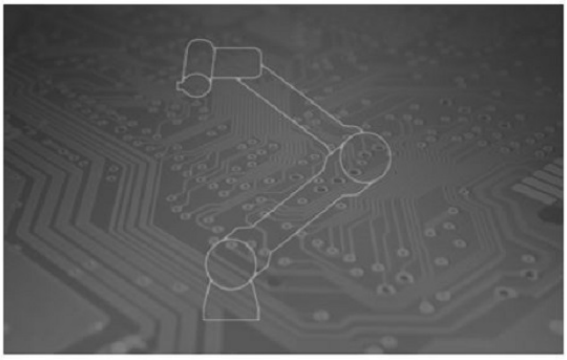
UNIVERSAL ROBOTS

Universal Robots
Error Codes Guide



SW5/UR20

Original instructions (en)

Contents

1. Introduction

Error codes are used in the robot error messages, Date Log, saved error reports and URScript Programming Language.

If the software prompts an error, immediately press emergency stop, write down the conditions that led to the error, find the corresponding error codes on the log screen, and contact your supplier.

The abbreviations in this document mean the following:

- On the Safety Control Board: Processor A = A uP = SafetySys1
- On the Safety Control Board: Processor B = B uP = SafetySys2
- PSU = Power Supply
- PC = Controller
- LVD = Low Voltage Detected

1.1. C0 No error

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.2. C1 Outbuffer overflow

C1A1 Buffer of stored warnings overflowed

C1A2 Outbuffer to RS485 overflowed (problem with Controller message)

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.3. C2 Inbuffer overflow

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.4. C3 Processor overloaded

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.5. C4 Communication issue

C4A1 Lost communication with Controller

EXPLANATION
Communication was lost between the Safety Control Board and the Motherboard

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check Ethernet cable between Safety Control Board and Motherboard, check that a script or UR+ software is not overloading the communication between the Safety Control Board and Motherboard, (B) Conduct a complete rebooting sequence, (C) Update the software

C4A2 Lost communication with Safety Control Board A uP

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check TCP/IP connection between Motherboard and Safety Control Board, (B) Conduct a complete rebooting sequence, (C) Exchange Safety Control Board

C4A3 Communication with Safety Control Board B uP lost

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check TCP/IP connection between Motherboard and Safety Control Board, (B) Conduct a complete rebooting sequence, (C) Exchange Safety Control Board

C4A4 Communication with primary Teach Pendant uP lost

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check RS485-12V connection between Motherboard and Teach Pendant, (B) Conduct a complete rebooting sequence, (C) Exchange Teach Pendant

C4A5 Communication with secondary Teach Pendant uP lost

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check RS485-12V connection between Motherboard and Teach Pendant, (B) Conduct a complete rebooting sequence, (C) Exchange Teach Pendant

C4A6 Communication with primary EUROMAP67 uP lost

SUGGESTION
Try the following actions to see which resolves the issue: (A)Check Euromap67 connection between Motherboard and Teach Pendant, (B) Conduct a complete rebooting sequence, (C) Exchange Teach Pendant

C4A7 Communication with secondary EUROMAP67 uP lost

SUGGESTION
Try the following actions to see which resolves the issue: (A)Check Euromap67 connection between Motherboard and Teach Pendant, (B) Conduct a complete rebooting sequence, (C) Exchange Teach Pendant

C4A8 Primary EUROMAP67 uP present, but euromap67 is disabled

EXPLANATION
Incorrect safety configuration

SUGGESTION
Try the following actions to see which resolves the issue: (A) Update the miscellaneous settings in the Safety Configuration, (B) Conduct a complete rebooting sequence

C4A9 Secondary EUROMAP67 uP present, but euromap67 is disabled

EXPLANATION
Incorrect safety configuration

SUGGESTION
Try the following actions to see which resolves the issue: (A) Update the miscellaneous settings in the Safety Configuration, (B) Conduct a complete rebooting sequence

C4A10 Primary Teach Pendant present, but Teach Pendant safety is disabled

EXPLANATION
Incorrect safety configuration

SUGGESTION
Try the following actions to see which resolves the issue: (A)Update the miscellaneous settings in the Safety Configuration, (B) Conduct a complete rebooting sequence

C4A11 Secondary Teach Pendant uP present, Teach Pendant safety is disabled

EXPLANATION
Incorrect safety configuration

SUGGESTION
Try the following actions to see which resolves the issue: (A) Update the miscellaneous settings in the Safety Configuration,(B) Conduct a complete rebooting sequence

C4A12 Communication with joint 0 lost

EXPLANATION
More than 1 package lost

SUGGESTION
Try the following actions to see which resolves the issue: (A)Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A13 Communication with joint 1 lost

EXPLANATION
More than 1 package lost

SUGGESTION
Try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A14 Communication with joint 2 lost

EXPLANATION
More than 1 package lost

SUGGESTION
Try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A15 Communication with joint 3 lost

EXPLANATION
More than 1 package lost

SUGGESTION
Try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A16 Communication with joint 4 lost

EXPLANATION
More than 1 package lost

SUGGESTION
Try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly (B) Conduct a complete rebooting sequence

C4A17 Communication with joint 5 lost

EXPLANATION
More than 1 package lost

SUGGESTION
Try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A18 Communication with tool lost

EXPLANATION
More than 1 package lost

SUGGESTION
Try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly (B) Conduct a complete rebooting sequence

C4A65 Lost package from Primary Teach Pendant

EXPLANATION
1 package lost

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A66 Lost package from Secondary Teach Pendant

EXPLANATION
1 package lost

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A67 Lost package from Primary Euromap67

EXPLANATION
1 package lost

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A68 Lost package from Secondary Euromap67

EXPLANATION
1 package lost

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A69 Lost package from Secondary Masterboard

EXPLANATION
1 package lost

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A)Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A70 Lost package from joint 0

EXPLANATION
Serial communication problem with one or more joints

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A71 Lost package from joint 1

EXPLANATION
Serial communication problem with one or more joints

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A)Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A72 Lost package from joint 2

EXPLANATION
Serial communication problem with one or more joints

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A73 Lost package from joint 3

EXPLANATION
Serial communication problem with one or more joints

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A74 Lost package from joint 4

EXPLANATION
Serial communication problem with one or more joints

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A75 Lost package from joint 5

EXPLANATION
Serial communication problem with one or more joints

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A76 Lost package from tool

EXPLANATION
Serial communication problem with one or more joints

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A77 Lost package from uPA to joints

EXPLANATION
1 package lost

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A78 Lost package from uPA to teach pendant

EXPLANATION
1 package lost

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A79 Lost package from uPA to uPB

EXPLANATION
1 package lost

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A80 Lost package from uPB

EXPLANATION
1 package lost

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A81 Packet counter disagreement in packet from Primary Screen

EXPLANATION
Safety processor 1 in Teach Pendant has a packet disagreement

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A82 Packet counter disagreement in packet from Secondary Screen

EXPLANATION
Safety processor 2 in Teach Pendant has a packet disagreement

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A83 Packet counter disagreement in packet from Primary Euromap67

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A84 Packet counter disagreement in packet from Secondary Euromap67

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A85 Packet counter disagreement in packet from Safety Control Board B

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A86 Packet counter disagreement in packet from joint 0

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A87 Packet counter disagreement in packet from joint 1

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A88 Packet counter disagreement in packet from joint 2

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A89 Packet counter disagreement in packet from joint 3

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A90 Packet counter disagreement in packet from joint 4

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A91 Packet counter disagreement in packet from joint 5

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A92 Packet counter disagreement in packet from tool

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A93 Packet counter disagreement in packet from processor A to joints

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A94 Packet counter disagreement in packet from processor A to B

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A95 Packet counter disagreement in packet from processor A to Teach Pendant and EUROMAP

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

C4A100 Communication lost due to Packet counter disagreements

SUGGESTION
If this happens often, try the following actions to see which resolves the issue: (A) Verify the communication cables are connected properly, (B) Conduct a complete rebooting sequence

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If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.6. C5 Heavy processor load warning

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.7. C10 Controller communication issue

C10A1 Lost packet from Controller

C10A101 Controller packet received too early

C10A102 Packet counter does not match

C10A103 Controller is sending packets too often

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.8. C11 Bad CRC

EXPLANATION
Serial communication problem with joint

SUGGESTION
Check black 2-wire connectors and wires in joints

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.9. C12 Unknown message error

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.10. C14 Debug message

C14A1 {float}

C14A2 {signed}

C14A3 {unsigned}

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.11. C17 Communication error between Safety Control Board and Motherboard

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check Ethernet connection between circuit boards, (B) Conduct a complete rebooting sequence, (C) Update the software

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.12. C25 Motor Encoder index missing

EXPLANATION
Joint mechanical problem, reader head skipped an index mark. Joint needs repair or replacement.

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.13. C26 Motor Encoder index drift detected

EXPLANATION
Joint mechanical problem, reader head cannot detect index marks. Joint needs repair or replacement.

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.14. C27 Calibration data is invalid or does not exist, selftest is needed!

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice, replace joint

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.15. C29 Online Calibration data checksum failed

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice, replace joint

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.16. C30 Master received data from too many joints

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.17. C31 Caught wrong message (not from master)

EXPLANATION
Serial communication problem with joint

SUGGESTION
Check black 2-wire connectors and wires on joints

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.18. C32 Flash write verify failed

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.19. C33 Calibration flash checksum failed

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.20. C34 Program flash checksum failed

SUGGESTION
Update Firmware

C34A0 Program flash checksum failed during bootloading

C34A1 Program flash checksum failed at runtime

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.21. C35 Joint ID is undefined

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.22. C36 Illegal bootloader command

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.23. C37 Inbuffer parse error

EXPLANATION
Serial communication problem with joint

SUGGESTION
Check black 2-wire connectors and wires on joints

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.24. C38 Online RAM test failed

SUGGESTION
Check the log file for what item is reporting this error. Replace the reporting item

C38A1 Data-bus test failed

C38A2 Address-bus stuck-high test failed

C38A3 Address-bus stuck-low test failed

C38A4 Address-bus shorted test failed

C38A5 Memory-cell test failed

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.25. C39 Logic and Temporal Monitoring Fault

C39A1 Max current deviation failure

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice, replace joint

C39A2 Max joint-encoder speed exceeded

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice, replace joint

C39A3 Max motor-encoder speed exceeded

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice, replace joint

C39A4 Illegal state change in joint detected

C39A5 A timing issue occurred during startup.

EXPLANATION
Too fast state change in joint detected

SUGGESTION
Conduct a complete rebooting sequence

C39A6 5V regulator voltage too low

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice, replace joint

C39A7 5V regulator voltage too high

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice, replace joint

C39A100 Watchpoint fault: ADC task timeout

C39A101 Watchpoint fault: Motor-Control task timeout

C39A102 Watchpoint fault: Motor-encoder task timeout

C39A103 Watchpoint fault: Joint-encoder task timeout

C39A104 Watchpoint fault: Communication task timeout

C39A105 Watchpoint fault: RAM-test task timeout

C39A106 Watchpoint fault: CalVal-test task timeout

C39A107 Watchpoint fault: ROM-test task timeout

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.26. C40 AD-Converter hit high limit joint

EXPLANATION
EMC issue external or electronics internal

SUGGESTION
Check grounding and shielding for EMC problems

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.27. C41 RC Oscillator Trim register hit high limit

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.28. C42 RC Oscillator Trim register hit low limit

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.29. C43 Change in invariant memory detected

C43A1 Current sensor gain

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.30. C44 CRC check failure on primary bus

EXPLANATION
Serial communication problem with joint or secondary bus node

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check black 2-wire connectors and wires in joints, (B) Conduct a complete rebooting sequence.(C) If this happens more than twice, contact your local service provider for assistance.

C44A0 Base

C44A1 Shoulder

C44A2 Elbow

C44A3 Wrist 1

C44A4 Wrist 2

C44A5 Wrist 3

C44A6 Tool

C44A80 CRC Check failure on primary bus.

EXPLANATION
Most likely an interference on the communication bus.

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.31. C45 AD-Converter error

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.32. C46 Loose gearbox or bad encoder mounting

EXPLANATION
Mechanical problem in gear related to encoder mounting

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice, replace joint

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.33. C47 AD-Converter hit low limit

EXPLANATION
EMC issue external or electronics internal

SUGGESTION
Check grounding and shielding for EMC problems

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.34. C49 RS485 receive warning

C49A200 Secondary RS485 bus is down

EXPLANATION
Bus for: Teach Pendant, Processor A and Processor B on SCB

SUGGESTION
Check TCP/IP-12V cable to Teach Pendant

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.35. C50 Robot powerup issue

EXPLANATION
Electrical error Control Box

SUGGESTION
Remove all external connections to I/O-interface of Safety Control Board. Check for short circuit

C50A1 Voltage detected at 24V rail before startup

C50A2 Voltage present at unpowered robot

C50A5 Powersupply voltage too low

SUGGESTION
Check 48 V cable between power supply and SCB

C50A6 Powersupply voltage too high

C50A11 Voltage not detected at 24V rail after startup

C50A15 Warning, waiting for SafetySYS2

C50A16 The Teach Pendant does not respond

EXPLANATION
Loose wire or incorrect safety configuration

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check the Teach Pendant cable and connections, (B) Check the settings in the miscellaneous tab in the Safety menu

C50A17 The Euromap67 interface does not respond

EXPLANATION
Loose wire or incorrect safety configuration

SUGGESTION
Try the following actions to see which resolves the issue: (A)Check the Euromap67 cable and connections, (B) Check the settings in the miscellaneous tab in the Safety menu

C50A18 Warning, waiting for SafetySYS1

EXPLANATION
SafetySYS1 = Processor A on Safety Control Board

C50A19 Warning, Waiting for a valid "euromap67 activated" status bit from secondary Safety Control Board

C50A20 5V, 3V3 or ADC error (5V too high)

C50A21 5V, 3V3 or ADC error (5V too low)

C50A22 Robot current sensor reading too high

C50A23 Robot current sensor reading too low

C50A24 48V not present (Check internal connection)

C50A25 Robot voltage present at 48V PSU powereup

C50A26 Voltage present on unpowered 48V power supply

C50A27 12V, 3V3 or ADC error (12V too high)

C50A28 12V, 3V3 or ADC error (12V too low)

C50A29 Analog I/O error (-12V too high)

C50A30 Analog I/O error (-12V too low)

C50A31 The other safetySYS do not initialize

C50A40 Wrong voltage from PSU1

C50A41 Wrong voltage from PSU2

C50A42 Voltage will not disappear from PSU

C50A43 Warning, waiting for CB2 type answer from primary processor

C50A50 Processor A 3.3V supply voltage out of bounds

C50A51 Robot voltage below threshold

C50A52 Robot voltage above threshold

C50A53 58V generator deviation error

C50A54 5V regulator too low

C50A55 5V regulator too high

C50A56 -4V generator too low

C50A57 -4V generator too high

C50A80 Last CPU reset caused by Low-Power-Reset

C50A81 Last CPU reset caused by Window-Watchdog-Reset

C50A82 Last CPU reset caused by Independent-Watchdog-Reset

C50A83 Last CPU reset caused by Software-Reset

EXPLANATION
The safety control board was reset on explicit request.

SUGGESTION

C50A84 Last CPU reset caused by External-Pin-Reset

C50A85 Last CPU reset caused by Brown-Out-Reset

C50A99 Wrong software on PCB

C50A100 Cable not connected

SUGGESTION
Check cable and connections between robot and Control Box

C50A101 Short circuit in robot detected or wrong robot connected to Control Box

SUGGESTION
Check robot type. Look for short circuit in cable and in Robot Arm

C50A102 Voltage rising too slowly

C50A103 Voltage failed to reach acceptable level

C50A104 The IMMI module does not respond

EXPLANATION
Missing IMMI module, hardware failure or incorrect safety configuration

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check the IMMI module and connections, (B) Check the settings in the Hardware tab in the Safety section of the installation

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If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.36. C51 CRC check failure on secondary bus

C51A0 Processor B

C51A1 Primary screen processor

EXPLANATION
CRC check failure on safety processor 1 in Teach Pendant

C51A2 Secondary screen processor

EXPLANATION
CRC check failure on safety processor 2 in Teach Pendant

C51A3 Primary E67

C51A4 Secondary E67

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.37. C53 IO overcurrent detected

EXPLANATION
Safety Control Board error

SUGGESTION
Remove all external connections to I/O-interface of Safety Control Board. Check for short circuit

C53A1 , max is 800mA

C53A2 , max is 600mA

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.38. C55 Safety system error

EXPLANATION
Safety system malfunction

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check Motherboard, Safety Control Board, Screenboard, Current distributor (Euromap, if installed), (B) Check safety devices and cables/connections to these devices, (C) Conduct a complete rebooting sequence

C55A23 Safety relay error (minus connection)

EXPLANATION
Current distributor error

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check cable from Safety Control Board to Current distributor or 48V Power supply and Current distributor for issues, (B) Conduct a complete rebooting sequence

C55A24 Safety relay error (plus connection)

EXPLANATION
Current distributor error

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check cable from Safety Control Board to Current distributor or 48V Power supply and Current distributor for issues, (B) Conduct a complete rebooting sequence

C55A33 Safety relay error (a relay is stuck)

EXPLANATION
Current distributor error

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check cable from Safety Control Board to Current distributor or 48V Power supply and Current distributor for issues (B) Conduct a complete rebooting sequence

C55A34 Safety relay error (relays are not on)

EXPLANATION
Current distributor error

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check cable from Safety Control Board to Current distributor or 48V Power supply and Current distributor for issues (B) Conduct a complete rebooting sequence

C55A50 Voltage present at unpowered robot

EXPLANATION
Safety Control Bord hardware fault

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice in a row, replace Safety Control Board

C55A51 Voltage will not disappear from robot

EXPLANATION
Safety Control Bord hardware fault

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice in a row, replace Safety Control Board

C55A52 5V, 3V3 or ADC error (5V too low)

EXPLANATION
Safety Control Bord hardware fault

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice in a row, replace Safety Control Board

C55A53 5V, 3V3 or ADC error (5V too high)

EXPLANATION
Safety Control Bord hardware fault

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice in a row, replace Safety Control Board

C55A90 Bootloader error, robot voltage too low or current too high

C55A91 Bootloader error, robot voltage too high

C55A100 Safety violation

C55A101 Safety Channel Error In Safety Control Board

C55A102 Safety Channel Error In Screen

C55A103 Safety Channel Error In Euromap67 Interface

C55A109 Received fault message from Controller

C55A110 Safety State is changing too often

C55A111 On/Off State is changing too often

C55A112 Robot current sensors readings differ

C55A120 Robot current is too high while emergency stopped

C55A121 Robot current is too high while safeguard stopped

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.39. C56 Overvoltage shutdown

EXPLANATION
Voltage exceeded 55V

SUGGESTION
Try the following actions to see which resolves the issue:(A) Check Energy Eaters cable and connections,(B) Check Energy,(C) Replace Energy Eater

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.40. C57 Brake release failure

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check Brake, solenoid, (B)Check TCP configuration, payload, and mounting settings

C57A1 Joint did not move or motor encoder is not functioning

C57A2 Large movement detected during brake release

C57A3 Robot was not able to brake release, see log for details

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.41. C58 Motor encoder not calibrated

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.42. C59 Overcurrent shutdown

EXPLANATION
Overcurrent in joint. Argument = Current in Amps

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check for short circuit, (B) Conduct a complete rebooting sequence, (C) If this happens more than twice, replace joint

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.43. C60 Energy surplus shutdown

EXPLANATION
The power supply is sending energy to the energy eater

SUGGESTION
Try the following actions to see which resolves the issue: (A) Ensure supply is not delivering more than 48V, (B) Contact support

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.44. C61 Idle power consumption to high

EXPLANATION
The system is drawing more power than expected while idle

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check Energy Eaters cable and connections, (B) Check Energy Eater, (C) Replace Energy Eater

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.45. C62 Thermal issue

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check nothing is hindering free movement of the joints, (B) Check TCP configuration, payload, and mounting settings

C62A1 Joint temperature: High (80(C)

C62A3 Warning: Static load too high

C62A11 Joint temperature: Shut down (85(C)

C62A13 Shutdown: Static load too high

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.46. C63 Motor test failed in step {unsigned}.

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.47. C65 PSU voltage to high

EXPLANATION
The power supply output voltage is above 49V

SUGGESTION
Try the following actions to see which resolves the issue: (A) Ensure supply is not delivering more than 48V, (B) Contact support

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.48. C68 SPI error

EXPLANATION
Joint: Absolut encoder on joint communication error

SUGGESTION
Try the following actions to see which resolves the issue: (A)Check for short circuit, (B) Conduct a complete rebooting sequence, (C) If this happens several times in a row, replace joint

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.49. C70 Close to gearbox shear limit

EXPLANATION
Acceleration / deceleration to high. Mechanical problem in gear related to encoder mounting

SUGGESTION
Try the following actions to see which resolves the issue: (A) Reduce acceleration in user program, (B) Conduct a complete rebooting sequence, (C) If this happens several times in a row, replace joint

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If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.50. C71 Startup check error

C71A0 Hardware is size0, wrong firmware at the joint

SUGGESTION
Update firmware

C71A1 Hardware is size1, wrong firmware at the joint

SUGGESTION
Update firmware

C71A2 Hardware is size2, wrong firmware at the joint

SUGGESTION
Update firmware

C71A3 Hardware is size3, wrong firmware at the joint

SUGGESTION
Update firmware

C71A4 Hardware is size4, wrong firmware at the joint

SUGGESTION
Update firmware

C71A5 Invalid hardware revision

C71A6 ADC calibration failed

C71A7 Unknown error result

EXPLANATION
The motor wires are damaged, bad connection in screw terminals or defect PCB

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check joint for damaged or loose connections, (B) Replace the joint

C71A8 Motor short circuit to ground or H-bridge problems

EXPLANATION
The motor wires are damaged, bad connection in screw terminals or defect PCB

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check joint for damaged or loose connections, (B) Replace the joint

C71A9 Motor indication signal does not work

EXPLANATION
The motor wires are damaged, bad connection in screw terminals or defect PCB

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check joint for damaged or loose connections, (B) Replace the joint

C71A10 Phase 1 is unconnected or not working

EXPLANATION
The motor wires are damaged, bad connection in screw terminals or defect PCB

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check joint for damaged or loose connections, (B) Replace the joint

C71A11 Phase 2 is unconnected or not working

EXPLANATION
The motor wires are damaged, bad connection in screw terminals or defect PCB

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check joint for damaged or loose connections, (B) Replace the joint

C71A12 Phase 3 or multiple phases is unconnected or not working

EXPLANATION
The wire is (1) damaged or (2) has been disconnected from the PCB (not likely) or (3) defect PCB

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check joint for damaged or loose connections, (B) Replace the joint

C71A50 Current sensor test failed

EXPLANATION
Sensor reported wrong current when probed

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check joint for damaged or loose connections, (B) Replace the joint

C71A51 Current sensor test failed

EXPLANATION
Sensor reported wrong current when probed

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check joint for damaged or loose connections, (B) Replace the joint

C71A52 Current sensor test failed

EXPLANATION
Sensors reported different currents when probed

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check joint for damaged or loose connections, (B) Replace the joint

C71A101 Wrong firmware on RLS encoder

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.51. C72 Power Supply Unit failure

C72A1 0 PSUs are active

EXPLANATION
PSU was not able to deliver 48V

SUGGESTION
Check power connection between power supply and Safety Control Board

C72A2 1 PSU active, but we expect 2 (UR10)

EXPLANATION
PSU was not able to deliver 48V or UR10 flash card in UR5 robot

SUGGESTION
Check power connection between power supply and Safety Control Board and check that the flash card and robot match

C72A3 2 PSUs active, but we expect 1 (UR5)

EXPLANATION
UR5 flash card in UR10 robot

SUGGESTION
Check that the flash card and robot match

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.52. C73 Brake test failed during selftest, check brakepin

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.53. C74 Joint encoder warning

EXPLANATION
Magnetic encoder error (absolute encoder). Argument = sum of C74 errors

C74A1 Invalid decode: Readhead misalignment, ring damaged or external magnetic field present.

SUGGESTION
Check grounding and shielding for EMC problems

C74A2 Speed reading is not valid

C74A4 System error=malfunction or inconsistent calibration detected

C74A8 Supply voltage is out of range

C74A16 Temperature is out of range

C74A32 Signal lost =Misaligned readhead or damaged ring

C74A64 Signal low =Too far from magnetic ring

C74A128 Signal saturation =Too close to magnetic ring

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.54. C75 Joint encoder error

EXPLANATION
Magnetic encoder error (absolute encoder). Argument = sum of C75 errors

C75A1 Invalid decode: Readhead misalignment, ring damaged or external magnetic field present.

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check grounding and shielding for EMC problems, (C) If this happens more than twice, replace joint

C75A2 Speed reading is not valid

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice, replace joint

C75A4 System error=malfunction or inconsistent calibration detected

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice, replace joint

C75A8 Supply voltage is out of range

C75A16 Temperature is out of range

C75A32 Signal lost =Misaligned readhead or damaged ring

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check grounding and shielding for EMC problems, (C) If this happens more than twice, replace joint

C75A64 Signal low =Too far from magnetic ring

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check grounding and shielding for EMC problems, (C) If this happens more than twice, replace joint

C75A128 Signal saturation =Too close to magnetic ring

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check grounding and shielding for EMC problems, (C) If this happens more than twice, replace joint

C75A200 Position from joint encoder does not change while motor is running

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.55. C76 Joint encoder communication CRC issue

EXPLANATION
Error between sensor and joint circuit

SUGGESTION
Check connections or very heavy electrical noise

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.56. C77 Sudden position change detected on the joint-encoder

EXPLANATION
The position reading from the encoder was different than expected.

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.57. C78 Large sudden position change detected on the joint-encoder

EXPLANATION
The position reading from the encoder was severely different than expected, the latest measurement was discarded. The argument relates to the size of the position change.

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.58. C85 Motor encoder error

C85A200 Position from motor encoder does not change while motor is running

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.59. C100 Robot changed mode

EXPLANATION
Status warning, general modus change

SUGGESTION
Check preceding errors in log history

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.60. C101 Real Robot Connected

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.61. C102 Real Robot not connected - Simulating Robot

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.62. C103 Communication issue

C103A1 Connection to Safety Control Board lost

EXPLANATION
PC did not receive 3 packets in a row

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check that the Ethernet cable between Motherboard and Safety Control Board is connected, (B) Conduct a complete rebooting sequence

C103A2 Package lost from Safety Control Board

C103A3 Ethernet connection initialization with Safety Control Board failed

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.63. C104 Error=Empty command sent to robot

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.64. C111 Something is pulling the robot

SUGGESTION
Check TCP configuration, payload, and mounting settings

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.65. C115 Unknown robot type

EXPLANATION
The robot type specified in the configuration is unknown

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.66. C116 Realtime part warning

EXPLANATION
Possible CPU-overload due to structure of user program

SUGGESTION
Restructure user program

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.67. C117 Restart SCB failed

EXPLANATION
The Safety Control Board couldn't be rebooted from the controller.

SUGGESTION
Conduct a complete rebooting sequence

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.68. C150 Position close to joint limits

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.69. C151 Tool orientation close to limits

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.70. C152 Position close to safety plane limits

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.71. C153 Position deviates from path

C153A0 Base. Check payload, center of gravity and acceleration settings. Log screen may contain additional information.

SUGGESTION
Check payload, center of gravity and acceleration settings.

C153A1 Shoulder. Check payload, center of gravity and acceleration settings. Log screen may contain additional information.

SUGGESTION
Check payload, center of gravity and acceleration settings.

C153A2 Elbow. Check payload, center of gravity and acceleration settings. Log screen may contain additional information.

SUGGESTION
Check payload, center of gravity and acceleration settings.

C153A3 Wrist 1. Check payload, center of gravity and acceleration settings. Log screen may contain additional information.

SUGGESTION
Check payload, center of gravity and acceleration settings.

C153A4 Wrist 2. Check payload, center of gravity and acceleration settings. Log screen may contain additional information.

SUGGESTION
Check payload, center of gravity and acceleration settings.

C153A5 Wrist 3. Check payload, center of gravity and acceleration settings. Log screen may contain additional information.

SUGGESTION
Check payload, center of gravity and acceleration settings.

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.72. C154 Position in singularity

EXPLANATION
Robot can not move linear near a singularity

SUGGESTION
Use MoveJ or change the motion

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.73. C155 Robot cannot maintain its position, check if payload is correct

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.74. C156 Wrong payload or mounting detected, or something is pushing the robot when entering Freedrive mode

EXPLANATION
The robot may move unexpected due to wrong settings

SUGGESTION
Verify that the TCP configuration and mounting in the used installation is correct

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.75. C157 Collision detected by joint

C157A0 Base. Check payload, center of gravity and acceleration settings. Log screen may contain additional information.

SUGGESTION
Make sure no objects are in the path of the robot and resume the program.

C157A1 Shoulder. Check payload, center of gravity and acceleration settings. Log screen may contain additional information.

SUGGESTION
Make sure no objects are in the path of the robot and resume the program.

C157A2 Elbow. Check payload, center of gravity and acceleration settings. Log screen may contain additional information.

SUGGESTION
Make sure no objects are in the path of the robot and resume the program.

C157A3 Wrist 1. Check payload, center of gravity and acceleration settings. Log screen may contain additional information.

SUGGESTION
Make sure no objects are in the path of the robot and resume the program.

C157A4 Wrist 2. Check payload, center of gravity and acceleration settings. Log screen may contain additional information.

SUGGESTION
Make sure no objects are in the path of the robot and resume the program.

C157A5 Wrist 3. Check payload, center of gravity and acceleration settings. Log screen may contain additional information.

SUGGESTION
Make sure no objects are in the path of the robot and resume the program.

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.76. C158 Collision detected by joint

C158A0 Base. The user specified payload is 0kg, please make sure this is correct.

EXPLANATION
Specifying an incorrect payload mass and/or center of gravity may cause poor robot performance and/or protective stops.

SUGGESTION
Make sure the specified payload mass and center of gravity are correctly specified.

C158A1 Shoulder. The user specified payload is 0kg, please make sure this is correct.

EXPLANATION
Specifying an incorrect payload mass and/or center of gravity may cause poor robot performance and/or protective stops.

SUGGESTION
Make sure the specified payload mass and center of gravity are correctly specified.

C158A2 Elbow. The user specified payload is 0kg, please make sure this is correct.

EXPLANATION
Specifying an incorrect payload mass and/or center of gravity may cause poor robot performance and/or protective stops.

SUGGESTION
Make sure the specified payload mass and center of gravity are correctly specified.

C158A3 Wrist 1. The user specified payload is 0kg, please make sure this is correct.

EXPLANATION
Specifying an incorrect payload mass and/or center of gravity may cause poor robot performance and/or protective stops.

SUGGESTION
Make sure the specified payload mass and center of gravity are correctly specified.

C158A4 Wrist 2. The user specified payload is 0kg, please make sure this is correct.

EXPLANATION
Specifying an incorrect payload mass and/or center of gravity may cause poor robot performance and/or protective stops.

SUGGESTION
Make sure the specified payload mass and center of gravity are correctly specified.

C158A5 Wrist 3. The user specified payload is 0kg, please make sure this is correct.

EXPLANATION
Specifying an incorrect payload mass and/or center of gravity may cause poor robot performance and/or protective stops.

SUGGESTION
Make sure the specified payload mass and center of gravity are correctly specified.

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.77. C159 Position deviates from path

C159A0 Base. The user specified payload is 0kg, please make sure this is correct.

EXPLANATION
Specifying an incorrect payload mass and/or center of gravity may cause poor robot performance and/or protective stops.

SUGGESTION
Make sure the specified payload mass and center of gravity are correctly specified.

C159A1 Shoulder. The user specified payload is 0kg, please make sure this is correct.

EXPLANATION
Specifying an incorrect payload mass and/or center of gravity may cause poor robot performance and/or protective stops.

SUGGESTION
Make sure the specified payload mass and center of gravity are correctly specified.

C159A2 Elbow. The user specified payload is 0kg, please make sure this is correct.

EXPLANATION
Specifying an incorrect payload mass and/or center of gravity may cause poor robot performance and/or protective stops.

SUGGESTION
Make sure the specified payload mass and center of gravity are correctly specified.

C159A3 Wrist 1. The user specified payload is 0kg, please make sure this is correct.

EXPLANATION
Specifying an incorrect payload mass and/or center of gravity may cause poor robot performance and/or protective stops.

SUGGESTION
Make sure the specified payload mass and center of gravity are correctly specified.

C159A4 Wrist 2. The user specified payload is 0kg, please make sure this is correct.

EXPLANATION
Specifying an incorrect payload mass and/or center of gravity may cause poor robot performance and/or protective stops.

SUGGESTION
Make sure the specified payload mass and center of gravity are correctly specified.

C159A5 Wrist 3. The user specified payload is 0kg, please make sure this is correct.

EXPLANATION
Specifying an incorrect payload mass and/or center of gravity may cause poor robot performance and/or protective stops.

SUGGESTION
Make sure the specified payload mass and center of gravity are correctly specified.

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.78. C160 The robot was powered off last time due to a joint position disagreement

SUGGESTION
Try the following actions to see which resolves the issue: (A) Verify that the robot position in the 3D graphics matches the real robot to ensure the encoders function before releasing the brakes. Stand back and monitor the robot performing its first program cycle as expected, (B) If the position is not correct, the robot must be repaired. In this case, tap Power Off Robot, (C) If the position is correct, please tick the check box below the 3D graphics and click Robot Position Verified

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.79. C161 Large movement of the robot detected while it was powered off. The joints were moved while it was powered off, or the encoders do not function

SUGGESTION
Try the following actions to see which resolves the issue: (A) Verify that the robot position in the 3D graphics matches the real robot to ensure the encoders function before releasing the brakes. Stand back and monitor the robot performing its first program cycle as expected, (B) If the position is not correct, the robot must be repaired. In this case, tap Power Off Robot, (C) If the position is correct, please tick the check box below the 3D graphics and click Robot Position Verified

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.80. C162 The protective stop was likely caused by incorrectly specified payload mass and/or center of gravity.

EXPLANATION
Specifying an incorrect payload mass and/or center of gravity may cause poor robot performance and/or protective stops.

SUGGESTION
Make sure the specified payload mass and center of gravity are correct.

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.81. C171 Issue with blends

C171A0 A MoveC-Waypoint were skipped due to a blend.

EXPLANATION
The value for the blend radius is too large compared to the distance between the Waypoints.

SUGGESTION
Decrease the blend radius or choose Waypoints that are further apart.

C171A1 Blend radius too small in a MoveC

SUGGESTION
Increase blend in MoveC

C171A3 A ServoC-Waypoint were skipped due to a blend.

EXPLANATION
The value for the blend radius is too large compared to the distance between the Waypoints.

SUGGESTION
Decrease the blend radius or choose Waypoints that are further apart.

C171A4 Overlapping Blends in a MoveJ, a Waypoint was skipped

SUGGESTION
Decrease the blend radius or choose Waypoints that are further apart.

C171A5 Overlapping Blends in a MoveJ, a Waypoint was skipped

SUGGESTION
Decrease the blend radius or choose Waypoints that are further apart.

C171A6 Overlapping Blends in a MoveJ, a Waypoint was skipped

SUGGESTION
Decrease the blend radius or choose Waypoints that are further apart.

C171A7 Overlapping Blends in a MoveJ, a Waypoint was skipped

SUGGESTION
Decrease the blend radius or choose Waypoints that are further apart.

C171A9 A MoveP-Waypoint were skipped due to a blend.

EXPLANATION
The value for the blend radius is too large compared to the distance between the Waypoints.

SUGGESTION
Decrease the blend radius or choose Waypoints that are further apart.

C171A10 Blend radius too small error in a MoveP

C171A11 Overlapping Blends in a MoveL, a Waypoint was skipped

SUGGESTION
Decrease the blend radius or choose Waypoints that are further apart.

C171A12 Overlapping Blends in a MoveL, a Waypoint was skipped

SUGGESTION
Decrease the blend radius or choose Waypoints that are further apart.

C171A13 Overlapping Blends in a MoveL, a Waypoint was skipped

SUGGESTION
Decrease the blend radius or choose Waypoints that are further apart.

C171A14 Overlapping Blends in a MoveL, a Waypoint was skipped

SUGGESTION
Decrease the blend radius or choose Waypoints that are further apart.

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.82. C172 Illegal control mode

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.83. C173 Robot motion causes too high joint torques

EXPLANATION
Exceeding joint torque ranges may damage robot hardware

SUGGESTION
Reduce accelerations in the robot motions around where the error was discovered. You can use the script command "pause_on_error_code()" to make the robot stop when this warning occurs, to identify which motion causes the warning

C173A0 Base.

C173A1 Shoulder.

C173A2 Elbow.

C173A3 Wrist 1.

C173A4 Wrist 2.

C173A5 Wrist 3.

C173A6 Base. Problem identified when executing program line {unsigned}.

C173A7 Shoulder. Problem identified when executing program line {unsigned}.

C173A8 Elbow. Problem identified when executing program line {unsigned}.

C173A9 Wrist 1. Problem identified when executing program line {unsigned}.

C173A10 Wrist 2. Problem identified when executing program line {unsigned}.

C173A11 Wrist 3. Problem identified when executing program line {unsigned}.

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.84. C174 Robot motion causes too high jump in joint torques

EXPLANATION
High jumps in joint torque ranges may damage robot hardware. This can be caused by sudden big changes in acceleration in the target trajectory

SUGGESTION
Use blends or reduce accelerations in the robot motions around where the error was discovered. You can use the script command "pause_on_error_code()" to make the robot stop when this warning occurs, to identify which motion causes the warning

C174A0 Base.

C174A1 Shoulder.

C174A2 Elbow.

C174A3 Wrist 1.

C174A4 Wrist 2.

C174A5 Wrist 3.

C174A6 Base. Problem identified when executing program line {unsigned}.

C174A7 Shoulder. Problem identified when executing program line {unsigned}.

C174A8 Elbow. Problem identified when executing program line {unsigned}.

C174A9 Wrist 1. Problem identified when executing program line {unsigned}.

C174A10 Wrist 2. Problem identified when executing program line {unsigned}.

C174A11 Wrist 3. Problem identified when executing program line {unsigned}.

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.85. C184 Joint self test not received by controller

C185A1 START_NORMAL_OPERATION is not allowed on selftest firmware

C185A2 GOTO_BACKDRIVE_COMMAND is not allowed on selftest firmware

C186A1 joint_mode == JOINT_RUNNING_MODE is not allowed on selftest firmware

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.86. C187 Temperature sensor test failed

C187A1 Starting temperature were lower than expected

C187A2 Starting temperature were higher than expected

C187A3 Temperature increased less than expected during warm up

C187A4 Temperature increased more than expected during warm up

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.87. C190 Joint failed during selftest

C190A0 Motor encoder index mark not found

C190A1 Phases not mounted correctly

C190A2 Motor encoder counting the wrong way

C190A3 Joint encoder counting the wrong way

C190A4 No movement detected while trying to move the motor

C190A11 Temperature alignment did not warm up to 45 degrees C within 30 minutes

C190A12 Temperature alignment did not cool down to 45 degrees C within 60 minutes

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.88. C191 Safety system violation

C191A1 Joint position limit violated

C191A2 Joint speed limit violated

C191A3 TCP speed limit violated

C191A4 TCP position limit violated

C191A5 TCP orientation limit violated

C191A6 Power limit violated

C191A7 Joint torque window violated

C191A8 Joint torque window too large

C191A9 Reduced mode output violation

C191A10 Safeguard stop output violation

C191A11 Emergency stop output violation

C191A12 Momentum limit violation

C191A13 Robot moving output violation

C191A14 Robot is not braking in stop mode

EXPLANATION
During the braking process, the safety system monitors if the robot brakes as expected. If this is not the case, this error is generated

SUGGESTION
Check TCP configuration, payload, and mounting settings

C191A15 Robot is moving in stop mode

EXPLANATION
When the robot is stopped due to a safety violation or a safeguard stop, the safety system generates this error, if the robot moves while in this mode

SUGGESTION
(A) Check if the robot is physically pushed while safeguard stopped, (B) Check TCP configuration, payload, and mounting settings

C191A16 Robot did not stop in time

C191A17 Received a null vector for TCP orientation

C191A18 Robot not stopping output violation

C191A19 Invalid safety IO configuration

C191A20 Configuration information or limit sets not received

C191A21 The other safety processor detected a violation

C191A22 Received unknown command from Controller

C191A23 Invalid setup of safety limits

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check Firmware/update firmware, (B) Conduct a complete rebooting sequence

C191A24 Reduced Mode Output set, while it should not be

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check Firmware/update firmware, (B) Conduct a complete rebooting sequence

C191A25 Reduced Mode Output not set, while it should be

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check Firmware/update firmware, (B) Conduct a complete rebooting sequence

C191A26 Not Reduced Mode Output set, while it should not be

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check Firmware/update firmware, (B) Conduct a complete rebooting sequence

C191A27 Not Reduced Mode Output not set, while it should be

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check Firmware/update firmware, (B) Conduct a complete rebooting sequence

C191A28 Robot Emergency Stop exceeded maximum stop time

EXPLANATION
Too high payload

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check that max payload of the robot has not been exceeded, (B) Check TCP configuration, payload, and mounting settings

C191A29 System Emergency Stop exceeded maximum stop time

EXPLANATION
Too high payload

SUGGESTION
Try the following actions to see which resolves the issue: (A)Check that max payload of the robot has not been exceeded, (B) Check TCP configuration, payload, and mounting settings

C191A30 Safeguard Stop exceeded maximum stop time

EXPLANATION
Too high payload

SUGGESTION
Try the following actions to see which resolves the issue: (A)Check that max payload of the robot has not been exceeded, (B) Check TCP configuration, payload, and mounting settings

C191A31 Operation mode switch is present while the three position switch is missing

C191A32 Joint speed limit violated - Base

C191A33 Joint speed limit violated - Shoulder

C191A34 Joint speed limit violated - Elbow

C191A35 Joint speed limit violated - Wrist 1

C191A36 Joint speed limit violated - Wrist 2

C191A37 Joint speed limit violated - Wrist 3

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.89. C192 Safety system fault

C192A1 Robot still powered in emergency stop

EXPLANATION
When the emergency stop is active, the Robot Arm powers off. The controller is responsible for sending the power off command. This error is generated if the safety system detects that the Robot Arm still has power

C192A2 Robot emergency stop disagreement

EXPLANATION
E-stop in teach pendant or in robot E-stop circuit problem

SUGGESTION
Check safety devices and cables/connections to these devices.

C192A3 System emergency stop disagreement

EXPLANATION
System E-stop circuit problem

SUGGESTION
Check safety devices and cables/connections to these devices.

C192A4 Safeguard stop disagreement

EXPLANATION
Safeguard circuit problem

SUGGESTION
Check safety devices and cables/connections to these devices.

C192A5 Euromap safeguard stop disagreement

EXPLANATION
Euromap circuit problem

SUGGESTION
Check cables from Safety Control Board to Euromap and to external machine

C192A6 Joint position disagreement

SUGGESTION
Try the following actions to see which resolves the issue: (A)Check TCP configuration, payload and mounting settings, (B) Check that safety settings respected

C192A7 Joint speed disagreement

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check TCP configuration, payload and mounting settings, (B) Check that safety settings respected

C192A8 Joint torque disagreement

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check TCP configuration, payload and mounting settings, (B) Check that safety settings respected

C192A9 TCP speed disagreement

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check TCP configuration, payload and mounting settings, (B) Check that safety settings respected

C192A10 TCP position disagreement

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check TCP configuration, payload and mounting settings, (B) Check that safety settings respected

C192A11 TCP orientation disagreement

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check TCP configuration, payload and mounting settings, (B) Check that safety settings respected

C192A12 Power disagreement

EXPLANATION
Power calculation: uP-A and uP-B disagreement

C192A13 Joint torque window disagreement

C192A14 Reduced mode input disagreement

EXPLANATION
Safety I/O uP-A and uP-B disagreement

SUGGESTION
Check safety devices and cables/connections to these devices

C192A15 Reduced mode output disagreement

EXPLANATION
Safety I/O uP-A and uP-B disagreement

SUGGESTION
Check safety devices and cables/connections to these devices

C192A16 Safety output failed

EXPLANATION
The safety output did not reach the correct value in the expected time

SUGGESTION
Check for short circuit on I/O or for wrong connection to output.

C192A17 Safeguard stop output disagreement

EXPLANATION
Safety I/O uP-A and uP-B disagreement

SUGGESTION
Check safety devices and cables/connections to these devices

C192A18 The other safety processor is in fault

C192A19 Emergency stop output disagreement

EXPLANATION
Safety I/O uP-A and uP-B disagreement

SUGGESTION
Check safety devices and cables/connections to these devices

C192A20 SPI output error detected

EXPLANATION
Powersupply for the I/O is not detected

SUGGESTION
Check if the connection to the internal power supply is correct. If an external power supply is being used, check if it is powered on and at the correct voltage.

C192A21 Momentum disagreement

C192A22 Robot moving output disagreement

SUGGESTION
Check safety devices and cables/connections to these devices

C192A23 Wrong processor ID

C192A24 Wrong processor revision

C192A25 Potential brownout detected

EXPLANATION
Voltage drop on Safety Control Board or defect Safety Control Board

C192A26 Emergency stop output disagreement

SUGGESTION
Check safety devices and cables/connections to these devices

C192A27 Safeguard stop output disagreement

SUGGESTION
Check safety devices and cables/connections to these devices

C192A28 Robot not stopping output disagreement

SUGGESTION
Check safety devices and cables/connections to these devices

C192A29 Safeguard reset input disagreement

SUGGESTION
Check safety devices and cables/connections to these devices

C192A30 Safety processor booted up in fault mode

C192A31 Reduced Mode Output disagreement

SUGGESTION
Check safety devices and cables/connections to these devices

C192A32 Not Reduced Mode Output disagreement

SUGGESTION
Check safety devices and cables/connections to these devices

C192A33 A timing issue occurred during startup. Please restart to proceed

EXPLANATION
Checksum disagreement between safety processors uA and uB

C192A34 User safety config checksum disagreement between uA and GUI

C192A35 Robot config checksum disagreement between uA and GUI

C192A36 Online RAM test failed

C192A37 Not all safety related functionalities are running

C192A38 Package too short for CRC calculation

C192A39 Three position switch input disagreement

C192A40 Operation mode switch input disagreement

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.90. C193 One of the nodes is in fault mode

C193A0 Base Joint

SUGGESTION
Try the following actions to see which resolves the issue: (A) See previous error, (B) Update the firmware on the joint, (C) Conduct a complete rebooting sequence

C193A1 Shoulder Joint

SUGGESTION
Try the following actions to see which resolves the issue: (A) See previous error, (B) Update the firmware on the joint, (C)Conduct a complete rebooting sequence

C193A2 Elbow Joint

SUGGESTION
Try the following actions to see which resolves the issue: (A) See previous error, (B) Update the firmware on the joint, (C) Conduct a complete rebooting sequence

C193A3 Wrist 1 Joint

SUGGESTION
Try the following actions to see which resolves the issue: (A) See previous error, (B) Update the firmware on the joint, (C) Conduct a complete rebooting sequence

C193A4 Wrist 2 Joint

SUGGESTION
Try the following actions to see which resolves the issue: (A) See previous error, (B) Update the firmware on the joint, (C) Conduct a complete rebooting sequence

C193A5 Wrist 3 Joint

SUGGESTION
Try the following actions to see which resolves the issue: (A) See previous error, (B) Update the firmware on the joint, (C) Conduct a complete rebooting sequence

C193A6 Tool

SUGGESTION
Try the following actions to see which resolves the issue: (A) See previous error, (B) Conduct a complete rebooting sequence

C193A7 Screen 1

EXPLANATION
Safety Control Board has detected an error on Safety processor 1 in Teach pendant

SUGGESTION
Try the following actions to see which resolves the issue: (A) See previous error, (B) Conduct a complete rebooting sequence

C193A8 Screen 2

EXPLANATION
Safety Control Board has detected an error on Safety processor 2 in Teach pendant

SUGGESTION
Try the following actions to see which resolves the issue: (A) See previous error, (B) Conduct a complete rebooting sequence

C193A9 Euromap 1

SUGGESTION
Try the following actions to see which resolves the issue: (A) See previous error, (B)Conduct a complete rebooting sequence

C193A10 Euromap 2

SUGGESTION
Try the following actions to see which resolves the issue: (A) See previous error, (B) Conduct a complete rebooting sequence

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If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.91. C194 One of the nodes is not booted or not present

C194A0 Base Joint

C194A1 Shoulder Joint

C194A2 Elbow Joint

C194A3 Wrist 1 Joint

C194A4 Wrist 2 Joint

C194A5 Wrist 3 Joint

C194A6 Tool

C194A7 Screen 1

EXPLANATION
Safety Control Board has detected an error on Safety processor 1 in Teach pendant

C194A8 Screen 2

EXPLANATION
Safety Control Board has detected an error on Safety processor 2 in Teach pendant

C194A9 Euromap 1

C194A10 Euromap 2

C194A128 Base not ready while brake release requested

EXPLANATION
Must be at least in IDLE mode when the brake release is requested

SUGGESTION
Check for loose communication cable

C194A129 Shoulder not ready while brake release requested

EXPLANATION
Must be at least in IDLE mode when the brake release is requested

SUGGESTION
Check for loose communication cable

C194A130 Elbow not ready while brake release requested

EXPLANATION
Must be at least in IDLE mode when the brake release is requested

SUGGESTION
Check for loose communication cable

C194A131 Wrist 1 not ready while brake release requested

EXPLANATION
Must be at least in IDLE mode when the brake release is requested

SUGGESTION
Check for loose communication cable

C194A132 Wrist 2 not ready while brake release requested

EXPLANATION
Must be at least in IDLE mode when the brake release is requested

SUGGESTION
Check for loose communication cable

C194A133 Wrist 3 not ready while brake release requested

EXPLANATION
Must be at least in IDLE mode when the brake release is requested

SUGGESTION
Check for loose communication cable

C194A134 Tool not ready while brake release requested

EXPLANATION
Must be at least in IDLE mode when the brake release is requested

SUGGESTION
Check for loose communication cable

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.92. C195 Conveyor speed too high

EXPLANATION
Conveyor speed higher than robot is able to run

SUGGESTION
Make sure that conveyor tracking is set up correctly

C195A1 for joint speed safety limit

C195A2 for TCP speed safety limit

C195A3 for momentum safety limit

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.93. C196 MoveP speed too high

EXPLANATION
Too high speed in relation to blend radius

SUGGESTION
Reduce speed or increase blend radius in user program

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.94. C197 Blend overlap warning

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.95. C200 Safety Control Board hardware error

C200A1 Hardware ID is wrong

EXPLANATION
Safety Control Board: uP-A has detected an error: Wrong Safety Control Board

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice in a row, replace Safety Control Board

C200A2 MCU type is wrong

EXPLANATION
Safety Control Board: uP-A has detected an error

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice in a row, replace Safety Control Board

C200A3 Part ID is wrong

EXPLANATION
Safety Control Board: uP-A has detected an error

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice in a row, replace Safety Control Board

C200A4 RAM test failed

EXPLANATION
Safety Control Board: uP-A has detected an error

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice in a row, replace Safety Control Board

C200A5 Register test failed

EXPLANATION
Safety Control Board: uP-A has detected an error

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice in a row, replace Safety Control Board

C200A6 pRom Crc test failed

EXPLANATION
Safety Control Board: uP-A has detected an error: firmware error

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice in a row, replace Safety Control Board

C200A7 Watchdog reset the processor

EXPLANATION
Safety Control Board: uP-A has detected an error

C200A8 OVG signal test not passed

EXPLANATION
Safety Control Board: uP-A has detected an error: over voltage generator

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B)If this happens more than twice in a row, replace Safety Control Board

C200A9 3V3A power good pin is low

EXPLANATION
Safety Control Board: uP-A has detected an error

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice in a row, replace Safety Control Board

C200A10 3V3B power good pin is low

EXPLANATION
Safety Control Board: uP-A has detected an error

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice in a row, replace Safety Control Board

C200A11 5V power good is low

EXPLANATION
Safety Control Board: uP-A has detected an error

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice in a row, replace Safety Control Board

C200A12 3V3 voltage too low

EXPLANATION
Safety Control Board: uP-A has detected an error

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice in a row, replace Safety Control Board

C200A13 3v3 voltage too high

EXPLANATION
Safety Control Board: uP-A has detected an error

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) If this happens more than twice in a row, replace Safety Control Board

C200A14 48V input is too low

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check 48 V Power supply, current distributer, energy eater and Safety Control Board for issues

C200A15 48V input is too high

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check 48 V Power supply, current distributer, energy eater and Safety Control Board for issues

C200A16 24V IO short circuited

EXPLANATION
Too high current

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Disconnect external I/O connections and check external power supply if connected

C200A17 PC current is too high

EXPLANATION
Motherboard takes too high current

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check cable between Safety Control Board and Motherboard and check all connections to Motherboard. Also check for short circuit

C200A18 Robot voltage is too low

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check for short circuit in Robot Arm, (C) Check 48 V Power supply, current distributer, energy eater and Safety Control Board for issues

C200A19 Robot voltage is too high

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check 48 V Power supply, current distributer, energy eater and Safety Control Board for issues

C200A20 24V IO voltage is too low

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Disconnect I/O, check external power supply if connected and check Safety Control Board for issues

C200A21 12V voltage is too high

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check 12 V Power supply, cables and Safety Control Board for issues

C200A22 12V voltage is too low

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check 12 V Power supply, cables and Safety Control Board for issues

C200A23 It took too long to stabilize 24V

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check 24 V and Safety Control Board for issues

C200A24 It took too long to stabilize 24V IO

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check 24 V and Safety Control Board for issues

C200A25 24V voltage is too high

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check external 24 V and Safety Control Board for issues, (B) Conduct a complete rebooting sequence, (C) If this happens more than twice in a row, replace Safety Control Board.

C200A26 24V IO voltage is too high

SUGGESTION
Try the following actions to see which resolves the issue: (A) Disconnect I/O's, (B) Conduct a complete rebooting sequence, (C) Check external 24 V and Safety Control Board for issues

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If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.96. C201 Setup of Safety Control Board failed

C201A0 Setup of Safety Control Board failed

EXPLANATION
No data was received from the Safety Control Board at initialization or invalid safety parameters have been received

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check that the ethernet cable between Motherboard and Safety Control Board is connected and verify that the setup of the Safety Configuration is valid.

C201A1 SCB uA is not responding

EXPLANATION
No data or invalid data was received from the Safety Control Board uA at initialization

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check that the ethernet cable between Motherboard and Safety Control Board is connected and verify that the setup of the Safety Configuration is valid.

C201A2 SCB uB is not responding

EXPLANATION
No data or invalid data was received from the Safety Control Board uB at initialization

SUGGESTION
Conduct a complete rebooting sequence.

C201A3 SCB is not responding

EXPLANATION
No data or invalid was received from Safety Control Board when requested for configuration parameters

SUGGESTION
Conduct a complete rebooting sequence.

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.97. C202 SCE configuration was illegal, after applying tolerances

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.98. C203 PolyScope detected a mismatch between the shown and (to be) applied safety parameters

EXPLANATION
PolyScope continuously verifies that the shown safety parameters are equal to the running parameters

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check that the software version is the same or newer than the firmware on the Safety Control Board, (B)Reload the installation, (C) Conduct a complete rebooting sequence

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.99. C204 Path sanity check failed

C204A1 Sudden change in target position

C204A2 Inconsistency between target position and speed

C204A3 Sudden stop

EXPLANATION
The program contains motions that are not ramped correctly down

SUGGESTION
To abort a motion, use "stopj" or "stopl" script commands to generate a smooth deceleration before using "wait". Avoid aborting motions between Waypoints with blend

C204A4 Robot has not stopped in the allowed reaction and braking time

C204A5 Robot program resulted in invalid setpoint

C204A6 Blending failed and resulted in an invalid setpoint

SUGGESTION
Try the following actions to see which resolves the issue: (A) Try changing the blend radius, (B) Contact your local Universal Robots technical support

C204A7 Robot approaching singularity - Acceleration threshold failed

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.100. C205 Target speed does not match target position

C205A0 Inconsistency between target position and speed

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.101. C206 Sanity check failed

C206A0 Target joint speed does not match target joint position change - Base

C206A1 Target joint speed does not match target joint position change - Shoulder

C206A2 Target joint speed does not match target joint position change - Elbow

C206A3 Target joint speed does not match target joint position change - Wrist 1

C206A4 Target joint speed does not match target joint position change - Wrist 2

C206A5 Target joint speed does not match target joint position change - Wrist 3

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.102. C207 Fieldbus input disconnected

SUGGESTION
Check fieldbus connections (RTDE, ModBus, EtherNet/IP and Profinet) or disable the fieldbus in the installation. Check RTDE watchdog feature. Check if a URCap is using this feature.

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.103. C208 Debug Assertion failed

EXPLANATION
An assert were executed. Notice: The functionality is exclusively used for testing purposes.

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.104. C209 A protective stop was triggered (for test purposes only)

EXPLANATION
A protective stop was triggered. Notice: The functionality is exclusively used for testing purposes.

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.105. C210 Socket is read-only when the robot is in local (Teach pendant) control

SUGGESTION
Set the robot in remote control in PolyScope to enable receiving scripts in the controller

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.106. C211 Operational mode changed

C211A0 Disabled

C211A1 Automatic

C211A2 Manual

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.107. C212 Name conflict in loaded program

C212A1 {unsigned} name conflict(s) occurred between feature names and program variables

EXPLANATION
Some feature names and program variables share the same name, which may cause confusion.

SUGGESTION
Rename the program variables.

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.108. C213 No Kinematic Calibration found (calibration.conf file is either corrupt or missing)

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.109. C214 Kinematic Calibration for the robot does not match the joint(s)

EXPLANATION
The calibration checksum stored in the calibration.conf does not match the values from the joint(s)

SUGGESTION
If moving a program from a different robot to this one, recalibrate the second robot to improve accuracy

C214A1 The Kinematic Calibration checksum does not match the Base checksum

C214A2 The Kinematic Calibration checksum does not match the Shoulder checksum

C214A3 The Kinematic Calibration checksum does not match the Elbow checksum

C214A4 The Kinematic Calibration checksum does not match Wrist 1 checksum

C214A5 The Kinematic Calibration checksum does not match for Wrist 2 checksum

C214A6 The Kinematic Calibration checksum does not match for Wrist 3 checksum

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.110. C215 Kinematic Calibration does not match the robot

EXPLANATION
The calibration checksum stored in the calibration.conf does not match the values from the joints

SUGGESTION
Check if the serial number of the Robot Arm matches the Control Box

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.111. C216 The offset of the joint has changed

C216A1 Base

C216A2 Shoulder

C216A3 Elbow

C216A4 Wrist 1

C216A5 Wrist 2

C216A6 Wrist 3

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.112. C217 White space detected at the beginning of a string token at line {unsigned}

EXPLANATION
Leading white spaces in strings are ignored in this version but won't be ignored in future releases

SUGGESTION
Make sure that these leading white spaces are intentional otherwise remove them

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.113. C218 A thread used a lot of time

EXPLANATION
There may be an infinite loop or other expensive command that does not move the robot, this can cause protective stops.

SUGGESTION
Add a Wait or sync() to split long program sequences.

C218A0 Main Robot Program.

C218A1 Thread: {string}

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.114. C219 Change in offset is too high

EXPLANATION
Following the specified offsets would result in the robot exceeding safety limits

C219A1 to meet joint speed safety limit

C219A2 to meet tool speed safety limit

C219A3 to meet momentum safety limit

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.115. C220 Kinematic Calibration

C220A1 Version {unsigned} on the robot arm is not supported

EXPLANATION
The kinematic calibration saved on the robot arm is an unsupported version.

SUGGESTION
(A) Conduct a complete rebooting sequence, (B) Update software, (C) Contact your local Universal Robots service provider for assistance

C220A2 Kinematic Calibration file was replaced with file from the arm.

EXPLANATION
The calibration.conf file was overwritten with the version stored in the arm. This is likely because the arm connected to the control box was changed

C220A3 Kinematic Calibration uploaded to the arm.

EXPLANATION
The calibration.conf file was changed and uploaded to the arm.

C220A4 Kinematic Calibration reuploaded to the arm.

EXPLANATION
The kinematic calibration was reuploaded to the arm as not all joints matching the calibration had it saved.

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.116. C221 GUI Communication

C221A0 High load, messages dropped

EXPLANATION
GUI Communication is under high load causing user messages to be dropped

SUGGESTION
(A) Reduce the number of textmsg() and varmsg() being executed in one time-step (B) Insert wait() or sync() in the thread or main program

C221A1 Overload

EXPLANATION
GUI Communication is overloaded

SUGGESTION
(A) Reduce the number of textmsg() and varmsg() being executed in one time-step (B) Insert wait() or sync() in the thread or main program

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If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.117. C257 An unexpected message was received (header {hex})

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.118. C258 Message contains invalid payload, data {unsigned}

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.119. C259 Filesystem-related issue

C259A0 Critical error

EXPLANATION
A critical error occurred in the filesystem

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Reimage SD card.

C259A1 Init failed at sub-part number: {unsigned}

C259A2 Failed to delete file with id: {unsigned}

C259A3 Filesystem was reset

C259A4 Failed to copy file at FAT entry index: {unsigned}

C259A5 Failed to write a FAT entry, file id: {unsigned}

C259A6 Failed to open a file with ID {unsigned}

C259A7 Failed to store a file with ID {unsigned}

C259A8 Write and verify of FAT valid status failed

C259A9 Write and verify of file deleted status

C259A10 Corrupted data in sector status at filesystem init

C259A11 Failed to set sector deprecated/not deprecated status

C259A12 Failed reading the FAT entry

C259A13 Information about used sector is corrupted

C259A14 Find file function failed

C259A15 Wrong CRC - file corrupted

C259A16 Could not determine which sector to use

C259A17 Wrong length, got length: {unsigned}

C259A18 Wrong file revision, got revision: {unsigned}

C259A19 Expected file length: {unsigned}

C259A20 Expected file revision: {unsigned}

C259A21 Filesystem sector at {hex} was corrupted but has been restored

C259A22 Filesystem has been restored {unsigned} times

C259A23 Apptype that performed last restore operation: {unsigned}

C259A24 SVN revision of app that performed last restore operation: {unsigned}

C259A25 Wrong Offset, got offset: {hex}

C259A26 Filesystem sector {hex} failed FAT sanitycheck

C259A27 Filesystem failed sanity check. No sector contain data that can safely be used.

C259A28 Write and verify of file data failed

C259A29 Tried to use a filesystem functions, while the filesystem uninitialized

C259A30 Tried to save a file with length zero

C259A31 Tried to save a file which would exceed the memory bounds

C259A32 There is no space in FAT array for a new FAT entry

C259A33 Failed setting sector 1 as not empty

C259A34 Failed setting sector 1 as deprecated

C259A35 Failed setting sector 0 as not emptyy

C259A36 Write and verify of FAT entry data failed

C259A37 Write and verify of CRC data failed

C259A38 Failed reading sthe status of the file

C259A39 Failed to read sector 0 status - empty

C259A40 Failed to read sector 0 status - deprecated

C259A41 Failed to read sector 1 status - empty

C259A42 Failed to read sector 1 status - deprecated

C259A43 Exceeded memory bounds

C259A44 Failed to clean a sector

C259A45 Failed to set sector empty/not empty status

C259A46 The memory device failed to erase sector

C259A47 Failed to set FAT entry deleted/not deleted status

C259A48 Failed to set FAT entry empty/not empty status

C259A49 The memory device failed to copy and verify the file

C259A50 The memory device failed to read the file data

C259A51 Examining need of garbage collection has failed

C259A52 Garbage collection has failed

C259A53 The memory device does not support direct read. Provide the pointer to a buffer

C259A54 The File is to large

C259A55 Saving the file has failed

C259A56 A file transfer is already in progress, only one at a time!

C259A57 File with ID: {unsigned} has been updated.

C259A58 Old version: {unsigned}.

C259A59 New version: {unsigned}.

C259A60 File with ID: {unsigned} Failed to update.

C259A61 Duplicate file with ID: {unsigned} configured in storage configuration.

EXPLANATION
File storage configuration has duplicate File IDs

SUGGESTION

C259A62 Unknown file with ID: {unsigned} added in storage configuration.

EXPLANATION
File storage has no handlers for configured File IDs

SUGGESTION

C259A63 Wrong filesystem revision, got revision: {unsigned}

C259A64 Expected filesystem revision: {unsigned}

C259A65 Filesystem experienced {unsigned} unexpected shutdowns.

C259A66 Volatile filesystem garbage collected {unsigned} times.

C259A67 Static filesystem garbage collected {unsigned} times.

C259A68 Git hash of app that performed last restore operation: {hex}

C259A69 Operation failed for file ID: {unsigned}

C259A70 File with ID {unsigned} not found, created new file.

C259A71 File with ID {unsigned} not found.

C259A72 File with ID {unsigned} was not completely saved.

C259A73 Cannot perform atomic store operation when processing runtime jobs.

C259A74 File with ID {unsigned} is already scheduled for storage.

C259A75 Starting recovery of filesystem sector at {hex}

C259A76 Starting garbage collection of volatile filesystem

C259A77 Starting garbage collection of static filesystem

C259A78 File with ID {unsigned} had a minimum file revision that was different from one

EXPLANATION
This could indicate an implementation error that causes issues with backwards compatibility

C259A79 Minimum file revision was {unsigned}

EXPLANATION
The data stored in joint is obsolete

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Update soft- and firmware Note: updating firmware needs to be done incrementally from such old persistent joint data. Re-deploy the previous firmware, and perform incremental upgrade up to SW 5.5 before deploying this version. IMPORTANT: Power on the robot arm between each update and validate it reaches IDLE state. Contact your local Universal Robots service provider for assistance

C259A81 Filesystem is not properly initialized

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.120. C260 Brake Release - old procedure

C260A0 Critical error

EXPLANATION
A critical error occurred during Brake Release

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Ensure the mounted payload, TCP, and CoG matches your configuration.

C260A1 Motor moved only: {float}

C260A2 Motor moved too far: {float}

C260A3 Failed, Microprocessor B wasn't ready.

C260A4 Unhandled state

C260A5 Solenoid boost too long

C260A6 Started boosting the solenoid too early after last boost

C260A12 Release of brake pin initiated

C260A13 Brake Pin successfully released

C260A14 Absolute Motor Encoder position offset unknown, searching for Motor Encoder Index Mark(s)

C260A15 Failed to determine Motor Encoder disc-type, {unsigned} Index Marks seen during Index Mark search.

C260A16 Absolute Motor Encoder position unknown after the Brake Release movement

EXPLANATION
Not enough Index Marks detected to determine absolute Motor Encoder position offset.

SUGGESTION

C260A17 Absolute Motor Encoder position offset found: {unsigned}

EXPLANATION
Enough valid Index Marks were detected during the Brake Release to determine the absolute Motor Encoder position offset.

C260A18 The robot did not come to a rest fast enough during Brake Release.

EXPLANATION
A timeout occurred while waiting for the robot to settle after the Brake Release movement.

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Ensure the robot is not subject to excessive forces or vibrations during the Brake Release.

C260A19 Commutation test started

C260A20 Joint speed too high during commutation test

EXPLANATION
The Joint speed was too high, while waiting for the robot to settle after starting the servo- and motor-control loops.

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Ensure the robot is not subject to excessive forces or vibrations during the Brake Release. !

C260A21 Joint speed not low enough, during commutation test

EXPLANATION
A timeout occurred while waiting for the Joint speed to settle after starting the servo- and motor-control loops.

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Ensure the robot is not subject to excessive forces or vibrations during the Brake Release.

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.121. C261 Temperature Sensor

C261A0 Critical error

EXPLANATION
A critical error occurred in the temperature sensor

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence.

C261A1 Temperature is too high: {float} Celsius

C261A2 Temperature is too low: {float} Celsius

C261A3 Temperature changed more than allowed: {float} Celsius

C261A4 Temperature is too high ({float} degrees Celsius)

EXPLANATION
Ambient temperature is too high or robot is overloaded

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Cool down the robot's environment and make sure the robot is operating within recommended limits, (B) Conduct a complete rebooting sequence.

C261A5 Temperature is too low ({float} degrees Celsius)

EXPLANATION
Ambient temperature is too low

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Make sure the robot is operating within recommended limits, (B) Conduct a complete rebooting sequence.

C261A6 Wrong device id {unsigned}

C261A7 Wrong revision id {unsigned}

C261A8 Wrong manufacturer id {unsigned}

C261A9 Failed to initialize I2C communication

C261A10 Failed to read from I2C

C261A12 Caught in unhandled state: {unsigned}

C261A13 Reading failed with timeout

C261A14 Failed to initialize thermometer hardware

C261A15 Temperature sensor {unsigned} read a temperature outside the allowed range.

EXPLANATION
A sensor read a temperature which is outside or close to robot operational limits. 0 = Core, 1 = Board.

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.122. C262 Communication

C262A0 Critical error

EXPLANATION
A critical error occurred in the communication framework

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check for ESD noise, (C) Update software.

C262A1 SPI length not accepted: {unsigned}

C262A2 Failed to transmit control data

C262A4 The {unsigned} message composed by the device was too long

C262A5 The device composed a message where the package destination and the message destination were different ({unsigned})

C262A6 The device composed a message where the package destination and the message destination were different ({unsigned})

C262A7 The received message has an invalid length, 4 byte data [status, type, source, length]: {hex}

C262A8 FIFO transfer error

C262A9 Memory allocation failed during the transfer operation

C262A10 SPI failed when flushing the RX buffer

C262A11 CRC error : Header {hex}

EXPLANATION
A corrupted data package was received.

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check communication cables, (C) Update software.

C262A12 Message not send to this device was received. Header : {hex}

C262A13 A message was received on an unknown interface: {unsigned}

C262A14 A message was received with an unknown RX channel: {unsigned}

C262A15 Unexpected message received from Joint to SCB. Header: {hex}

C262A16 Failed to send message to communication queues

EXPLANATION
Communication queue is in an improper state.

SUGGESTION

C262A17 Failed to communicate with Joint: {unsigned}

C262A18 Failed to communicate with TOOL:

C262A19 Received a non-finite float in a message, 4 byte data [0xFF, element index, type, source]: {hex}

C262A20 Received a non-finite float in a special command, 4 byte data [0xFF, element index, command, source]: {hex}

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.123. C263 Motor Encoder

C263A0 Critical error

EXPLANATION
A critical error occurred in the Motor Encoder.

SUGGESTION
Contact your local Universal Robots service provider for assistance.

C263A1 Motor Encoder is unavailable

EXPLANATION
The Motor Encoder's sense signal indicates a bad connection.

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C263A2 Calibration has been invalidated and can lead to reduced performance.

EXPLANATION
An error in the file handling caused the invalid calibration, which can alter joint performance.

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C263A3 Calibration quality is poor, estimated error-reduction: {float_5_5}

C263A4 Calibration quality is poor, estimated error-reduction: {float_5_5}

C263A5 Calibration quality: estimated error-reduction = {float_5_5}

C263A7 Failed to determine absolute Motor Encoder position. Distance {signed} not found in Index Mark LUT

EXPLANATION
If the distance between two adjacent Index Marks does not exist in the Index Mark LUT, one or more invalid Index Marks were detected

C263A8 Failure: Not enough valid Index Marks detected to determine absolute Motor Encoder position during movement of {signed} ticks.

EXPLANATION
At least two valid Index Marks have not been detected during a large movement.

C263A9 Missing Index Mark detected at absolute Motor Encoder position {unsigned}

C263A10 Index drift detected at absolute Motor Encoder position {unsigned}

C263A11 An Index Mark was expected at absolute Motor Encoder position {unsigned}

C263A12 Previous Index Mark was detected at absolute Motor Encoder position {unsigned}

C263A13 Joint velocity: {float_2_6} [rad/s]

C263A14 Index Mark position lost due to a timing error

EXPLANATION
A new Index Mark was captured by the peripheral timer before the previously captured value was read, resulting in an over-capture event.

C263A15 Index Mark position queue overflow

EXPLANATION
The queue used to hold the captured Index Mark positions was full. Writing an Index Mark position to the queue failed.

SUGGESTION

C263A16 Index Mark was not detected when entering RUNNING mode

C263A17 Motor commutation-zero angle set to: ME position = {float_2_8} [rad]

C263A18 Failed to retrieve new memory block for Motor Encoder Index Marks

C263A19 The memory block swap failed

C263A20 Validation of the detected Index Mark ({signed}) failed

EXPLANATION
Validation of the absolute Motor Encoder position failed because the detected Index Mark number is outside the required range.

SUGGESTION

C263A21 Validation of the detected Index Mark ({signed}) failed

EXPLANATION
The absolute Motor Encoder position cannot be validated because the Motor position calculated by the Joint Encoder is invalid.

SUGGESTION
Try the following actions to see if itwhich resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C263A22 Failed to determine the absolute position missing index detected, distance = {signed}.

EXPLANATION
The detected distance is greater than the maximum allowed distance between any two Index Marks

SUGGESTION

C263A23 Discarding Motor Encoder raw pos1: {unsigned}

C263A24 Motor Encoder raw pos1: {unsigned}

C263A25 Motor Encoder raw pos2: {unsigned}

C263A26 Failure to log missing Index Mark, index out of range: {unsigned}

C263A27 Failure to log index drift, position out of range: {unsigned}

C263A28 STAT command check failure: {unsigned}

C263A29 STAT special cmd boundary failure, type *1000 + idx: {unsigned}

C263A30 The timer ratio is out of sync, actual ratio is {float}

C263A31 The motor encoder configuration file id:{unsigned} was not succesfully loaded

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket

1.124. C264 Task Manager

C264A0 Critical error

EXPLANATION
A critical error occurred in the task manager

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C264A1 Missed a systick

C264A2 Overload, task-ID: {unsigned}, was not executed in time.

EXPLANATION
A system task was not executed at the appropriate time

SUGGESTION

C264A3 The task was delayed by: {float} uS

EXPLANATION
A system task was delayed.

SUGGESTION

C264A4 Overrun, task ID: {unsigned}, exceeded allowed execution window.

EXPLANATION
A system task exceeded its permitted execution time.

SUGGESTION

C264A5 The task allowed execution time was exceeded by: {float} uS

EXPLANATION
A system task exceeded its permitted execution time.

SUGGESTION

C264A6 CPU load is {float_2_0}%.

C264A7 SOC was required but not found after {unsigned}ms.

C264A8 Systick and SOC are misaligned by {float}us.

C264A9 Unexpected (+) or missing (-) SOCs detected within 1s check period: {signed}.

C264A10 Invalid SOCs detected within 1s check period: {unsigned}.

C264A11 Lost {unsigned} SOC(s).

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.125. C265 Joint Encoder

C265A0 Joint encoder position invalid. Detailed error: {hex}

EXPLANATION
A critical error occurred in the Joint Encoder. The reported position is not valid.

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check for ESD noise, (C) Update software.

C265A1 Data is invalid. Status: {hex}

C265A2 CRC failed

C265A3 Data is arriving late or not at all

C265A4 The Joint Encoder Firmware version {hex} is incorrect

EXPLANATION
Joint Encoder version was not whitelisted

C265A5 Near operation limits. Status: {hex}

EXPLANATION
The joint encoder is close to operational limits. Reported positions have reduced precision.

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check for ESD noise, (C) Update software.

C265A6 Not present. Status: {hex}

EXPLANATION
The Joint Encoder is not responding to commands

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check for ESD noise, (C) Update software, (D) Contact your local Universal Robots service provider for assistance

C265A7 Decoding error. Status: {hex}

EXPLANATION
The module is out of alignment or the ring is damaged or external magnetic field present or encoder acceleration too high.

C265A8 Internal speed data is not valid. Status: {hex}

EXPLANATION
The time difference between two position requests exceeded 65 ms.

C265A9 Circuit malfunction or inconsistent calibration. Status: {hex}

C265A10 Power supply voltage out of range. Status: {hex}

C265A11 The room temperature is out of range. Status: {hex}

EXPLANATION
The room temperature is too high or the robot is overloaded.

SUGGESTION
Cool down the environment and make sure the robot is operating within the recommended limits.

C265A12 Signal lost. Status: {hex}

C265A13 Signal amplitude low. Status: {hex}

C265A14 Signal amplitude too high. Status: {hex}

C265A15 Signal clipping. Status: {hex}

C265A16 Failed to initiate data transfer with the Joint Encoder

EXPLANATION
Could not schedule asynchronous callback

C265A17 Failed to initiate data transfer with the Joint Encoder. Could not acquire a DMA buffer

C265A18 The Zero-torque offset of the Motor model is not valid

C265A19 The position reported by the encoder does not convert to a valid floating point number. Binary data: {hex}

C265A20 Negative sampling delay (Value = {float_5_5}) can result in missing jointencoder feedback.

EXPLANATION
If the sampling delay is negative, the requested data package can't be sampled and transferred from the joint encoder, to the joint, before the next deadline.

C265A21 Sampling delay was negative: Actual Systick-time = {unsigned} us.

EXPLANATION
Systick-time refers to the time, in microseconds, since the start of the current scheduling cycle.

C265A22 Sampling delay was negative: Actual Sampling-time = {float_5_5} us.

EXPLANATION
Sampling-time refers to the total time needed, from requesting a sample by asserting chip-select, until the requested package has been transmitted by the joint encoder and received in the joint MCU.

C265A23 Sampling delay was negative: Actual Sample-deadline-time = {float_5_5} us.

EXPLANATION
Sample-deadline-time refers to the future Systick-time, when the joint encoder sample must be ready for parsing.

C265A24 Encoder acceleration too high. Status: {hex}

C265A25 Decoding error. Status: {hex}

EXPLANATION
The module is out of alignment or the ring is damaged or external magnetic field present.

C265A26 Decoding warning. Status: {hex}

EXPLANATION
Encoder is close to invalid-decoding error. Check installation and magnetic fields.

C265A27 System warning. Status: {hex}

EXPLANATION
Encoder state is undefined (position is not yet calculated).

C265A28 The jointencoder position filter {unsigned} is not valid

EXPLANATION
The joint encoder position filter has to be one of the valid types

C265A29 An attept to initialize the position filter was made after it has already been initialized

EXPLANATION
The position filter can only be initialized once (with one filter type)

C265A30 Invalid pointer when initializing adaptive filter

EXPLANATION
The adaptive position filter was initialized with an invalid pointer

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If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.126. C266 Self-test

C266A0 Critical error

EXPLANATION
A critical error occurred in the Joint Self-test

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C266A1 ADC calibration failed

C266A3 Brake Test failed

C266A4 Brake Test failed. An Index Mark should have been detected.

C266A5 Cogging calibration failed

C266A6 Joint calibration failed

C266A7 Microprocessor B failed

C266A8 Commutation offset calibration failed

C266A10 uPB failed to sync with tag {unsigned}

C266A11 ADC Calibration failed due to an invalid gain of ({float})

C266A12 ADC Calibration failed due to an invalid offset of ({float})

C266A13 Brake Test failed because it moved too far

C266A14 Brake Test failed due to the current being ({float}A) too high.

C266A15 Brake Test success: current {float}A

C266A18 Brake Release procedure failed

C266A19 Motor phases are connected in the wrong order, speed: {float}rad/s

C266A20 uPA is in an abnormal state

C266A21 Microprocessor A failed

C266A22 Not all tests were completed.

C266A23 Printed Circuit Board type has not been identified as being a Joint.

C266A25 Joint moving to new mounting position: {float}rad

C266A26 Joint failed to move to a new mounting position: {float}rad

C266A27 Restarting the Self-test

C266A28 External device failed to run Self-test

C266A29 Serial calibration failed

C266A30 Self-test was succesfully validated with serial:{unsigned}

C266A31 ADC calibration failed, too high current requested: {float}A

C266A32 Doing ADC calibration with sample voltage: {float}V

C266A33 ADC calibration assumes nominal gain of {float}

C266A34 ADC calibration cannot load ADC configuration file

C266A36 Joint- and Motor-Encoder calibration failed

C266A37 Start of invalid test have been requested. Test ID: {unsigned}

C266A38 Invalid ADC test stage have been requested. stage ID: {unsigned}

C266A39 Force-Torque sensor calibration did not start because the temperature is below the required threshold of {float} degrees Celsius

C266A40 Tool was moved during calibration

C266A41 Unable to reach target temperature for Joint calibration

C266A42 Failure to save the Motor Encoder data file

C266A43 Failure to save the index LUT data file

C266A44 The motor constants calibration stage failed to load required files

C266A45 The motor constants calibration stage entered illegal state

C266A46 Stator calibration cannot load the Motor Parameters file

C266A47 Stator calibration cannot load the ADC Configuration file

C266A48 Stator calibration cannot load the Inverter Configuration file

C266A49 Stator calibration failed, too high current requested: {float}A

C266A50 Doing stator calibration with sample voltage: {float}V

C266A51 Starting stator cooldown, temperature is: {float} degrees Celcius

C266A52 Doing stator cooldown iteration, temperature is: {float} degrees Celcius

C266A53 Stator not cooling down, temperature is: {float} degrees Celcius

C266A54 Stator not cooling down fast enough, temperature is: {float} degrees Celcius

C266A55 Stator is heating up, temperature is: {float} degrees Celcius

C266A56 Unexpected PCB {unsigned}, unable to determine servo_speed_params

C266A57 Selftest was expected to be in state: INIT but was in state: {unsigned} instead

C266A58 State at last shutdown: {unsigned}

C266A59 Commutation angle calibration does not support {unsigned} polepairs

C266A60 Commutation angle calibration is unable to find the first pole

C266A61 Commutation angle calibration is unable to settle in position

C266A62 EMS ADC calibration data is missing or invalid, run new EMS test

C266A63 The revision {unsigned} of the EMS ADC calibration is not supported by this firmware

C266A64 Vibration measurement, unsupported PCB {unsigned}

C266A65 The hardware info message revision is not supported {hex}

C266A66 The enum version is not supported {hex}

C266A67 Invalid amount of hardware types in one message {unsigned}

C266A68 Information on hardware ID {hex} has already been received

C266A69 Received unknown hardware ID {unsigned}

C266A70 Mismatch between rotor and stator type {hex}

C266A71 Received unknown motor type {unsigned}

C266A72 Mismatch between gear box and shaft type {unsigned}

C266A73 Received unknown gear type {unsigned}

C266A74 Received unknown motor encoder platform type {unsigned}

C266A75 Hardware ID {unsigned} not received

C266A76 Could not set motor parameters for the given type {unsigned}

C266A77 Invalid amount of hardware types requested for storage {unsigned}

C266A78 Timed out while waiting for hardware information. Waited {unsigned} milliseconds

C266A79 Hardware info failed

C266A80 Average D voltage in the positive direction was {float}

C266A81 Average Q voltage in the positive direction was {float}

C266A82 Average D voltage in the negative direction was {float}

C266A83 Average Q voltage in the negative direction was {float}

C266A87 Failed to load nominal shunt data

C266A88 Zero current measurement not completed

C266A89 The revision {unsigned} of the ADC calibration is not supported on this joint size, make sure correct EMS data is available.

C266A90 Got {unsigned} bytes of magnetic field data.

C266A91 Expected {unsigned} bytes of magnetic field data.

C266A92 Got {unsigned} samples of magnetic field data.

C266A93 At least {unsigned} samples of magnetic field data is required on a revolution. Reduce motor velocity for test.

C266A94 Both regression lines have equal slope, no valid sensor tilt can be derived. Validate that no external magnetic field disturb the encoder.

C266A95 Average D current in the positive direction was {float}

C266A96 Average Q current in the positive direction was {float}

C266A97 Average D current in the negative direction was {float}

C266A98 Average Q current in the negative direction was {float}

C266A99 Commutation angle optimization actual commutation angle: {float}

C266A100 Commutation angle optimization iteration {unsigned} results:

C266A101 The package size cannot contain a header and at least one hardware ID

C266A102 The memory buffer pointer is invalid

C266A103 Invalid distance {float} between polepairs

C266A104 Invalid distance {float} between polepair measurements from positive and negative directions

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.127. C267 Bootloader error

C267A0 Critical error

EXPLANATION
A critical error occurred during Firmware upgrade.

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C267A1 Bootloader is corrupted

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C267A2 Firmware is corrupted

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update soft- and firmware

C267A3 Power on Self-test failed

C267A4 The processor unique ID is wrong

SUGGESTION

C267A5 The processor version is wrong

SUGGESTION

C267A6 Unable to boot main application

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update soft- and Upgrade firmware

C267A7 The AES key is corrupted

C267A8 Decrypted data is corrupted

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update soft firmware.

C267A9 Data sent but expected IV

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update soft firmware.

C267A10 Data could not be correctly decrypted

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update soft firmware.

C267A11 Hardware configuration issue

EXPLANATION
Hardware configuration mismatch

SUGGESTION

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.128. C268 Special Command

C268A0 Received unhandled command cmd:{unsigned}

C268A1 Recieved Set Zero Command at too high speed

C268A2 Self-test command with illegal key: {unsigned}

C268A3 Self-test command was not executed, key:{unsigned}

EXPLANATION
The command was received in an illegal Self-test state

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.129. C269 Transceiver - deprecated

C269A0 Hub : Framing error on port: {signed}

EXPLANATION
A message with a malformed frame was passed to the HUB on specified port(0: Int 1: Ext0, 2: Ext1, 4: None)

SUGGESTION

C269A1 Hub : Alignment error on port: {signed}

EXPLANATION
A message with a malformed frame was passed to the HUB on specified port(0: Int 1: Ext0, 2: Ext1, 4: None)

SUGGESTION

C269A2 Data transmission unit : FiFo overflow on port {unsigned}

EXPLANATION
Transmission unit had a FiFo overflow on specified port (0: port a, 1: port b)

C269A3 Data transmission unit : code error on port {unsigned}

EXPLANATION
Transmission unit received a code error on specified port (0: port a, 1: port b), this should never happen

SUGGESTION

C269A4 Data reception unit : Alignment error on port {unsigned}

EXPLANATION
Reception unit was unaligned with message on specified port (0: port a, 1: port b)

SUGGESTION

C269A5 Data reception unit : Alignment fault on port {unsigned}

EXPLANATION
Reception unit was unable to align to incomming message on specified port (0: port a, 1: port b)

SUGGESTION

C269A6 Data reception unit : Code error on port {unsigned}

EXPLANATION
Reception unit saw an invalid control code on specified port (0: port a, 1: port b)

SUGGESTION

C269A7 Data reception unit : Disparity error on port {unsigned}

EXPLANATION
Reception unit got a disparity error on specified port (0: port a, 1: port b)

SUGGESTION

C269A8 Data reception unit : FiFo overflow on port {unsigned}

EXPLANATION
Reception unit had a FiFo overflow on specified port (0: port a, 1: port b)

SUGGESTION

C269A9 Upstream transport layer : Package CRC error

EXPLANATION
Upstream transport layer cought CRC error in package header, this might happen on occation. Can be ignored if only happens rarely

C269A10 Upstream transport layer : Bad package framing

EXPLANATION
Upstream transport layer had found a framing error.

SUGGESTION

C269A11 Upstream transport layer : Rx FiFo overflow

EXPLANATION
Upstream transport layer had a FiFo overflow

SUGGESTION

C269A12 Upstream transport layer : Tx FiFo overflow

EXPLANATION
Slave transport layer had a Tx FiFo overflow

SUGGESTION

C269A13 Upstream transport layer : Invalid hub count

EXPLANATION
Slave transport layer recieved a message with invalid hub-cnt

SUGGESTION

C269A14 Upstream transport layer : Request source not master.

EXPLANATION
Slave transport layer recieved a message request from a device different from the master

SUGGESTION

C269A15 Upstream transport layer : Response source not slave.

EXPLANATION
Slave transport layer recieved a message response from a device different from a slave

SUGGESTION

C269A16 Upstream transport layer : Sync package type received

EXPLANATION
Master transport layer recieved a message where the type was Sync

SUGGESTION

C269A17 Upstream transport layer : Trigger package type received

EXPLANATION
Master transport layer recieved a message where the type was a tigger

SUGGESTION

C269A18 Upstream transport layer : Request package type received

EXPLANATION
Master transport layer recieved a message where the type was a request

SUGGESTION

C269A19 Upstream transport layer : Invalid reponse type received

EXPLANATION
Master transport layer recieved a message where the type was an invalid response

SUGGESTION

C269A20 Upstream transport layer : Package from invalid source received

EXPLANATION
Master transport layer recieved a package with an invalid source

SUGGESTION

C269A21 Upstream transport layer : Missmatch between HUB count and package source

EXPLANATION
Master transport layer recieved a package where the src and HUB count did not match

SUGGESTION

C269A22 Upstream transport layer : Package longer than expected

EXPLANATION
Master transport layer recieved a package where the length was greate than expected, or lost a framing end

SUGGESTION

C269A23 Upstream transport layer : Package shorter than expected

EXPLANATION
Master transport layer recieved a package where the length was less than expected

SUGGESTION

C269A24 Upstream transport layer : Package was misaligned

EXPLANATION
Master transport layer recieved a package that did not align to 32bit

SUGGESTION

C269A25 Downstream transport layer : Package was shorter than expected

EXPLANATION
Downstream transport layer tried to transmit a package that was longer than the data available

SUGGESTION

C269A26 Downstream transport layer : Package was longer than expected

EXPLANATION
Downstream transport layer tried to transmit a package with more data than expected

SUGGESTION

C269A27 Downstream transport layer : Invalid package type

EXPLANATION
Master transport layer tried to transmit a package with an invalid package type

SUGGESTION

C269A28 Downstream transport layer : Package type missing

EXPLANATION
Master transport layer tried to transmit a package without a package type

SUGGESTION

C269A29 Downstream transport layer : Message length missing

EXPLANATION
Master transport layer tried to transmit a package without a message length

SUGGESTION

C269A30 Downstream transport layer : Package destination missing

EXPLANATION
Master transport layer tried to transmit a package without a destination

SUGGESTION

C269A31 Downstream transport layer : Package source missing

EXPLANATION
Master transport layer tried to transmit a package without a source

SUGGESTION

C269A32 Downstream transport layer : Package NML missing

EXPLANATION
Master transport layer tried to transmit a package without a next message length

SUGGESTION

C269A33 Downstream transport layer : Package TTTL missing

EXPLANATION
Master transport layer tried to transmit a package without a time to live

SUGGESTION

C269A34 Downstream transport layer : Package timeout(high byte) missing

EXPLANATION
Master transport layer tried to transmit a package without a timeout the high byte

SUGGESTION

C269A35 Downstream transport layer : Package timeout(low byte) missing

EXPLANATION
Master transport layer tried to transmit a package without a timeout the low byte

SUGGESTION

C269A36 Downstream transport layer : Invalid message length

EXPLANATION
Master transport layer tried to transmit a package with missmatch between stated and actual length

SUGGESTION

C269A37 BLVDS controller : Received control pkg in data phase

EXPLANATION
BLVDS controller received a control package when not in the control phase

SUGGESTION

C269A38 BLVDS controller : Received data package in control phase

EXPLANATION
BLVDS controller received a data package when not in the data phase

SUGGESTION

C269A39 BLVDS controller : Got SOC before being ready

EXPLANATION
BLVDS controller got a SOC interrupt while not ready

SUGGESTION

C269A40 BLVDS scheduler : Got SOC before being ready

EXPLANATION
BLVDS scheduler got a SOC interrupt while not ready

SUGGESTION

C269A41 BLVDS scheduler : Node ID invalid

EXPLANATION
BLVDS scheduler tried to send to Node ID outside valid range

SUGGESTION

C269A42 Switch : Priority package timeout on ports: {hex}

EXPLANATION
Switch timed out trying to provide priority package to specified ports (bitmask)

SUGGESTION

C269A43 Switch : Data package timeout on ports: {hex}

EXPLANATION
Switch timed out trying to provide data package to specified ports (bitmask)

SUGGESTION

C269A44 Endpoint : Priority data debug channel overflow

EXPLANATION
SCB Endpoint discarded priority data to debug channel as it was not consumed fast enough

SUGGESTION

C269A45 Endpoint : data debug channel overflow

EXPLANATION
SCB Endpoint discarded data to debug channel as it was not consumed fast enough

SUGGESTION

C269A46 Endpoint : Priority data inbound timeout from port {hex}

EXPLANATION
SCB Endpoint lost an inbound priority package on specified port as the data was not provided before timeout, data as bitmask

SUGGESTION

C269A47 Endpoint : Data inbound timeout from port {hex}

EXPLANATION
SCB Endpoint lost an inbound package on specified port as the data was not provided before timeout, data as bitmask

SUGGESTION

C269A48 Endpoint : Priority data outbound timeout to port {hex}

EXPLANATION
SCB Endpoint lost an outbound priority package to specified port as the data was not consumed before timeout, data as bitmask

SUGGESTION

C269A49 Endpoint : Data outbound timeout to port {hex}

EXPLANATION
SCB Endpoint lost an outbound package to specified port as the data was not consumed before timeout, data as bitmask

SUGGESTION

C269A50 UART : FiFo overflow

EXPLANATION
UART lost incomming data as a result of a FiFo overflow

SUGGESTION

C269A51 UART : Length mismatch

EXPLANATION
UART discarded a package as length of data did not match announced data

SUGGESTION

C269A52 UART : Unexpected SOM

EXPLANATION
UART got a new start of message during transmission of a message, data will be lost

C269A53 uA SPI : FiFo underflow

EXPLANATION
uA SPI FiFo ran out of data before message was complete

SUGGESTION

C269A54 uA SPI : Unexpected read command

EXPLANATION
uA SPI received a read command without signaling data ready

SUGGESTION

C269A55 uA SPI : Unsupported command: {hex}

EXPLANATION
uA SPI received an unspported command

SUGGESTION

C269A56 uA SPI : FiFo overflow

EXPLANATION
uA SPI received more data from device than could be stored.

SUGGESTION

C269A57 uB SPI : FiFo underflow

EXPLANATION
uB SPI FiFo ran out of data before message was complete

SUGGESTION

C269A58 uB SPI : Unexpected read command

EXPLANATION
uB SPI received a read command without signaling data ready

SUGGESTION

C269A59 uB SPI : Unsupported command: {hex}

EXPLANATION
uB SPI received an unspported command

SUGGESTION

C269A60 uB SPI : FiFo overflow

EXPLANATION
uB SPI received more data from device than could be stored.

SUGGESTION

C269A61 The SoC arrived {unsigned} [ns] too early

EXPLANATION
The ideal period of the SoC is 1000.00 us, and the allowed jitter is +/- 1000.0 ns

C269A62 Timeout while waiting for the SoC, the SoC was lost or delayed more than {unsigned} ns!

EXPLANATION
The ideal period of the SoC is 1000.00 us, and the allowed jitter is +/- 1000.0 ns

SUGGESTION

C269A63 uA SPI : FiFo overflow on interface: {signed}

EXPLANATION
uA SPI received more data than could be relayed to device.

C269A64 uA SPI : FiFo overflow cleared

EXPLANATION
uA SPI is ready to relay messages to device.

SUGGESTION

C269A65 uB SPI : FiFo overflow on interface: {signed}

EXPLANATION
uB SPI received more data than could be relayed to device.

SUGGESTION

C269A66 uB SPI : FiFo overflow cleared

EXPLANATION
uB SPI is ready to relay messages to device.

SUGGESTION

C269A67 PCIe Control-Data : Blocked for {unsigned} us

EXPLANATION
PCIe control channel overflowed and was blocked, time to nearest us

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Reduce CPU load

C269A68 PCIe Priority-Data : Blocked for {unsigned} us

EXPLANATION
PCIe priority channel overflowed and was blocked, time to nearest us

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Reduce CPU load

C269A69 PCIe data-data : Blocked for {unsigned} us

EXPLANATION
PCIe data channel overflowed and was blocked, time to nearest us

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Reduce CPU load

C269A70 Flash device is not supported, JEDEC data for device is: {hex}

EXPLANATION
The flash device's JEDEC ID does not match a supported flash device

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.130. C270 Self-test SYNC

C270A1 Unexpected ACK received with tag {unsigned}

C270A2 Unexpected NACK received with tag {unsigned}

C270A3 Timeout while waiting for ACK/NACK with tag {unsigned}

C270A4 Expected ACK received with tag {unsigned}.

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.131. C271 Low level real-time thread

C271A1 Runtime is too much behind.

EXPLANATION
One of the threads might be using too much time (see log for more details).

SUGGESTION
Try the following actions to see which resolves the issue: (A) Use a Wait or sync() to split long program sequences that do not move the robot.

C271A2 Too many invalid packets from the robot

C271A3 Runtime and communication out of sync

C271A4 Runtime and communication out of sync

C271A5 Runtime and communication out of sync

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.132. C272 Missing calibration

C272A0 Critical error - the calibration is missing

EXPLANATION
Calibration could not be loaded

C272A1 ADC calibration is missing

C272A2 Commutation offset calibration is missing

C272A3 Cogging calibration is missing

C272A5 Joint- and Motor-Encoder calibration is missing

C272A6 Motor parameter calibration is missing

C272A7 Joint-Encoder Legacy calibration is missing

C272A8 Joint-Encoder DFT calibration is missing

C272A9 Motor-Encoder calibration is missing

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.133. C273 Cross monitoring

C273A0 Critical error

EXPLANATION
A critical disagreement error occurred in the safety system

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A1 Float value on A-side: {float}

C273A2 Float value on B-side: {float}

C273A3 Unsigned value on A-side: {unsigned}

C273A4 Unsigned value on B-side: {unsigned}

C273A5 Disagreement on Safety Control Board State

EXPLANATION
A critical disagreement occurred within the safety system.

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A6 Disagreement on Robot State

EXPLANATION
A critical disagreement occurred within the safety system.

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A7 Disagreement on Safety State

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A8 Disagreement on position

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A9 Disagreement on velocity

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A10 Disagreement on current

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A11 Disagreement on temperature

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A12 Disagreement on Teach Pendant State

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A13 Disagreement on Teach Pendant Emergency Stop

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A14 One processor entered Fault State

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A15 One processor entered Violation State

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A16 Joint State disagreement

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A17 Joint Constant Data CRC disagreement

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A18 Joint target current disagreement

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A19 Torque Window disagreement

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A20 Torque Error disagreement

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A21 Target Velocity disagreement

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A22 Target Acceleration disagreement

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A23 Recovery Mode CRC disagreement

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A24 Robot Configuration CRC disagreement

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A25 User Configuration CRC disagreement

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A26 Maximum stopping time disagreement

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A27 Stopping Time Torque Overload disagreement

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A28 Disagreement error on joint {unsigned}

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A29 Tool speed disagreement

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A30 Safety Mode Limit disagreement

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A31 Hand Protection Distance disagreement

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A32 Elbow Sphere speed disagreement

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A33 Momentum disagreement

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A34 Power disagreeement

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A35 Elbow position disagreement

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A36 Workpiece Rotation disagreement

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A37 Disagreement on Workpiece Position

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A38 Disagreement on motor parameter (R_pp)

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A39 Disagreement on motor parameter (L_pp)

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A40 Disagreement on motor parameter (Kb)

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A41 Disagreement on motor parameter (Kt)

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A42 Disagreement on motor parameter (T)

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A43 Disagreement on the Teach Pendant's Three-Position Enabling Device

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A44 Disagreement on the active status of the Teach Pendant's Three-Position Enabling Device

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A45 Disagreement on user safety configuration version, major

C273A46 Disagreement user safety configuration version, minor

C273A47 Disagreement on state

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A48 Disagreement on Injection-Molding-Machine-Interface Emergency Stop input

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A49 Disagreement on Injection-Molding-Machine-Interface Emergency Stop output

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A50 Disagreement on Injection-Molding-Machine-Interface Safeguard input

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A51 Disagreement on Injection-Molding-Machine-Interface type

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A52 Disagreement on Torque Parameters CRC

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A53 Target Torque disagreement

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A54 Disagreement on hardware configuration CRC

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A55 Disagreement on compensation current

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A56 Disagreement on external torque target

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C273A57 Safety Target Torque disagreement

EXPLANATION
A critical disagreement occurred within the safety system

SUGGESTION
Try the following actions to see if it which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.134. C274 Control box fan error

C274A1 Fan is not running

EXPLANATION
The control box fan must be running to prevent the control box from overheating

SUGGESTION
Try the following actions to see if it resolve the issue: (A) Conduct a complete rebooting sequence, (B) Ensure the fan in the control box can rotate freely and the connector is attached. The control box fan is located between the air filter and the energy eater in the control box. See the Service Manual for details.

C274A2 Monitoring data timed out

EXPLANATION
The monitoring signals for the fan speed was not received by the system in a timely manner

SUGGESTION
Try the following actions to see if it resolve the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C274A3 Fan speed is {float}

EXPLANATION
Fan rotational speed in RPM

Try the following actions to resolve the issue: (A) Conduct a complete rebooting sequence, (B) Update software, (C) Contact your local Universal Robots service provider for assistance.

1.135. C275 Brake Pin

C275A1 Boost on

C275A2 Boost off

C275A4 Released

C275A6 Locked

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.136. C276 Uart

C276A0 Critical error

EXPLANATION
A critical error occurred in the UART driver

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C276A1 Wrong length received, data: {hex}

EXPLANATION
Byte 3: bytes recieved, Byte 2: pkg len, Byte 1: pkg dst, Byte 0: pkg src

C276A2 Noise detected

C276A3 Framing error

C276A4 Overrun error

C276A5 failed to start rx

C276A6 Trying to start TX DMA while DMA in use

C276A7 TX DMA transfer error, uart: {unsigned}

C276A8 TX DMA FIFO error, uart: {unsigned}

C276A9 Parity error

C276A10 Interrupt flag unhandled: {unsigned}

C276A11 The Commit function has not been initialized.

C276A12 Cannot provide desired baudrate: {unsigned}

C276A13 The package length is greater than 256 bytes, can't be sent: {unsigned}

C276A14 Unhandled overflow detected

EXPLANATION
UART overflowed and driver did not clear it correctly

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.137. C277 Memory

C277A1 Failed to allocate memory

C277A2 Wrong memory pointer freed: {hex}

C277A3 Pointer with value zero freed, caller: {hex}

C277A4 Wrong memory pointer freed, caller: {hex}

C277A5 Unable to push message to queue, id: {unsigned}

C277A6 Report queue is full

EXPLANATION
Report queue has run out of space, expect loss of messages

SUGGESTION

C277A7 The queue of available message buffers is nearly empty.

C277A8 Pointer with value zero pushed to queue, queueID: {unsigned}

C277A9 Memmory Allocation fail data: {unsigned}

C277A10 Unable to latch report: {hex}

EXPLANATION
Specified report is already latched expect loss of report data

C277A11 memory leak detected, due a full free queue

EXPLANATION
Free queue is in a bad state

SUGGESTION

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.138. C278 Servo

C278A0 Critical error

EXPLANATION
A critical error occurred in the servo module

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C278A1 Joint moment of inertia = {float_5_5} [kg*m^2] received from the controller is not within the valid range

C278A2 The minimum required current loop bandwidth is greater than allowed

EXPLANATION
The Speed loop damping is set too low, and/or the Speed LPF pole is set too high

C278A3 Received a new control parameter with key {unsigned}

EXPLANATION
Controller passed a new control parameter to the joints

C278A4 Received a new control parameter with value {float}

EXPLANATION
Controller passed a new control parameter value to the joints

C278A5 Device mode function pointer initialized to NULL

EXPLANATION
The function pointer to get device mode was initialized to NULL which is not valid

C278A6 Joint target position is not a finite value, value: {float}

C278A7 Joint target speed is not a finite value, value: {float}

C278A8 Joint target current is not a finite value, value: {float}

C278A9 Joint current min is not a finite value, value: {float}

C278A10 Joint current max is not a finite value, value: {float}

C278A11 Joint actual inertia is not a finite value, value: {float}

C278A12 Joint target acceleration is not a finite value, value: {float}

C278A13 Joint target torque is not a finite value, value: {float}

C278A14 Joint predicted torque is not a finite value, value: {float}

C278A15 Joint control torque is not a finite value, value: {float}

C278A16 Joint torque min is not a finite value, value: {float}

C278A17 Joint torque max is not a finite value, value: {float}

C278A18 The control message version that was received in not supported. Version received: {unsigned}

C278A19 Previous device mode function pointer initialized to NULL

EXPLANATION
The function pointer to get previous device mode was initialized to NULL which is not valid

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If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.139. C279 Flash

C279A0 Critical error

EXPLANATION
A critical error occurred in the flash driver

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C279A1 Unable to allocate data in Flash

C279A2 Address is not aligned

C279A3 Source is not aligned

C279A4 Unable to read data

C279A5 Tried writing to nonerased address

C279A6 Flash access error

C279A7 Flash protection violation

C279A8 Previous operation failed

C279A9 Failed during execution

C279A10 Write verification failed

C279A11 Reading out of bounds

C279A12 Write and verify operation failed

C279A13 Address to be erased is not aligned

C279A14 Address to be erased is out of bounds

C279A15 Erase verification failed

C279A16 Collision of read and write

C279A17 Init failed

C279A18 Unable to write data

C279A19 System voltage too low

C279A20 Flash quality issue count: {unsigned}

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.140. C280 Real-time error

C280A0 Critical error

EXPLANATION
A critical real-time error occurred

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software, (C) Check communication between joints.

C280A1 Missed {unsigned} CTRL message(s)

C280A2 CTRL data not sent in current cycle (delayed {unsigned}[us] into next cycle)

C280A3 {unsigned} CTRL messages in queue, discarding all but the most recent

C280A7 Oldest unparsed message on interface {unsigned} discarded

C280A8 Missed {unsigned} XCOM message(s)

C280A9 {unsigned} XCOM messages in queue, discarding all but the most recent

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.141. C281 Robot State Machine

C281A0 Critical error

EXPLANATION
A critical State Machine error occurred

SUGGESTION
Try the following actions to see if itresolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C281A1 An invalid transition occurred in the code:{unsigned}

C281A2 An invalid Robot State occurred

C281A3 {unsigned} joint entered the Fault State

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C281A4 {unsigned} joint entered the Violation State

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C281A5 Shutdown took too long, robot voltage is {float}

C281A6 Moved to an unhandled state: {unsigned}

C281A7 Teach Pendant entered the Fault State

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C281A8 Teach Pendant entered the Violation State

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C281A9 {unsigned} joint moved too far before robot entered RUNNING State

EXPLANATION
A Joint moved more than the permissible range during the Brake Release procedure.

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Ensure the mounted payload, TCP, and CoG matches your configuration, (C) Update software.

C281A10 Failed to power on the Robot arm

C281A11 Caused by joint {unsigned}

C281A12 Caused by state {unsigned}

C281A13 Aggregate joint mode status {hex}

C281A14 IMMI entered the Fault State

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C281A15 IMMI entered the Violation State

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.142. C282 Systick

C282A1 Systick Sync: SoC frequency synchronization started

C282A2 Systick Sync: SoC frequency synchronization in progress, sample number: {unsigned} of 16

C282A3 Systick Sync: SoC frequency synchronization in progress, received 'SoC period' sample of: {float_4_4} [us]

C282A4 Systick Sync: SoC frequency synchronization in progress, received 'SoC ISR Latency' sample of: {float_3_5} [us]

C282A5 Systick Sync: SoC period determined to be: {float} [us]

C282A6 Systick Sync: SysTick timer LOAD value set to: {unsigned} [cpu-clock-cycles]

C282A7 Systick Sync: SoC frequency synchronization finished

C282A8 Systick Sync: SoC Phase synchronization started

C282A9 Systick Sync: SysTick SoC Phase error: {signed}

EXPLANATION
Negative number means the Systick counter was behind (too late), positive number means the Systick counter was ahead (too early)

C282A10 Systick Sync: Estimated Systick counter value at SoC: {unsigned}

C282A11 Systick Sync: Estimated Systick counter ticks to next SoC: {unsigned}

C282A12 Systick Sync: SoC Phase synchronization finished

C282A13 The internal SoC count value has been resynchronized with the FPGA SoC count. Data: {hex}

EXPLANATION
Data: [Number of resyncs, 16 bits][FPGA SoC count (new), 8 bit][Device SoC count (old), 8 bit]

C282A14 SOC status data failed to update in a timely manner

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.143. C283 Safety system

C283A0 Critical error

EXPLANATION
A critical error occurred in the safety system

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C283A1 Robot is not braking when in Stop Mode

C283A2 Robot is moving when in Stop Mode

C283A3 Power not removed from the motors while in Emergency Stop

C283A4 Failed to power on the Robot Arm

C283A5 Invalid pin-configuration received: {hex}

C283A6 Trying to reassign pin configuration with configuration {hex}

C283A7 {unsigned} joint exceeded the speed limit of the safety settings

SUGGESTION
Try each of the following actions (in order) to see if it resolves the issue: (A) Ensure the mounted payload and center of gravity matches your installation settings, (B) Slow down movements. You can exceed speed limits if you move the robot too fast in Freedrive, in that case, move the robot slower, (C) Check safety settings

C283A8 The System Emergency Stop Output is not active

EXPLANATION
Failed to activate the System Emergency Stop Output. The output is active when voltage is low

SUGGESTION
Make sure output is not short circuited to a power supply

C283A9 System Emergency Stop Output disagreement within the safety system

EXPLANATION
The input signals are not switching simultaneously, or are incorrectly connected.

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Ensure both inputs are properly connected

C283A10 Robot Emergency Stop Input disagreement within the safety system

EXPLANATION
The input signals are not switching simultaneously, or are incorrectly connected.

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Ensure both inputs are properly connected

C283A11 System Emergency Stop Input disagreement within the safety system

EXPLANATION
The input signals are not switching simultaneously, or are incorrectly connected.

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Ensure both inputs are properly connected

C283A12 Safeguard Stop Input disagreement within the safety system

EXPLANATION
The input signals are not switching simultaneously, or are incorrectly connected.

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Ensure both inputs are properly connected

C283A13 Safeguard Reset Input disagreement within the safety system

EXPLANATION
The input signals are not switching simultaneously, or are incorrectly connected.

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Ensure both inputs are properly connected

C283A14 Operation Mode input disagreement within the safety system.

EXPLANATION
The input signals are not switching simultaneously, or are incorrectly connected.

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Ensure both inputs are properly connected

C283A15 Three-Positional Enabling Device Input disagreement within the safety system

EXPLANATION
The input signals are not switching simultaneously, or are incorrectly connected.

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Ensure both inputs are properly connected

C283A16 Operation Mode Switch is defined and no Three-Positional Device is defined.

EXPLANATION
Operation mode switch can only be enabled if a Three-Positional Device is present

SUGGESTION
Try the following actions to see which resolves the issue: (A) Ensure that a Three-Positional Device is enabled in the Safety Configuration (B) Conduct a complete rebooting sequence, (C) Update software, (D) Contact your local Universal Robots service provider for assistance

C283A17 Lost {unsigned} Teach Pendant safety packages in a row

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Check that the teach pendant is properly connected, (B) Conduct a complete rebooting sequence, (C) Update software

C283A18 Lost too many Joint safety packages in a row. Diagnostic data: {unsigned}

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Check that the teach pendant is properly connected, (B) Conduct a complete rebooting sequence, (C) Update software

C283A19 Incorrect gravity vector sent from the controller

C283A20 Wrong payload mass sent from the controller

C283A21 Wrong payload center of gravity sent from the controller

C283A22 Teach Pendant is connected while it is disabled in robot configuration

EXPLANATION
If the Teach Pendant is enabled, it is connected. If it is disabled, it is not connected.

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Disconnect the Teach Pendant or enable it in the configuration.

C283A23 Lost {unsigned} safety packages in a row from other safety processor

C283A24 Got {unsigned} safety packages too early in a row from other safety processor

C283A25 Got a ready message from an unexpected source: {hex}

C283A26 Force limitation: A joint exceeded the torque window by {float}Nm

EXPLANATION
If the target trajectory is very jerky, e.g. in case of sensor based control with path_offset() or servoj(), the target joint torques can exceed safety system limits. Noisy sensors or communication jitter in external control can cause jerky trajectories

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Check that the target trajectory is smooth, (B) Conduct a complete rebooting sequence, (C) Update software.

C283A27 Mismatch on Robot Configuration CRC between the safety system and PolyScope

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C283A28 Mismatch on User Configuration CRC between the safety system and PolyScope

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Make new installation, (C) Update software,

C283A29 Trying to reapply the {unsigned} part of the User Configuraton.

C283A30 Trying to reapply the {unsigned} part of the Robot Configuraton,

C283A31 Trying to reapply normal limits, part {unsigned}

C283A32 Trying to reapply reduced limits, part {unsigned}

C283A33 Trying to reapply safety CRC

C283A34 Error while trying to apply safety configuration

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C283A35 Reduced Mode Output disagreement within the safety system

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C283A36 Not Reduced Mode Output disagreement within the safety system

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C283A37 Robot Moving Output disagreement within the safety system

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C283A38 Robot Not Stopping Output disagreement within the safety system

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C283A39 {unsigned} safety packages were received too late from the SCB processor

C283A40 Reduced Mode Input disagreement within the safety systems

EXPLANATION
The input signals are not switching simultaneously, or are incorrectly connected.

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Ensure both inputs are correctly connected

C283A41 TCP Velocity violates limits of maximum stopping time

SUGGESTION
Try each of the following actions (in order) to see if it resolves the issue: (A) Ensure the mounted payload and center of gravity matches your installation settings, (B) Slow down movements. You can exceed speed limits if you move the robot too fast in Freedrive, in that case, move the robot slower, (C) Check safety settings

C283A42 TCP Velocity violates limits of maximum stopping distance

SUGGESTION
Try each of the following actions (in order) to see if it resolves the issue: (A) Ensure the mounted payload and center of gravity matches your installation settings, (B) Slow down movements. You can exceed speed limits if you move the robot too fast in Freedrive, in that case, move the robot slower, (C) Check safety settings

C283A43 {unsigned} joint moved too quickly toward a Joint position limit

SUGGESTION
Try each of the following actions (in order) to see if it resolves the issue: (A) Ensure the mounted payload and center of gravity matches your installation settings, (B) Slow down movements. You can exceed speed limits if you move the robot too fast in Freedrive, in that case, move the robot slower, (C) Check safety settings

C283A44 The tool moved too fast towards an orientation limit

SUGGESTION
Try each of the following actions (in order) to see if it resolves the issue: (A) Ensure the mounted payload and center of gravity matches your installation settings, (B) Slow down movements. You can exceed speed limits if you move the robot too fast in Freedrive, in that case, move the robot slower, (C) Check safety settings

C283A45 The Elbow moved too fast towards a safety plane

SUGGESTION
Try each of the following actions (in order) to see if it resolves the issue: (A) Ensure the mounted payload and center of gravity matches your installation settings, (B) Slow down movements. You can exceed speed limits if you move the robot too fast in Freedrive, in that case, move the robot slower, (C) Check safety settings

C283A46 The tool moved too fast towards a safety plane

SUGGESTION
Try each of the following actions (in order) to see if it resolves the issue: (A) Ensure the mounted payload and center of gravity matches your installation settings, (B) Slow down movements. You can exceed speed limits if you move the robot too fast in Freedrive, in that case, move the robot slower, (C) Check safety settings

C283A47 {unsigned} joint position limit exceeded

SUGGESTION
Try each of the following actions (in order) to see if it resolves the issue: (A) Ensure the mounted payload and center of gravity matches your installation settings, (B) Slow down movements. You can exceed speed

limits if you move the robot too fast in Freedrive, in that case, move the robot slower, (C) Check safety settings

C283A48 Tool position limit exceeded

SUGGESTION
Try each of the following actions (in order) to see if it resolves the issue: (A) Ensure the mounted payload and center of gravity matches your installation settings, (B) Slow down movements. You can exceed speed limits if you move the robot too fast in Freedrive, in that case, move the robot slower, (C) Check safety settings

C283A49 Tool orientation limit exceeded

SUGGESTION
Try each of the following actions (in order) to see which resolves the issue: (A) Ensure the mounted payload and center of gravity matches your installation settings, (B) Slow down movements. You can exceed speed limits if you move the robot too fast in Freedrive, in that case, move the robot slower, (C) Check safety settings

C283A50 Elbow position limit exceeded

SUGGESTION
Try each of the following actions (in order) to see if it resolves the issue: (A) Ensure the mounted payload and center of gravity matches your installation settings, (B) Slow down movements. You can exceed speed limits if you move the robot too fast in Freedrive, in that case, move the robot slower, (C) Check safety settings

C283A51 Robot moved with a speed of {float} mm/s at the tool. This exceeds the tool speed limit in the safety settings

SUGGESTION
Try each of the following actions (in order) to see if it resolves the issue: (A) Ensure the mounted payload and center of gravity matches your installation settings, (B) Slow down movements. You can exceed speed limits if you move the robot too fast in Freedrive, in that case, move the robot slower, (C) Check safety settings

C283A52 Robot moved with a speed of {float} mm/s at the elbow. This exceeds the elbow speed limit in the safety settings

SUGGESTION
Try each of the following actions (in order) to see if it resolves the issue: (A) Ensure the mounted payload and center of gravity matches your installation settings, (B) Slow down movements. You can exceed speed limits if you move the robot too fast in Freedrive, in that case, move the robot slower, (C) Check safety settings

C283A53 Maximum Tool Center Point Speed in Reduced Mode is invalid

SUGGESTION
Ensure the Reduced Mode Limit is less than or equal to the Normal Mode limit.

C283A54 Maximum Elbow Speed in Reduced Mode is invalid

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Ensure the Reduced Mode limit is less than or equal to the Normal Mode Limit, (B) Update software.

C283A55 Maximum Joint Speed of joint {unsigned} in Reduced Mode is invalid

SUGGESTION
Ensure the Reduced Mode Limit is less than or equal to the Normal Mode Limit.

C283A56 Maximum Momentum in Reduced Mode is invalid

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Ensure the Reduced Mode limit is less than or equal to the Normal Mode Limit, (B) Update software.

C283A57 Maximum stopping time in Reduced Mode is invalid

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Ensure the Reduced Mode limit is less than or equal to the Normal Mode Limit, (B) Update software.

C283A58 Maximum stopping distance in Reduced Mode is invalid

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Ensure the Reduced Mode limit is less than or equal to the Normal Mode Limit, (B) Update software.

C283A59 Reduced Mode Output is not active

EXPLANATION
Failed to activate the Reduced Mode Output. The output is active when voltage is low

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Make sure output is not short circuited to a power supply, (B) Update software.

C283A60 Reduced Mode Output is not inactive

EXPLANATION
Failed to deactivate the Reduced Mode Output. The output is inactive when voltage is high

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Make sure output is not short circuited to ground, (B) Update software.

C283A61 Not Reduced Mode Output is not active

EXPLANATION
Failed to activate the Not Reduced Mode Output. The output is active when voltage is low

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Make sure output is not short circuited to a power supply, (B) Update software.

C283A62 Not Reduced Mode Output is not inactive

EXPLANATION
Failed to deactivate the Not Reduced Mode Output. The output is inactive when voltage is high

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Make sure output is not short circuited to ground, (B) Update software.

C283A63 Robot is moving while Robot Moving Output is not active

EXPLANATION
Failed to activate the Robot Moving Output. The output is active when voltage is low

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Make sure output is not short circuited to a power supply, (B) Update software.

C283A64 Tool Direction Vector Length for Normal Mode is {float}, not 1.0

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Reconfigure Tool orientation, (B) Update software.

C283A65 Tool Direction Vector Length for Reduced Mode is {float}, not 1.0

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Reconfigure Tool orientation, (B) Update software.

C283A66 Robot Momentum reached {float} kg * m/s, which exceeds the Momentum limit

C283A67 Robot Power reached {float} W, which exceeds the Power limit

C283A68 Error caused by the {unsigned} Joint

EXPLANATION
A critical safety error

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C283A69 Float value: {float}

C283A70 Unsigned value: {unsigned}

C283A71 Safety is disabled but the app type is not MAIN-NS (No Safety)

EXPLANATION
It's only allowed to have Safety disabled if the app type is MAIN-NS (No Safety) (0x07)

C283A72 The motor configuration sent by the Control Box is invalid

EXPLANATION
The motor configuration sent is unusable with this firmware revision.

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C283A73 Safe Home Position Output disagreement within the safety system

C283A74 The Safe Home Position Output is active while not allowed

EXPLANATION
The Safe Home Position Output is active while the robot is not in Safe Home Position

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Make sure output is not short circuited to power supply or ground, (B) Update software.

C283A75 The user config versions received differ

C283A76 Controller reported a fault

EXPLANATION
The Controller has faulted and requested the safety system to fault

C283A77 The user config versions is higher than supported

C283A78 The user config versions is lower than supported

C283A79 Safe home position index: {unsigned} out of range

C283A80 Force limit calculation got an unsupported joint size {unsigned}

C283A81 The robot configuration specifies an unsupported joint size {signed}

EXPLANATION
The safety system is not certified to work with the specified joint size

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Update software.

C283A82 The connected Teach Pendant type does not match the configuration

EXPLANATION
The connected Teach Pendant is not the same type as the one selected in the safety configuration

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Check that the Teach Pendant is properly connected and matches the one in the safety configuration, (B) Conduct a complete rebooting sequence, (C) Update the software.

C283A83 The configured Teach Pendant has no Three-Positional Enabling Device

EXPLANATION
The safety configuration enables the Teach Pendant's Three-Positional Enabling Device, but the configured Teach Pendant does not have a Three-Positional Enabling Device

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Check that the correct Teach Pendant is selected in the safety configuration, (B) Conduct a complete rebooting sequence, (C) Update the software.

C283A84 Received an invalid Teach Pendant type in the user configuration: {unsigned}

C283A85 Automatic Safeguard Stop Input disagreement within the safety system

EXPLANATION
The input signals are not switching simultaneously, or are incorrectly connected.

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Ensure both inputs are properly connected

C283A86 Automatic Safeguard Reset Input disagreement within the safety system

EXPLANATION
The input signals are not switching simultaneously, or are incorrectly connected.

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Ensure both inputs are properly connected.

C283A87 Injection-Molding-Machine-Interface is connected while it is disabled in the robot configuration

EXPLANATION
If the Injection-Molding-Machine-Interface is enabled, it must be connected. If it is disabled, it must be disconnected.

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Disconnect the Injection-Molding-Machine-Interface or enable it in the configuration.

C283A88 Lost {unsigned} Injection-Molding-Machine-Interface safety packages in a row

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Check that the Injection-Molding-Machine-Interface is properly connected, (B) Conduct a complete rebooting sequence, (C) Update software.

C283A89 The connected Injection-Molding-Machine-Interface type does not match the configuration

EXPLANATION
The connected Injection-Molding-Machine-Interface is not the same type as the one selected in the safety configuration

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Check that the Injection-Molding-Machine-Interface is properly connected and matches the one in the safety configuration, (B) Conduct a complete rebooting sequence, (C) Update the software.

C283A90 Invalid Injection-Molding-Machine-Interface type in the user configuration: {unsigned}

EXPLANATION
The configuration provided by the user safety configuration is invalid

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Ensure the correct IMMI type is selected in the Safety Configuration (B) Conduct a complete rebooting sequence, (C) Update software.

C283A91 The Injection-Molding-Machine-Interface System Emergency Stop Output is not active

EXPLANATION
Failed to activate the System Emergency Stop Output on the Injection-Molding-Machine-Interface. The output is active when voltage is high

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Make sure output is not short circuited to ground (B) Conduct a complete rebooting sequence, (C) Update software.

C283A92 Target torque of {float} is outside the allowed range

EXPLANATION
The target torque received from the controller is outside the allowed range

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C283A93 Sanity check of target torque differs by {float}, which is outside the allowed range

EXPLANATION
The target torque received from the controller is outside the allowed range

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C283A94 Automatic Safeguard Stop input is configured but no Three-Position Enabling device is configured

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Ensure that a Three-Positional Device is enabled in the Safety Configuration (B) Conduct a complete rebooting sequence, (C) Update software, (D) Contact your local Universal Robots service provider for assistance

C283A95 IO Data has not been updated before latching it

C283A96 Received an invalid IMMI type in the user configuration: {unsigned}

C283A97 The payload inertia diagonal sent from the controller must be non-negative

C283A98 The payload inertia sent from the controller must be within valid range

C283A99 Received an invalid value {float} as part of the runtime safety configuration

SUGGESTION
Try the following actions to see if resolve the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C283A100 Multiple sources defined for controlling operational mode

SUGGESTION
Try the following actions to see if it resolve the issue: (A) Make sure there are not set multiple sources in the Safety Config controlling the operational mode, (B) Update Software.

C283A101 The PROFISafe System Emergency Stop Output is not active

EXPLANATION
Failed to activate the PROFISafe System Emergency Stop Output.

SUGGESTION
Try the following actions to see if it resolve the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C283A102 Profisafe Reduced Mode Output is not active

EXPLANATION
Failed to activate the PROFISafe Reduced Mode Output.

SUGGESTION
Try the following actions to see if it resolve the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C283A103 Profisafe Reduced Mode Output is not inactive

EXPLANATION
Failed to deactivate the PROFISafe Reduced Mode Output.

SUGGESTION
Try the following actions to see if it resolve the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C283A104 Robot is moving while PROFISafe Robot Moving Output is not active

EXPLANATION
Failed to activate the PROFISafe Robot Moving Output.

SUGGESTION
Try the following actions to see if it resolve the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C283A105 The Profisafe Safe Home Position Output is active while not allowed

EXPLANATION
The PROFISafe Safe Home Position Output is active while the robot is not in Safe Home Position

SUGGESTION
Try the following actions to see if it resolve the issue: (A) Conduct a complete rebooting sequence, (B) Update software.

C283A106 The PROFISafe Safeguard Stop Output is active while not allowed

EXPLANATION
The PROFISafe Safeguard Stop Output is active while the robot is not in safeguard stop

SUGGESTION
Try the following actions to see if it resolve the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C283A107 The PROFISafe Safeguard Stop Output is inactive while not allowed

EXPLANATION
The PROFISafe Safeguard Stop Output is inactive while the robot is in safeguard stop

SUGGESTION
Try the following actions to see if it resolve the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C283A108 Unknown input disagreement, value is {unsigned}

C283A109 Unknown output disagreement, value is {unsigned}

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.144. C284 Brake Release

C284A0 Critical error

EXPLANATION
A critical error occurred during Brake Release

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Ensure the mounted payload, TCP, and CoG matches your configuration

C284A1 Brake release procedure aborted.

C284A2 Microprocessor B wasn't ready.

C284A3 Absolute position unknown, after successful completion of the find absolute position movement.

C284A4 The motor did not move enough, during the find absolute position movement.

C284A5 After successfully completing the free pin move the rotor was still not within the required window.

C284A6 The motor was unable to move far enough during the free pin movement.

C284A7 Peak speed of {float} rad/s was detected during enabling of motor control.

C284A8 Speed was larger than 0.1 rad/s for more than 50ms, during enabling of motor control.

C284A9 Motor control was not successfully started, due to lacking commutation offset calibration.

C284A10 Absolute position was not known before attempting to release the brake pin.

C284A11 Motor was not within the free pin window after enabling of control.

C284A12 Brake release commutation was started while motor control was running.

C284A13 Pin collision detected, during brake release move.

C284A14 Brake release commutation did not move far enough.

C284A15 Unhandled state.

C284A16 Solenoid boost too long.

C284A17 Started boosting the solenoid too early after last boost.

C284A18 Absolute Motor Encoder position unknown after the Brake Release movement

EXPLANATION
Not enough Index Marks detected to determine absolute Motor Encoder position offset.

SUGGESTION

C284A19 Brake release procedure took too long.

C284A20 Commutation angle or absolute position was unknown, but is required.

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.145. C285 Joint Keep-Alive System

C285A0 Critical error

EXPLANATION
A critical error occurred in the Joint Keep-Alive System

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C285A1 Joint Keep-Alive System message with wrong sequence received from SCB-uPA.

C285A2 Timeout reached while waiting for a Joint Keep-Alive System message from SCB-uPA.

C285A3 Go-to-Fault command received a Joint Keep-Alive System message from SCB-uPA.

C285A4 A Joint Keep-Alive System message with wrong sequence received from SCB-uPB.

C285A5 Timeout reached while waiting for Joint Keep-Alive System message from SCB-uPB.

C285A6 Go-to-Fault command received in Joint Keep-Alive System message from SCB-uPB.

C285A7 Joint Keep-Alive System message received from an unauthorized source: {unsigned}

C285A8 uPA handler received an invalid value

C285A9 uPB handler received an invalid value

C285A10 Lost {unsigned} Keep-Alive System message(s) in a row from Safety Control Board-uPA

EXPLANATION
An invalid amount of Keep-Alive System messages have been lost from the Safety Control Board Processor A

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C285A11 Lost {unsigned} Keep-Alive System message(s) in a row from Safety Control Board-uPB

EXPLANATION
A invalid amount of Keep-Alive messages have been lost from the Safety Control Board Processor B

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C285A12 Go-to-Violation command received in Joint Keep-Alive System message from SCB-uPA.

C285A13 Go-to-Violation command received in Joint Keep-Alive System message from SCB-uPB.

C285A14 Invalid command received in Joint Keep-Alive System message from SCB-uPA.

C285A15 Invalid command received in Joint Keep-Alive System message from SCB-uPB.

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.146. C286 Motor Controller

C286A1 ME Index seen, commutation-zero set to: {float_5_5}

C286A2 PWM margin too small, ticks left: {signed}

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.147. C287 Saved files

C287A0 Critical error

EXPLANATION
A critical error occurred during file loading/saving

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C287A1 The file requested (id {unsigned}) is not saved or its loading failed

C287A2 Re-sending a part of the file with ID {unsigned}, due to a missing ACK

C287A3 Maximum re-sending tries ({unsigned}) reached

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.148. C288 IO control

C288A1 Wrong control mode

C288A2 Wrong channel chosen

C288A3 The pin is not configured as analog

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.149. C289 Tool Connector

C289A1 Short circuit detected on Digital Output: {unsigned} high side

EXPLANATION
Tool Digital Output pin has been turned off due to either a short-circuit or an overload was detected.

SUGGESTION
Try the following actions to see which resolves the issue: (A) Update software, (B) Check connections to make sure Tool Digital Output currents are within specified limits.

C289A2 Short circuit detected on Digital Output: {unsigned} low side

EXPLANATION
Tool Digital Output pin has been turned off due to either a short-circuit or an overload was detected.

SUGGESTION
Try the following actions to see which resolves the issue: (A) Update software, (B) Check connections to make sure Tool Digital Output currents are within specified limits.

C289A4 10 second Average tool IO Current of {float} A is outside of the allowed range.

EXPLANATION
The average current sum of the Tool Connector Power and Digital Output pins is outside of the allowed range.

SUGGESTION
Try the following actions to see which resolves the issue: (A) Update software, (B) Check connections to make sure Tool Digital Output currents are within specified limits.

C289A5 Unable to remove tool Digital Output fault.

EXPLANATION
Unable to remove the overload on tool Digital Output, therefore the robot powered down.

SUGGESTION
Try the following actions to see which resolves the issue: (A) Update software, (B) Check connections to make sure Tool Digital Output currents are within specified limits.

C289A6 Current of {float} A on the tool connector supply pins is outside of the allowed range.

EXPLANATION
Too high current on tool connector supply pins

SUGGESTION
Try the following actions to see which resolves the issue: (A) Update software, (B) Check connections to make sure Tool Digital Output currents are within specified limits..

C289A7 Current of {float} A on the Digital Output pins is outside of the allowed range.

EXPLANATION
Too high current on tool connector Digital Output pins.

SUGGESTION
Try the following actions to see which resolves the issue: (A) Update software, (B) Check connections to make sure Tool Digital Output currents are within specified limits.

C289A8 Current of {float} A on the ground pin is outside of the allowed range.

EXPLANATION
Too high current on tool ground pin

SUGGESTION
Try the following actions to see which resolves the issue: (A) Update software, (B) Check connections to make sure Tool Digital Output currents are within specified limits.

C289A9 Current of {float} A on the POWER pin is outside of the allowed range.

EXPLANATION
Too high current on tool power pin

SUGGESTION
Try the following actions to see which resolves the issue: (A) Update software, (B) Check connections to make sure Tool Digital Output currents are within specified limits.

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.150. C290 I2C

C290A1 The I2C bus was busy too long

C290A2 Function called too early after last call or the slave chip did not answer

C290A3 A peripheral unit has set the alert pin

C290A4 Communication timeout detected

C290A6 An error was detected in the i2c acknowledge handshake

C290A7 I2C detected arbitration loss

C290A8 I2C detected error on the I2C-bus

C290A9 I2C error interrupt called with unhandled error-flag

C290A10 I2C peripheral issue, unhandled events: {hex}

EXPLANATION
the hexidecimal number is an event code generated by integration of the two status registers

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If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.151. C291 EEPROM

C291A1 Addressed data is out of memory bounds

C291A2 I2C communication error

C291A3 Write to EEPROM failed

C291A4 Read from EEPROM failed

C291A5 Verification of written data failed

C291A6 Difference in data when comparing the source and the data written

C291A7 Writing of a page in EEPROM failed

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.152. C292 Online RAM test

C292A0 Critical error

EXPLANATION
A critical error occurred during RAM test

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C292A1 Uninitialized return value, internal error

C292A2 Databus test failure

C292A3 Address bus stuck high

C292A4 Address bus stuck low

C292A5 Address bus shorted

C292A6 Memory cell test case 1 failed

C292A7 Memory cell test case 2 failed

C292A8 Memory cell test case 3 failed

C292A9 Incorrect test type on DMA test

C292A10 Runtime RAM test round period too long

C292A11 Tested data/address: {hex}

C292A12 Unexpected test state: {unsigned}

C292A13 Not tested DMA buffers: {hex}

C292A14 Wrong DMA buffer pointer: {hex}

C292A15 RAM test error reported at line code: {unsigned}

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.153. C293 Exception

C293A1 Unexpected exception/interrupt: {unsigned}

C293A2 HardFault exception status: {hex}

C293A3 HardFault Stack Pointer (SP): {hex}

C293A4 HardFault Link Register (LR): {hex}

C293A5 HardFault Program Counter (PC): {hex}

C293A6 HardFault Program Status Register (PSR): {hex}

C293A7 HardFault R0 register: {hex}

C293A8 HardFault R1 register: {hex}

C293A9 HardFault R2 register: {hex}

C293A10 HardFault R3 register: {hex}

C293A11 HardFault R12 register: {hex}

C293A12 MemManage exception status: {hex}

C293A13 MemManage exception address: {hex}

C293A14 BusFault exception status: {hex}

C293A15 BusFault exception address: {hex}

C293A16 UsageFault exception status: {hex}

C293A17 Tool exception status: {hex}

C293A18 Tool exception address 1: {hex}

C293A19 Tool exception address 2: {hex}

C293A20 HardFault CFSR register: {hex}

C293A21 HardFault BFAR register: {hex}

C293A22 HardFault MMFAR register: {hex}

C293A23 HardFault HFSR register: {hex}

C293A24 HardFault SHCSR register: {hex}

C293A25 HardFault ICSR register: {hex}

C293A26 HardFault exception caught

C293A27 MemManage exception caught

C293A28 BusFault exception caught

C293A29 UsageFault exception caught

C293A30 Additional data: {hex}

EXPLANATION
Additional data from Main app, version and application specific.

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.154. C294 ADC

C294A0 Critical error

EXPLANATION
A critical error occurred in the ADC driver

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C294A1 ADC0 triggered before finishing previous conversion

C294A2 ADC1 triggered before finishing previous conversion

C294A4 ADC driver called with an invalid ADC pointer

EXPLANATION
ADC initialization has failed

C294A5 ADC initialization has failed to get a fresh memory block

EXPLANATION
ADC initialization has failed

C294A6 ADC initialization has failed: {unsigned}

EXPLANATION
ADC initialization has failed

C294A7 ADC channel {unsigned} sampled an out of range value

C294A8 ADC sample ({hex}) out of range

C294A9 The value was sampled {float}ms ago

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.155. C295 PCB

C295A0 Wrong PCB type ({hex})

EXPLANATION
The printed circuit board is defective

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.156. C296 Start up check

C296A0 Critical error

EXPLANATION
A critical error occurred during startup

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C296A1 SCB IO failed to power on

SUGGESTION
Ensure the IO Power Connector on the Safety Control Board is connected to the 24VDC

C296A2 One or more Motor phases is short circuited to ground. Diagnostic data: {hex}

EXPLANATION
Bit 0 high indicates short circuit

SUGGESTION

C296A3 Motor Indication Signal does not work. Diagnostic data: {hex}

EXPLANATION
Bit 1 low indicates that the diagnostics feature is broken

SUGGESTION

C296A4 Phase 1 is not connected. Diagnostic data: {hex}

EXPLANATION
Bit pattern 0b0110 indicates that phase 1 is not connected

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Make sure all Motor phases are connected correctly, (B) Update software

C296A5 Phase 2 is not connected. Diagnostic data: {hex}

EXPLANATION
Bit pattern 0b1010 indicates that phase 2 is not connected

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Make sure all Motor phases are connected correctly, (B) Update software

C296A6 Phase 3 is not connected. Diagnostic data: {hex}

EXPLANATION
Bit pattern 0b0010 indicates that phase 3 is not connected

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Make sure all Motor phases are connected correctly, (B) Update software

C296A7 Motor test results were invalid. Diagnostic data: {hex}

EXPLANATION
Bit0 high indicates short circuit. Bit1 is phase 3 test. Bit2 is phase 2 test. Bit3 is phase 1 test

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Make sure all Motor phases are connected correctly, (B) Update software

C296A8 Motor PWM output is not zero in Joint State {unsigned}

EXPLANATION
No PWM signals are expected to be active in the current Joint State.

SUGGESTION

C296A9 Robot Voltage was present during self-diagnostics

EXPLANATION
Robot Voltage rose above acceptable levels before both processors powered it on

SUGGESTION

C296A10 Time out during self-diagnostics

EXPLANATION
A processor timed out while waiting for the other processor to finish self-diagnotics

SUGGESTION

C296A11 Data was received while trying to disable communication

EXPLANATION
A validation that theof communication could be suppressioned failed to preventin preventing a message from passing through.

SUGGESTION

C296A12 Sequence number did not match expected sequence

EXPLANATION
After communication was disabled and reenabled the sequence number did not match what was expected

SUGGESTION

C296A13 The expected sequence number was {unsigned}

EXPLANATION
After communication was disabled and reenabled the sequence number did not match what was expected

C296A14 The actual sequence number was {unsigned}

EXPLANATION
After communication was disabled and reenabled the sequence number did not match what was expected

SUGGESTION

C296A15 Interval between messages did not match expectations

EXPLANATION
After communication was disabled and reenabled the message interval did not match what expectations

C296A16 The expected interval was {unsigned} ticks

EXPLANATION
After communication was disabled and reenabled the message interval did not match what was expected

SUGGESTION

C296A17 The measured interval was {unsigned} ticks

EXPLANATION
After communication was disabled and reenabled the message interval did not match what was expected

SUGGESTION

C296A18 Motor Kt value {float} is outside manufacturer specifications

EXPLANATION
Calibrated motor parameter Kt (torque sensitivity) falls outside manufacturer rated values

SUGGESTION

C296A19 Motor Kb value {float} is outside manufacturer specifications

EXPLANATION
Calibrated motor parameter Kb (back EMF constant) falls outside manufacturer rated values

C296A20 Motor R value {float} is outside manufacturer specifications

EXPLANATION
Calibrated motor parameter R (phase-phase resistance) falls outside manufacturer rated values

SUGGESTION

C296A21 Motor L value {float} is outside manufacturer specifications

EXPLANATION
Calibrated motor parameter L (phase-phase inductance) falls outside manufacturer rated values

SUGGESTION

C296A22 Processor uB has been in Booting state for too long

EXPLANATION

C296A23 Cross-monitoring data was invalid for too long while booting

EXPLANATION
uB timed out while waiting for cross-monitoring data to agree before changing from Booting to Idle state

C296A24 Motor Tau value {float} is outside manufacturer specifications

EXPLANATION
Calibrated motor parameter Tau (phase-phase time constant) falls outside manufacturer rated values

SUGGESTION

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.157. C297 Joint validation

C297A0 Critical error

EXPLANATION
A critical error occurred during Joint validation

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check that SD card and robot type match, (C) Update software

C297A1 Received Node ID from an unexpected device ({unsigned})

EXPLANATION
The Safety Control Board received a message from a device other than A or B

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Ensure that the robot configuration is correct, (C) Update software

C297A2 Received Node ID an unexpected node ({unsigned})

EXPLANATION
The Safety Control Board received a message from a node outside the expected range of Node IDs.

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Ensure that the robot configuration is correct, (C) Update software

C297A3 Joint processors disagree on Joint Size ({hex})

EXPLANATION
There is a mismatch between the Joint Size reported from A and B. byte0: A, byte1: B

SUGGESTION

C297A4 Joints disagree with configuration on Joint Size ({hex})

EXPLANATION
There is a mismatch between the Joint Size and the configuration, byte0: Joint, byte1: Configuration

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Ensure that the robot configuration is correct, (C) Update software

C297A5 Found ({unsigned}) Joint disabled in configuration

EXPLANATION
There is a mismatch between joints attahced and the configuration

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Ensure that the robot configuration is correct, (C) Update software

C297A6 Joint processors disagree on Joint ID. Diagnostic data: {hex}

EXPLANATION
There is a mismatch between reported Node ID from A and B, byte0: A, byte1: B

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Run Joint ID assignment, (C) Update software.

C297A7 Node ID differs from the stored ID. Diagnostic data: {hex}

EXPLANATION
There is a mismatch between current Node ID and the expected ID, byte0: Current, byte1: Stored

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Run Joint ID assignment, (C) Update software

C297A8 Invalid robot configuration

EXPLANATION
The robot does not match Robot Configuration

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Ensure that the robot configuration is correct, (C) Update software

C297A9 Joint IDs need updating

EXPLANATION
The stored Node ID differs from the current ID on one or more joints and needs to be updated

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Run Joint ID assignment, (C) Update software

C297A10 Timeout while waiting for Node IDs

EXPLANATION
One or more of the configured devices are not responding with Node IDs

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Conduct a complete rebooting sequence, (B) Ensure that the robot configuration is correct, (C) Update software

C297A11 The Robot arm does not match the Control Box

EXPLANATION
One or more joints do not match stored Robot Configuration

SUGGESTION
Try the following actions to see if itresolves the issue: (A) Conduct a complete rebooting sequence, (B) Check that SD card and robot type match, (C) Update software

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If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.158. C298 Hand protection

C298A0 Tool is too close to the lower arm: {float_2_4} meter.

EXPLANATION
The tool is too close to the lower Robot arm

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check wrist position, (B) Verify mounting, (C) Conduct a complete rebooting sequence, (D) Update software

---

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket

1.159. C299 Tool communication

C299A0 Communication error detected

EXPLANATION
A problem with the Tool communication was detected.

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C299A1 TX buffer overflow

EXPLANATION
The output buffer of the tool has overflown

SUGGESTION

C299A2 New message started unexpectedly

EXPLANATION
A new message started before all data from previous message was received

SUGGESTION

C299A3 RX framing error

EXPLANATION
Framing error detected on received data

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check external equipment connection, (B) Verify the communication configuration matches the hardware, (C) Conduct a complete rebooting sequence, (D) Update software

C299A4 RX Parity error

EXPLANATION
Parity error detected on received data

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check external equipment connection, (B) Verify the communication configuration matches the hardware, (C) Conduct a complete rebooting sequence, (D) Update software

C299A5 RX buffer overflow.

EXPLANATION
The input buffer has overflown

SUGGESTION

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket

1.160. C300 Safety message

C300A1 Safety message received from an unexpected node. Diagnostic data: {unsigned}

C300A2 Safety message response received with an unexpected sequence number. Diagnostic data: {unsigned}

C300A3 Duplicate safety message response received with sequence number. Diagnostic data: {unsigned}

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket

1.161. C301 Safety message monitor

C301A0 Critical error

EXPLANATION
A critical error occurred in safety message monitoring

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C301A2 Mode data mismatch

C301A3 Position data mismatch

C301A4 Revolution data mismatch

C301A5 Temperature data mismatch

C301A6 Torque data mismatch

C301A7 Velocity data mismatch

C301A8 Input state data disagreement: {unsigned}

EXPLANATION
Data bit 0-7 is xmon values. Data bit 8-15 is safety data values

C301A10 Safety monitor: Don't have the corresponding x-mon data

C301A12 Target current data mismatch

C301A14 Target Velocity data mismatch

C301A15 Target Acceleration data mismatch

C301A16 Issue with setting up the UART mon RX address in TP

C301A17 Issue with setting up the UART mon RX CITER register in TP

C301A18 Issue with setting up the UART mon RX BITER register in TP

C301A19 Issue with setting up the MK02 UART TX, address is incorrect

C301A20 Issue with setting up the MK02 UART TX, CITER REG is incorrect

C301A21 Issue with setting up the MK02 UART TX, BITER REG is incorrect

C301A25 Node {unsigned} uA's communication to SCB disabled

C301A26 Motor parameter (R_pp) data mismatch

C301A27 Motor parameter (L_pp) data mismatch

C301A28 Motor parameter (Kb) data mismatch

C301A29 Motor parameter (Kt) data mismatch

C301A30 Motor parameter (T) data mismatch

C301A31 Safety Message was not received in the last {unsigned} milliseconds

C301A32 Function indicating if we should monitor data is not configured

C301A33 Function to parse messages is not configured

C301A34 Function to handle messages is not configured

C301A35 Function to handle disable communication requests is not configured

C301A36 IMMI Safety IO estop input mismatch

C301A37 IMMI Safety IO estop output mismatch

C301A38 IMMI Safety IO safeguard input mismatch

C301A39 Target torque data mismatch

C301A40 compensation current mismatch

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket

1.162. C302 Tool Configuration

C302A1 Invalid Robot Type {unsigned}

EXPLANATION
The tool received an invalid robot type

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (C) Update software

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket

1.163. C303 System status

C303A0 Critical error

EXPLANATION
A critical system error occurred

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C303A1 Starting up

C303A2 Shutting down

C303A3 Reset caused by unknown reasons

C303A4 Reset caused by power loss

C303A5 Reset caused by window watchdog

C303A6 Reset caused by independent watchdog

C303A7 Reset caused by software

C303A8 Reset caused by power on

C303A9 Reset caused by reset pin

C303A10 Reset caused by brown out

C303A11 Reset caused by a loss of lock in the PLL

C303A12 Reset caused by a loss of external clock.

C303A13 Reset caused by LLWU module wakeup source

C303A14 Reset caused by peripheral failure to acknowledge attempt to enter Stop Mode

C303A15 Reset caused by EzPort receiving the RESET command while the device is in EzPort mode

C303A16 Reset caused by host debugger system setting of the System Reset Request bit

C303A17 Reset caused by core LOCKUP event

C303A18 Reset caused by JTAG

C303A19 Unexpected core frequency configured: {unsigned}

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket

1.164. C304 Self monitoring

C304A0 Critical error

EXPLANATION
A critical error occurred in physical, logical, and temporal monitoring (PLATM)

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C304A1 Temperature sensor failure (diff: {float} degC)

C304A2 Phase current sensor failure (diff: {float_5_3} A)

C304A3 Close to the gearbox shear limit. Encoders disagree {float} [rad] on the Joint position

EXPLANATION
The Joint acceleration or deceleration is too high, or there is a mechanical problem in the gear related to encoder mounting.

SUGGESTION
Try the following actions to see which resolves the issue: (A) Reduce acceleration in the user program, (B) Conduct a complete rebooting sequence, (C) Update software, (D) Replace Joint if necessary

C304A4 Either the encoder was inappropriately mounted, or the gearbox is loose or broken. Difference between the encoders is {float} [rad].

EXPLANATION
Mechanical problem in gear related to encoder mounting.

SUGGESTION
Try the following actions to see which resolves the issue: (A) Reduce acceleration in the user program, (B) Check TCP,Payload, and Cog, (C) Conduct a complete rebooting sequence, (D) Update software, (E) Replace Joint if necessary

C304A5 Disagreement on cross-monitored data

C304A6 Motor phase {unsigned}'s resistance is too high.

EXPLANATION
The lead/connector is broken, or the Motor phase lead has become disconnected or loose.

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

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If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket

1.165. C305 Robot Power Control

C305A0 Critical error

EXPLANATION
A critical error in power control module, supply voltage is >50V

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software,

C305A1 Power supply voltage too low

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check for loose connections, (B) Conduct a complete rebooting sequence, (C) Update software,

C305A2 Robot cable not connected

SUGGESTION
Try the following actions to see which resolves the issue: (A) Make sure the cable between Control Box and Robot Arm is correctly connected and it has no damage, (B) Check for loose connections, (C) Conduct a complete rebooting sequence, (D) Update software,

C305A3 Short circuit in Robot detected or the wrong Robot is connected to the Control Box.

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check for loose connections, (B) Make sure the cable between Control Box and Robot Arm is correctly connected and it has no damage, (C) Conduct a complete rebooting sequence, (D) Update software,

C305A4 Robot voltage rising slower than expected

SUGGESTION
Try the following actions to see which resolves the issue: (A) Verify the power supply, (B) Verify Control Box and Robot Arm are correctly paired,

C305A5 Attempted to start Energy Eater with powered robot

C305A6 Power supply voltage too high: {float} V

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check for loose connections, (B) Make sure the cable between Control Box and Robot Arm is correctly connected and it has no damage, (C) Conduct a complete rebooting sequence, (D) Update software,

C305A7 Energy Eater was active when trying to turn on the Robot arm

C305A8 The Robot Voltage is too high ({float})V when powering on the Robot

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software,

C305A9 The Power State was not OFF ({unsigned}) when trying to power on the Robot

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software,

C305A10 The Delay Callback setup failed at the {unsigned} stage

C305A11 The power to the robot arm was not removed fast enough after violation

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.166. C306 Joint

C306A0 Critical error

EXPLANATION
A critical error occurred in a Joint

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C306A1 Not stopping fast enough

EXPLANATION
Joint was unable to come to a full stop fast enough.

SUGGESTION
Try the following actions to see which resolves the issue: (A) Either an incorrect payload is mounted, or an external force is pushing the robot, (B) Conduct a complete rebooting sequence, (C) Update software

C306A2 Velocity failed to pass sanity check

C306A3 Acceleration failed to pass sanity check

C306A4 Joint does not have a stored id

EXPLANATION
Joint was unable to locate an assigned id, most likely because it has never been used in a robot.

SUGGESTION
New Joint ID assignment should happen aautomatically

C306A5 Joint ID could not be stored

EXPLANATION
Something went wrong while trying to store the Joint ID, new ID verification will be needed.

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C306A6 control-package sequence number mismatched with expected sequence number

C306A7 {unsigned} instances of mismatched control-package sequence numbers within last second

C306A8 Sanity check of control-package sequence numbers recovered after detecting {unsigned} bad sequence numbers

C306A9 Joint moved more than allowable limit

EXPLANATION
Potential mechanical failure of the joint's brakes

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C306A10 Current detected in motor exceeded limits, current was {float}A

C306A11 PWM duty cycle for motor phase A is {float}

C306A12 PWM duty cycle for motor phase B is {float}

C306A13 PWM duty cycle for motor phase C is {float}

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket

1.167. C307 Data B: {data}

EXPLANATION
Data dump from MCU B, argument indicates index of data.

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.168. C308 Data A: {data}

EXPLANATION
Data dump from MCU A, argument indicates index of data.

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.169. C309 Keep-Alive System

C309A0 Critical error

EXPLANATION
A critical error occurred in the Keep-Alive System

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C309A1 Keep-Alive System message with wrong sequence received from SCB-uPA.

C309A2 Timeout reached while waiting for a Keep-Alive System message from SCB-uPA.

C309A3 Go-to-Fault command received a Keep-Alive System message from SCB-uPA.

C309A4 A Keep-Alive System message with wrong sequence received from SCB-uPB.

C309A5 Timeout reached while waiting for Keep-Alive System message from SCB-uPB.

C309A6 Go-to-Fault command received in Keep-Alive System message from SCB-uPB.

C309A7 Keep-Alive System message received from an unauthorized source: {unsigned}

C309A8 uPA handler received an invalid value

C309A9 uPB handler received an invalid value

C309A10 Lost {unsigned} Keep-Alive System message(s) in a row from Safety Control Board-uPA

EXPLANATION
An invalid amount of Keep-Alive System messages have been lost from the Safety Control Board Processor A

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C309A11 Lost {unsigned} Keep-Alive System message(s) in a row from Safety Control Board-uPB

EXPLANATION
A invalid amount of Keep-Alive messages have been lost from the Safety Control Board Processor B

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C309A12 Go-to-Violation command received in Keep-Alive System message from SCB-uPA.

C309A13 Go-to-Violation command received in Keep-Alive System message from SCB-uPB.

C309A14 Invalid command received in Keep-Alive System message from SCB-uPA.

C309A15 Invalid command received in Keep-Alive System message from SCB-uPB.

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.170. C311 Delay Callback

C311A0 The timer is not available

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.171. C312 Data validation

C312A0 Critical error

EXPLANATION
A critical error occurred during data validation

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check for ESD noise, (C) Update software

C312A1 Missed {unsigned} packages

C312A2 Unexpected sequence ({signed})

C312A3 {unsigned} failures in a row

C312A4 Received a package at an unexpected time

C312A5 Package had type {unsigned}

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.172. C313 App version

C313A0 Build version is: {signed}

C313A1 Git sha is: {hex}

C313A2 CRC code is: {hex}

C313A3 Build major version is: {unsigned}

C313A4 Build minor version is: {unsigned}

C313A5 Build patch version is: {unsigned}

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.173. C314 SPI IO

C314A0 Critical error

EXPLANATION
A critical error occurred related to IO

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check for IO connections, (C) Update software

C314A1 Control bits read wrongly as: {hex}

C314A2 Output readback does not match the produced value: {hex}

EXPLANATION
High 8 bit - set, low 8 bit - readback

C314A3 Safeguard bit transition to low

C314A4 Emergency Stop bit transition to low

C314A5 Expected OSSD pulse were not detected on CO{unsigned}

EXPLANATION
The generated OSSD pulses on the safety output were not seen during readback

SUGGESTION
Try any of the following actions to resolve the issue: (A) Verify safety output is not connected to any power supply or another safety output, (B) Update software

C314A6 An unexpected OSSD pulse was detected on CO{unsigned}

EXPLANATION
An OSSD pulse was detected on the safety output readback, but was not generated by the hardware

SUGGESTION
Try any of the following actions to resolve the issue: (A) Verify safety output is not connected to ground or another safety output, (B) Update software

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.174. C315 Watchdog

C315A0 Self-test failed

EXPLANATION
The system watchdog is not working as expected

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C315A1 Patrol post {unsigned}

C315A2 Checked in at {float_1_3} mS which is outside permitted window

C315A3 Checked in {unsigned} times which is outside permitted window

C315A4 Has not been checked in for {float_1_3} mS times which is outside permitted window

C315A5 There is no more space in the wdog keeper module.

EXPLANATION
The number of allowed checkpoints has exceeded what is allowed

SUGGESTION
Configure the wdog keeper to allow more checkpoints if possible.

C315A6 The wdog keeper is not initialized, trying to register a checkpoint.

EXPLANATION
Trying to register, before the wdog keeper has beein initialized.

SUGGESTION
Make sure the wdog keeper has been initialized, before registering.

C315A7 The wdog keeper failed to initialized, already initialized.

EXPLANATION
The watchdog keeper cannot be initialized multiple times.

SUGGESTION
Make sure not to initialize multiple times.

C315A8 Program counter at time of reset: {hex}

EXPLANATION
Program counter at watchdog reset.

SUGGESTION

C315A9 Active watchpoint bitmask: {hex}

EXPLANATION
Bitmask indicating if a watchpoint is active.

SUGGESTION

C315A10 ID {unsigned} failed to meet checkin requirements

EXPLANATION
ID of watchpoint that failed validation.

SUGGESTION

C315A11 Additional data: {hex}

EXPLANATION
Additional data from Main app, version and application specific.

C315A12 Last system state reported before watchdog reset {unsigned}

EXPLANATION
System status at watchdog reset.

SUGGESTION

C315A13 Stack Pointer (SP): {hex}

C315A14 Link Register (LR): {hex}

C315A15 Program Counter (PC): {hex}

C315A16 Status Register (PSR): {hex}

C315A17 R0 register: {hex}

C315A18 R1 register: {hex}

C315A19 R2 register: {hex}

C315A20 R3 register: {hex}

C315A21 R12 register: {hex}

C315A22 Number of checkins: {unsigned}

C315A23 Time between last two checkins: {float} mS

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.175. C316 MCU

C316A0 Unknown ID

EXPLANATION
The Microcontroller Identifier does not match an expected value

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C316A1 This version of the firmware is obsolete and needs to be updated

EXPLANATION
The firmware in the robot is too old and needs to be updated

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

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If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.176. C317 Failure injection

C317A0 Injecting type {unsigned}

EXPLANATION
Failure of the specified type has been injected to the system.

SUGGESTION

C317A1 Missing handler for type {unsigned}

EXPLANATION
There is no failure handler for the specified type.

SUGGESTION

C317A2 Invalid data provided to type {unsigned}

EXPLANATION
The data for the failure type is incorrect. The failure has not been injected.

SUGGESTION

C317A3 Throw report

EXPLANATION
The failure has been injected.

SUGGESTION

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.177. C318 Stack monitor

C318A0 The stack level watermark at {unsigned}% is breached

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.178. C319 Filesys Diagnostic Tool

C319A0 Read operation started, at start address {hex}

C319A1 Read operation was succesfully completed

C319A2 Read operation failed, due to illegal address {hex}

EXPLANATION
This tool does not support reading out the requested address

C319A3 Received data for unexpected address {hex}

C319A4 Expected address to be {hex}

C319A5 Erased sector at address {hex}

C319A6 Write operation was succesfully completed

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.179. C320 REDnet BLVDS

C320A0 Hub : Framing error on port: {signed}

EXPLANATION
A message with a malformed frame was passed to the HUB on specified port(0: Int 1: Ext0, 2: Ext1, 4: None)

SUGGESTION

C320A1 Hub : Alignment error on port: {signed}

EXPLANATION
A message with a malformed frame was passed to the HUB on specified port(0: Int 1: Ext0, 2: Ext1, 4: None)

SUGGESTION

C320A2 Data transmission unit : FiFo overflow on port {unsigned}

EXPLANATION
Transmission unit had a FiFo overflow on specified port (0: port a, 1: port b)

C320A3 Data transmission unit : code error on port {unsigned}

EXPLANATION
Transmission unit received a code error on specified port (0: port a, 1: port b), this should never happen

SUGGESTION

C320A4 Data reception unit : Alignment error on port {unsigned}

EXPLANATION
Reception unit was unaligned with message on specified port (0: port a, 1: port b)

SUGGESTION

C320A5 Data reception unit : Alignment fault on port {unsigned}

EXPLANATION
Reception unit was unable to align to incomming message on specified port (0: port a, 1: port b)

SUGGESTION

C320A6 Data reception unit : Code error on port {unsigned}

EXPLANATION
Reception unit saw an invalid control code on specified port (0: port a, 1: port b)

SUGGESTION

C320A7 Data reception unit : Disparity error on port {unsigned}

EXPLANATION
Reception unit got a disparity error on specified port (0: port a, 1: port b)

SUGGESTION

C320A8 Data reception unit : FiFo overflow on port {unsigned}

EXPLANATION
Reception unit had a FiFo overflow on specified port (0: port a, 1: port b)

SUGGESTION

C320A9 Upstream transport layer : Package CRC error

EXPLANATION
Upstream transport layer cought CRC error in package header

SUGGESTION
This might happen on occation. Can be ignored if only happens rarely

C320A10 Upstream transport layer : Bad package framing

EXPLANATION
Upstream transport layer had found a framing error.

SUGGESTION

C320A11 Upstream transport layer : Rx FiFo overflow

EXPLANATION
Upstream transport layer had a FiFo overflow

C320A12 Upstream transport layer : Tx FiFo overflow

EXPLANATION
Slave transport layer had a Tx FiFo overflow

SUGGESTION

C320A13 Upstream transport layer : Invalid hub count

EXPLANATION
Slave transport layer recieved a message with invalid hub-cnt

SUGGESTION

C320A14 Upstream transport layer : Request source not master.

EXPLANATION
Slave transport layer recieved a message request from a device different from the master

SUGGESTION

C320A15 Upstream transport layer : Response source not slave.

EXPLANATION
Slave transport layer recieved a message response from a device different from a slave

SUGGESTION

C320A16 Upstream transport layer : Sync package type received

EXPLANATION
Master transport layer recieved a message where the type was Sync

SUGGESTION

C320A17 Upstream transport layer : Trigger package type received

EXPLANATION
Master transport layer recieved a message where the type was a tigger

SUGGESTION

C320A18 Upstream transport layer : Request package type received

EXPLANATION
Master transport layer recieved a message where the type was a request

SUGGESTION

C320A19 Upstream transport layer : Invalid reponse type received

EXPLANATION
Master transport layer recieved a message where the type was an invalid response

SUGGESTION

C320A20 Upstream transport layer : Package from invalid source received

EXPLANATION
Master transport layer recieved a package with an invalid source

SUGGESTION

C320A21 Upstream transport layer : Missmatch between HUB count and package source

EXPLANATION
Master transport layer recieved a package where the src and HUB count did not match

SUGGESTION

C320A22 Upstream transport layer : Package longer than expected

EXPLANATION
Master transport layer recieved a package where the length was greate than expected, or lost a framing end

SUGGESTION

C320A23 Upstream transport layer : Package shorter than expected

EXPLANATION
Master transport layer recieved a package where the length was less than expected

SUGGESTION

C320A24 Upstream transport layer : Package was misaligned

EXPLANATION
Master transport layer recieved a package that did not align to 32bit

SUGGESTION

C320A25 Downstream transport layer : Package was shorter than expected

EXPLANATION
Downstream transport layer tried to transmit a package that was longer than the data available

SUGGESTION

C320A26 Downstream transport layer : Package was longer than expected

EXPLANATION
Downstream transport layer tried to transmit a package with more data than expected

C320A27 Downstream transport layer : Invalid package type

EXPLANATION
Master transport layer tried to transmit a package with an invalid package type

SUGGESTION

C320A28 Downstream transport layer : Package type missing

EXPLANATION
Master transport layer tried to transmit a package without a package type

SUGGESTION

C320A29 Downstream transport layer : Message length missing

EXPLANATION
Master transport layer tried to transmit a package without a message length

SUGGESTION

C320A30 Downstream transport layer : Package destination missing

EXPLANATION
Master transport layer tried to transmit a package without a destination

C320A31 Downstream transport layer : Package source missing

EXPLANATION
Master transport layer tried to transmit a package without a source

SUGGESTION

C320A32 Downstream transport layer : Package NML missing

EXPLANATION
Master transport layer tried to transmit a package without a next message length

SUGGESTION

C320A33 Downstream transport layer : Package TTTL missing

EXPLANATION
Master transport layer tried to transmit a package without a time to live

SUGGESTION

C320A34 Downstream transport layer : Package timeout(high byte) missing

EXPLANATION
Master transport layer tried to transmit a package without a timeout the high byte

SUGGESTION

C320A35 Downstream transport layer : Package timeout(low byte) missing

EXPLANATION
Master transport layer tried to transmit a package without a timeout the low byte

SUGGESTION

C320A36 Downstream transport layer : Invalid message length

EXPLANATION
Master transport layer tried to transmit a package with missmatch between stated and actual length

SUGGESTION

C320A37 REDnet controller : Received control pkg in data phase

EXPLANATION
REDnet controller received a control package when not in the control phase

C320A38 REDnet controller : Received data package in control phase

EXPLANATION
REDnet controller received a data package when not in the data phase

SUGGESTION

C320A39 REDnet controller : Got SOC before being ready

EXPLANATION
REDnet controller got a SOC interrupt while not ready

SUGGESTION

C320A40 REDnet scheduler : Got SOC before being ready

EXPLANATION
REDnet scheduler got a SOC interrupt while not ready

SUGGESTION
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C320A41 REDnet scheduler : Node ID invalid

EXPLANATION
REDnet scheduler tried to send to Node ID outside valid range

C320A42 Data reception unit : Alignment error on port A, {unsigned} seen since last

EXPLANATION
Reception unit was unaligned with message on port A

SUGGESTION

C320A43 Data reception unit : Alignment fault on port A, {unsigned} seen since last

EXPLANATION
Reception unit was unable to align to incomming message on port A

SUGGESTION

C320A44 Data reception unit : Code error on port A, {unsigned} seen since last

EXPLANATION
Reception unit saw an invalid control code on port A

SUGGESTION

C320A45 Data reception unit : Disparity error on port A, {unsigned} seen since last

EXPLANATION
Reception unit got a disparity error on port A

C320A46 Data reception unit : FiFo overflow on port A, {unsigned} seen since last

EXPLANATION
Reception unit had a FiFo overflow on port A

SUGGESTION

C320A47 Data reception unit : Alignment error on port B, {unsigned} seen since last report

EXPLANATION
Reception unit was unaligned with message on port B

SUGGESTION

C320A48 Data reception unit : Alignment fault on port B, {unsigned} seen since last report

EXPLANATION
Reception unit was unable to align to incomming message on port B

SUGGESTION

C320A49 Data reception unit : Code error on port B, {unsigned} seen since last report

EXPLANATION
Reception unit saw an invalid control code on port B

SUGGESTION

C320A50 Data reception unit : Disparity error on port B, {unsigned} seen since last report

EXPLANATION
Reception unit got a disparity error on port B

C320A51 Data reception unit : FiFo overflow on port B, {unsigned} seen since last report

EXPLANATION
Reception unit had a FiFo overflow on port B

SUGGESTION

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.180. C321 REDnet RS485

C321A0 Hub : Framing error on port: {signed}

EXPLANATION
A message with a malformed frame was passed to the HUB on specified port(0: Int 1: Ext0, 2: Ext1, 4: None)

SUGGESTION

C321A1 Hub : Alignment error on port: {signed}

EXPLANATION
A message with a malformed frame was passed to the HUB on specified port(0: Int 1: Ext0, 2: Ext1, 4: None)

SUGGESTION

C321A2 Data transmission unit : FiFo overflow on port {unsigned}

EXPLANATION
Transmission unit had a FiFo overflow on specified port (0: port a, 1: port b)

SUGGESTION

C321A3 Data transmission unit : code error on port {unsigned}

EXPLANATION
Transmission unit received a code error on specified port (0: port a, 1: port b), this should never happen

SUGGESTION

C321A4 Data reception unit : Alignment error on port {unsigned}

EXPLANATION
Reception unit was unaligned with message on specified port (0: port a, 1: port b)

SUGGESTION

C321A5 Data reception unit : Alignment fault on port {unsigned}

EXPLANATION
Reception unit was unable to align to incomming message on specified port (0: port a, 1: port b)

SUGGESTION

C321A6 Data reception unit : Code error on port {unsigned}

EXPLANATION
Reception unit saw an invalid control code on specified port (0: port a, 1: port b)

SUGGESTION
Contact your local Universal Robots service provider for assistance.

C321A7 Data reception unit : Disparity error on port {unsigned}

EXPLANATION
Reception unit got a disparity error on specified port (0: port a, 1: port b)

SUGGESTION

C321A8 Data reception unit : FiFo overflow on port {unsigned}

EXPLANATION
Reception unit had a FiFo overflow on specified port (0: port a, 1: port b)

SUGGESTION

C321A9 Upstream transport layer : Package CRC error

EXPLANATION
Upstream transport layer cought CRC error in package header

SUGGESTION
This might happen on occation. Can be ignored if only happens rarely

C321A10 Upstream transport layer : Bad package framing

EXPLANATION
Upstream transport layer had found a framing error.

SUGGESTION

C321A11 Upstream transport layer : Rx FiFo overflow

EXPLANATION
Upstream transport layer had a FiFo overflow

SUGGESTION

C321A12 Upstream transport layer : Tx FiFo overflow

EXPLANATION
Slave transport layer had a Tx FiFo overflow

SUGGESTION

C321A13 Upstream transport layer : Invalid hub count

EXPLANATION
Slave transport layer recieved a message with invalid hub-cnt

SUGGESTION

C321A14 Upstream transport layer : Request source not master.

EXPLANATION
Slave transport layer recieved a message request from a device different from the master

C321A15 Upstream transport layer : Response source not slave.

EXPLANATION
Slave transport layer recieved a message response from a device different from a slave

SUGGESTION

C321A16 Upstream transport layer : Sync package type received

EXPLANATION
Master transport layer recieved a message where the type was Sync

SUGGESTION

C321A17 Upstream transport layer : Trigger package type received

EXPLANATION
Master transport layer recieved a message where the type was a tigger

SUGGESTION

C321A18 Upstream transport layer : Request package type received

EXPLANATION
Master transport layer recieved a message where the type was a request

SUGGESTION

C321A19 Upstream transport layer : Invalid reponse type received

EXPLANATION
Master transport layer recieved a message where the type was an invalid response

SUGGESTION

C321A20 Upstream transport layer : Package from invalid source received

EXPLANATION
Master transport layer recieved a package with an invalid source

SUGGESTION

C321A21 Upstream transport layer : Missmatch between HUB count and package source

EXPLANATION
Master transport layer recieved a package where the src and HUB count did not match

SUGGESTION

C321A22 Upstream transport layer : Package longer than expected

EXPLANATION
Master transport layer recieved a package where the length was greate than expected, or lost a framing end

SUGGESTION

C321A23 Upstream transport layer : Package shorter than expected

EXPLANATION
Master transport layer recieved a package where the length was less than expected

SUGGESTION

C321A24 Upstream transport layer : Package was misaligned

EXPLANATION
Master transport layer recieved a package that did not align to 32bit

SUGGESTION

C321A25 Downstream transport layer : Package was shorter than expected

EXPLANATION
Downstream transport layer tried to transmit a package that was longer than the data available

SUGGESTION

C321A26 Downstream transport layer : Package was longer than expected

EXPLANATION
Downstream transport layer tried to transmit a package with more data than expected

SUGGESTION

C321A27 Downstream transport layer : Invalid package type

EXPLANATION
Master transport layer tried to transmit a package with an invalid package type

SUGGESTION

C321A28 Downstream transport layer : Package type missing

EXPLANATION
Master transport layer tried to transmit a package without a package type

SUGGESTION

C321A29 Downstream transport layer : Message length missing

EXPLANATION
Master transport layer tried to transmit a package without a message length

SUGGESTION

C321A30 Downstream transport layer : Package destination missing

EXPLANATION
Master transport layer tried to transmit a package without a destination

SUGGESTION

C321A31 Downstream transport layer : Package source missing

EXPLANATION
Master transport layer tried to transmit a package without a source

SUGGESTION

C321A32 Downstream transport layer : Package NML missing

EXPLANATION
Master transport layer tried to transmit a package without a next message length

SUGGESTION

C321A33 Downstream transport layer : Package TTTL missing

EXPLANATION
Master transport layer tried to transmit a package without a time to live

SUGGESTION

C321A34 Downstream transport layer : Package timeout(high byte) missing

EXPLANATION
Master transport layer tried to transmit a package without a timeout the high byte

C321A35 Downstream transport layer : Package timeout(low byte) missing

EXPLANATION
Master transport layer tried to transmit a package without a timeout the low byte

SUGGESTION

C321A36 Downstream transport layer : Invalid message length

EXPLANATION
Master transport layer tried to transmit a package with missmatch between stated and actual length

SUGGESTION

C321A37 REDnet controller : Received control pkg in data phase

EXPLANATION
REDnet controller received a control package when not in the control phase

SUGGESTION

C321A38 REDnet controller : Received data package in control phase

EXPLANATION
REDnet controller received a data package when not in the data phase

SUGGESTION

C321A39 REDnet controller : Got SOC before being ready

EXPLANATION
REDnet controller got a SOC interrupt while not ready

SUGGESTION

C321A40 REDnet scheduler : Got SOC before being ready

EXPLANATION
REDnet scheduler got a SOC interrupt while not ready

C321A41 REDnet scheduler : Node ID invalid

EXPLANATION
REDnet scheduler tried to send to Node ID outside valid range

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.181. C322 Switch

C322A0 Switch : Priority package timeout on ports: {hex}

EXPLANATION
Switch timed out trying to provide priority package to specified ports (bitmask)

SUGGESTION

C322A1 Switch : Data package timeout on ports: {hex}

EXPLANATION
Switch timed out trying to provide data package to specified ports (bitmask)

SUGGESTION

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.182. C323 SCB Endpoint

C323A0 Endpoint : Priority data debug channel overflow

EXPLANATION
SCB Endpoint discarded priority data to debug channel as it was not consumed fast enough

SUGGESTION

C323A1 Endpoint : data debug channel overflow

EXPLANATION
SCB Endpoint discarded data to debug channel as it was not consumed fast enough

SUGGESTION

C323A2 Endpoint : Priority data inbound timeout from port {hex}

EXPLANATION
SCB Endpoint lost an inbound priority package on specified port as the data was not provided before timeout, data as bitmask

SUGGESTION

C323A3 Endpoint : Data inbound timeout from port {hex}

EXPLANATION
SCB Endpoint lost an inbound package on specified port as the data was not provided before timeout, data as bitmask

SUGGESTION

C323A4 Endpoint : Priority data outbound timeout to port {hex}

EXPLANATION
SCB Endpoint lost an outbound priority package to specified port as the data was not consumed before timeout, data as bitmask

SUGGESTION

C323A5 Endpoint : Data outbound timeout to port {hex}

EXPLANATION
SCB Endpoint lost an outbound package to specified port as the data was not consumed before timeout, data as bitmask

SUGGESTION

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.183. C324 TP UART

C324A0 UART : FiFo overflow

EXPLANATION
UART lost incomming data as a result of a FiFo overflow

SUGGESTION

C324A1 UART : Length mismatch

EXPLANATION
UART discarded a package as length of data did not match announced data

SUGGESTION

C324A2 UART : Unexpected SOM

EXPLANATION
UART got a new start of message during transmission of a message, data will be lost

SUGGESTION

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.184. C325 SPI uA

C325A53 uA SPI : FiFo underflow

EXPLANATION
uA SPI FiFo ran out of data before message was complete

SUGGESTION

C325A54 uA SPI : Unexpected read command

EXPLANATION
uA SPI received a read command without signaling data ready

SUGGESTION

C325A55 uA SPI : Unsupported command: {hex}

EXPLANATION
uA SPI received an unspported command

SUGGESTION

C325A56 uA SPI : FiFo overflow

EXPLANATION
uA SPI received more data from device than could be stored.

C325A63 uA SPI : FiFo overflow on interface: {signed}

EXPLANATION
uA SPI received more data than could be relayed to device.

C325A64 uA SPI : FiFo overflow cleared

EXPLANATION
uA SPI is ready to relay messages to device.

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.185. C326 SPI uB

C326A57 uB SPI : FiFo underflow

EXPLANATION
uB SPI FiFo ran out of data before message was complete

SUGGESTION

C326A58 uB SPI : Unexpected read command

EXPLANATION
uB SPI received a read command without signaling data ready

SUGGESTION

C326A59 uB SPI : Unsupported command: {hex}

EXPLANATION
uB SPI received an unspported command

SUGGESTION

C326A60 uB SPI : FiFo overflow

EXPLANATION
uB SPI received more data from device than could be stored.

SUGGESTION

C326A65 uB SPI : FiFo overflow on interface: {signed}

EXPLANATION
uB SPI received more data than could be relayed to device.

SUGGESTION

C326A66 uB SPI : FiFo overflow cleared

EXPLANATION
uB SPI is ready to relay messages to device.

SUGGESTION

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.186. C327 PCIe

C327A0 PCIe Control-Data : Blocked for {unsigned} us

EXPLANATION
PCIe control channel overflowed and was blocked, time to nearest us

SUGGESTION
Try the following actions to see which resolves the issue: (A) Update software, (B) Reduce CPU load

C327A1 PCIe Priority-Data : Blocked for {unsigned} us

EXPLANATION
PCIe priority channel overflowed and was blocked, time to nearest us

SUGGESTION
Try the following actions to see which resolves the issue: (A) Update software, (B) Reduce CPU load

C327A2 PCIe data-data : Blocked for {unsigned} us

EXPLANATION
PCIe data channel overflowed and was blocked, time to nearest us

SUGGESTION
Try the following actions to see which resolves the issue: (A) Update software, (B) Reduce CPU load

---

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket

1.187. C328 Transceiver miscellaneous

C328A0 The SoC arrived {unsigned} [ns] too early

EXPLANATION
The ideal period of the SoC is 1000.00 us, and the allowed jitter is +/- 1000.0 ns

SUGGESTION

C328A1 Timeout while waiting for the SoC, the SoC was lost or delayed more than {unsigned} ns!

EXPLANATION
The ideal period of the SoC is 1000.00 us, and the allowed jitter is +/- 1000.0 ns

SUGGESTION

C328A2 Flash device is not supported, JEDEC data for device is: {hex}

EXPLANATION
The flash device's JEDEC ID does not match a supported flash device

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

---

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.188. C329 AXI STREAM

C329A1 FiFo overflow on interface: {signed}

EXPLANATION
AXI stream received more data than could be relayed to device.

SUGGESTION
Contact your local Universal Robots service provider for assistance.

C329A2 FiFo overflow cleared

EXPLANATION
AXI stream is ready to relay messages to device.

SUGGESTION

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.189. C330 IMMI IO

C330A1 Injection-Molding-Machine-Interface E-Stop output readback does not match produced value: {hex}

EXPLANATION
First byte: produced value, second byte: read value

C330A2 Injection-Molding-Machine-Interface Moulding Area Free output readback does not match produced value: {hex}

EXPLANATION
First byte: produced value, second byte: read value

C330A3 Injection-Molding-Machine-Interface 24V IO voltage outside acceptable range

EXPLANATION
The voltage measured on the 24V IO rail is lower than expected.

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check the fuses on the Injection-Molding-Machine-Interface. (B) Verify there are no short circuits on the 24V IO connectors.

C330A4 Injection-Molding-Machine-Interface 48V voltages outside acceptable range

EXPLANATION
The voltages measured on the 48V rails are lower than expected.

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check the fuses on the Injection-Molding-Machine-Interface. (B) Verify there are no short circuits on the IO connectors.

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.190. C331 Friction model

C331A0 Critical error

EXPLANATION
A critical error occurred in the friction model module

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.191. C332 Servo configuration

C332A0 Critical error

EXPLANATION
A critical error occurred in the servo configuration module

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software,

C332A1 The configuration file could not be loaded

C332A2 The configuration file could not be updated

C332A3 Failed to create configuration file, due to unknown PCB_type {unsigned}.

C332A4 Failed to acquire the motor datasheet, due to unsupported motor id {unsigned}

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.192. C333 File message

C333A0 Critical error

EXPLANATION
A critical error occurred in the file message module

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C333A1 File type {unsigned} is not supported

C333A2 All arguments are mandatory

C333A3 Protocol version {unsigned} is not supported

C333A4 File part {unsigned} is unexpected

C333A5 CRC {hex} is invalid

C333A6 Expected CRC {hex}

C333A7 Unique ID {hex} is invalid

C333A8 Expected unique ID {hex}

C333A9 File version {unsigned} is not supported

C333A10 File ID {unsigned} is deleted

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.193. C334 Robot deviated from constrained axes while in Constrained Freedrive.

EXPLANATION
The robot moved in one or more axes that were not allowed.

SUGGESTION
Check the settings on the Freedrive panel.

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.194. C336 Hardware configuration manager

C336A1 An illegal write request to a memory area, at line {unsigned}

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.195. C337 Control parameters

C337A0 Critical error

EXPLANATION
A critical error occurred during setup of the control parameters

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C337A1 A selected set of control parameters with id {unsigned}, was not allowed in this application

C337A2 A selected set of control parameters with id {unsigned}, was not known or was incorrectly applied

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.196. C338 PROFIsafe

C338A0 Critical error

EXPLANATION
A critical error occured in the PROFIsafe logic

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software,

C338A1 A hard error was triggered by the Siemens Profisafe Driver with instance ID {unsigned}

C338A2 A hard error was triggered by the Siemens Profisafe Driver at line number {unsigned}

C338A3 A hard error was triggered by the Siemens Profisafe Driver in file {unsigned}

C338A4 Invalid protocol version for PROFIsafe crosscommunication detected

C338A5 Invalid message length for PROFIsafe crosscommunication detected for msg id {unsigned}

C338A6 A PROFIsafe message was received, but there is no valid configuration

EXPLANATION
A PROFIsafe message was received before a valid safety configuration

SUGGESTION
Try the following actions to see which resolves the issue: (A) Verify the PROFIsafe Host settings and review the robot safety configuration, see PROFIsafe (B) Do not start a PROFIsafe host before the robot is ready (C) Conduct a complete rebooting sequence

C338A7 A PROFIsafe message was received and PROFIsafe was disabled.

EXPLANATION
A PROFIsafe message was received while PROFIsafe is disabled in the safety configuration

SUGGESTION
Try the following actions to see which resolves the issue: (A) Verify the PROFIsafe Host settings and review the robot safety configuration, see PROFIsafe (B) Do not start a PROFIsafe host before the robot is ready (C) Conduct a complete rebooting sequence

C338A8 The robot rejected the PROFIsafe F-Parameter set

EXPLANATION
A PROFIsafe F-Parameterset was received from the PLC but was not accepted

SUGGESTION
Try the following actions to see which resolves the issue: (A) Check the diagnosis messages from the PLC and set a valid F-Parameter configuration, (B) Conduct a complete rebooting sequence

C338A9 An error occured during param state with code {unsigned}

C338A10 An error occured during operational state with code {unsigned}

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.197. C339 Cross communication

C339A0 Critical error

EXPLANATION
A critical error occured in the cross communication module

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software

C339A1 Requested transmit queue size {unsigned} larger than fifo size

C339A2 The transmit queue size must not be larger than {unsigned}

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.198. C340 Energy Monitoring

C340A0 Idle power consumption too high

EXPLANATION
The system is drawing more power than expected while idle

SUGGESTION
Try the following actions to see which resolves the issue: (A) Ensure supply is not delivering more than 48V, (B) Check Energy Eaters cable and connections, (C) Check Energy Eater, (D) Update software,

C340A1 Energy surplus shutdown

EXPLANATION
The power supply is sending energy to the energy eater

SUGGESTION
Try the following actions to see if it resolves the issue: (A) Ensure supply is not delivering more than 48V, (B) Update software,

If you are unable to resolve the issue, login or create an account at http://myUR.universal-robots.com and post a new ticket.

1.199. C400 Elbow position close to safety plane limits

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.200. C401 Exceeding user safety settings for stopping time

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.201. C402 Exceeding user safety settings for stopping distance

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.202. C403 Danger of clamping between the Robot's lower arm and tool

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.203. C404 Unexpected behavior

C404A0 Runtime sends data too often

C404A1 Runtime tries to receive data too often

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.204. C450 Force-Torque sensor

C450A0 Sensor data invalid

EXPLANATION
Force-Torque sensor is defective or not mounted correctly

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check for loose connections, (C) Update software, (D) Contact your local Universal Robots service provider for assistance

C450A1 Sensor can not be used, therefore it is disabled

EXPLANATION
Force-Torque sensor version is newer than the Robot software

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check for loose connections, (C) Update software, (D) Contact your local Universal Robots service provider for assistance

C450A2 Channel {unsigned} signal became invalid

C450A3 Frequency is: {float}

C450A4 Force-Torque sensor is expected, but it cannot be detected

EXPLANATION
Force-Torque sensor is expected, but no signals from the sensor can be detected.

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check for loose connections, (C) Check for damages to the Tool/sensor, (D) Update software, (E) Contact your local Universal Robots service provider for assistance

C450A5 Force-Torque sensor is detected but not calibrated

EXPLANATION
Force-Torque sensor is installed, but no calibration was found.

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Contact your local Universal Robots service provider for assistance

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If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.205. C499 Motorencoder calibration

C499A0 Actual position isn't stable. Position error: {float} [ticks]

C499A1 Actual position has a large error. Position error: {float} [ticks]

C499A2 Actual position has a large error and isn't stable. Position error: {float} [ticks]

C499A3 Target position is: {unsigned} [ticks]

C499A4 Actual average position is: {float} [ticks]

C499A5 Actual position variance is: {float} [ticks]

C499A6 Actual position min to max delta is: {signed} [ticks]

C499A7 Actual sample position number is: {unsigned}

C499A8 Average position isn't stable. Position variance: {float} [ticks]

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.206. C500 Self-test step

C500A0 ADC calibration started

C500A1 ADC calibration done

C500A2 Commutation offset calibration started

C500A3 Commutation offset calibration done

C500A4 Brake Test started

C500A5 Brake Test done

C500A6 Burn-in started

C500A7 Burn-in done

C500A8 Cogging started

C500A9 Cogging done

C500A12 Joint calibration started

C500A13 Joint calibration done

C500A17 Motor phase order start

C500A18 Motor phase order done

C500A19 Awaiting acceptance started

EXPLANATION
The Self-test awaits acceptance using serial number.

C500A20 Joint Encoder calibration started

C500A21 Joint Encoder calibration done

C500A22 Force-Torque started

C500A23 Force-Torque done

C500A24 Motor Encoder calibration started

C500A25 Motor Encoder calibration done

C500A26 Gear Zero Torque calibration started

C500A27 Gear Zero-torque calibration done

C500A28 RLS encoder signal quality test started

C500A29 RLS encoder signal quality test done

C500A30 Get motor encoder statistics started

C500A31 Get motor encoder statistics done

C500A32 Started calibration of motor parameters

C500A33 Completed calibration of motor parameters

C500A34 Started calibration of stator parameters

C500A35 Completed calibration of stator parameters

C500A36 Started thermal test

C500A37 Completed thermal test

C500A38 Started vibration test

C500A39 Completed vibration test

C500A40 Started store hardware information step

C500A41 Completed store hardware information step

C500A42 Commutation offset correction started

C500A43 Commutation offset correction done

C500A46 Kinematic error calibration started

C500A47 Kinematic error calibration done

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.207. C501 PC Selftest message

C501A0 Unhandled exception during subtest transition

C501A1 Exception occurred when accessing limits file

C501A2 Received Selftest step when state was not in running state

C501A3 Joint was disconnected prematurely

C501A4 Illegally transitioned into bootloader while the selftest was running

C501A5 Low-Level Spam Violation

C501A6 Startup Failed

C501A7 Selftest aborted

C501A8 Repeats of log entries (SPAM) caused the selftest setup to fail the selftest

C501A9 Repeats of log entries (SPAM) caused the selftest setup to attempt reboot of joint FPGA

C501A10 The scanned hardware type is not valid. The scanned string was: {string}

C501A11 {string} was not validated correctly. Ensure that the test has been run

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.208. C502 Additional information

C502A0 Min limit was {float}

C502A1 Max limit was {float}

C502A2 Value on uA was {float}

C502A3 Value on uB was {float}

C502A4 Maximum deviation between uA and uB was larger then limit of {float}

C502A5 The deviation was {float}

C502A6 Deviation calculation was based on value {float} from uA

C502A7 Deviation calculation was based on value {float} from uB

C502A8 Expected negative value, but tested {float}

C502A9 Expected positive value, but tested {float}

C502A10 Joint ID was {unsigned}

C502A11 Device ID was {unsigned}

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.209. C503 Limit Violation - ADC calibration

C503A0 Calibration data was not found for uA

C503A1 Calibration data was not found for uB

C503A2 phase_A gain exceeded limit

C503A3 phase_B gain exceeded limit

C503A4 phase_C gain exceeded limit

C503A5 phase_A offset exceeded limit

C503A6 phase_B offset exceeded limit

C503A7 phase_C offset exceeded limit

C503A8 Current samples not found for uA

C503A9 Current samples not found for uB

C503A10 Phase A coefficient of determination below minimum limit

C503A11 Phase B coefficient of determination below minimum limit

C503A12 Phase C coefficient of determination below minimum limit

C503A13 Phase {string} on uA, did not have a reference currrent measured at 0A

C503A14 Phase {string} on uB, did not have a reference currrent measured at 0A

C503A15 Phase {string} on uA, the applied offset did not match the 0A sample

C503A16 Phase {string} on uB, the applied offset did not match the 0A sample

C503A17 Phase {string} on uA, the applied offset deviated to much from the linear offset

C503A18 Phase {string} on uB, the applied offset deviated to much from the linear offset

C503A19 The ADC calibration on uA had illegal revision {unsigned}, make sure that ems calibration data is available

C503A20 The ADC calibration on uB had illegal revision {unsigned}, make sure that ems calibration data is available

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.210. C504 Limit Violation - Commutation offset calibration

C504A0 Calibration data was not found for uA

C504A1 Calibration data was not found for uB

C504A2 Commutation offset exceeded limit

C504A3 Difference between uA and uB exceeded limit

C504A4 The standard deviation of pole {unsigned} from the positive direction exceeded maximum level

C504A5 The standard deviation of pole {unsigned} from the negative direction exceeded maximum level

C504A6 The difference in position of pole {unsigned} measured from the positive and negative direction exceeded limit

C504A7 The Uncertainty of the commutation offset exceeded limit

C504A8 The estimated torque error at pole {unsigned} exceeded limit

C504A9 Received data from fewer poles than expected

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.211. C505 Limit Violation - Brake test

C505A0 Test data was not found

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.212. C506 Limit Violation - Zero torque offset calibration

C506A0 Missing calibration data. No data received

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.213. C507 Limit Violation - Joint Calibration

C507A0 Missing calibration data for uA

C507A1 Missing calibration measurements for uA

C507A2 Missing measurements count for uA

C507A3 Missing calibration data for uB

C507A4 Missing calibration measurements for uB

C507A5 Missing measurements count for uB

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.214. C508 Deviation - Joint Calibration

C508A0 Maximum Q-axis currents deviation

C508A1 Maximum D-axis currents deviation

C508A2 Maximum velocity deviation

C508A3 Maximum deviation from target pct.

C508A4 Wrong sign on Q-axis current from uA, positive expected

C508A5 Wrong sign on Q-axis current from uA, negative expected

C508A6 Temperature limit violation

C508A7 Wrong sign on Q-axis current from uB, positive expected

C508A8 Wrong sign on Q-axis current from uB, negative expected

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.215. C509 Limit Violation - Cogging calibration

C509A0 Calibration summary was not found for uA

C509A1 Calibration summary was not found for uB

C509A2 Received too many coefficient pairs uA

C509A3 Received too many coefficient pairs uB

C509A4 Received too few coefficient pairs uA

C509A5 Received too few coefficient pairs uB

C509A6 Cogging summary - std. residual error exceeded maximum limit

C509A7 Cogging summary - peak residual error exceeded maximum limit

C509A8 Cogging summary - mean speed error exceeded maximum limit

C509A9 Cogging summary - std. speed error exceeded maximum limit

C509A10 Cogging summary - peak speed error exceeded maximum limit

C509A11 Cogging coefficients - max signal amplitude exceeded max absolute limit

C509A12 Cogging coefficients - difference between the frequency component measured by uA and uB at index {float} exceeded the limit

C509A13 Joint type {string} is not supported by the test

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.216. C510 Limit Violation - Temperature

C510A0 Joint temperature exceeded limits

C510A1 Processor temperature exceeded difference limits

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.217. C511 Limit Violation - Joint encoder calibration

C511A0 Calibration summary was not found

C511A1 Incorrect amount of calibration LUT values

C511A2 Incorrect amount of validation LUT values

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.218. C512 Limit Violation - Motor encoder calibration

C512A0 Calibration summary was not found

C512A1 Incorrect amount of calibration LUT pairs

C512A2 Incorrect amount of validation LUT pairs

C512A3 Motor Encoder Calibration residual error, std. dev. limit violation

C512A4 Motor Encoder Calibration residual error, peak limit violation

C512A5 Incorrect amount of raw calibration samples

C512A6 Incorrect amount of raw validation samples

C512A7 Motor Encoder Calibration error reduction factor violation

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.219. C513 Motor encoder statistics

C513A0 Missing calibration data. Data not found

C513A1 Did not receive expected amount of drift data

C513A2 Did not receive expected amount of missing data

C513A3 Missed more indexes than max allowed

C513A4 Detected more drifted indexes than max allowed

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.220. C514 Limit Violation - RLS Encoder Signal Quality

C514A0 Data was not found, missing calibration data

C514A1 Height exceeded limits

C514A2 Distance exceeded limits

C514A3 Tilt exceeded limits

C514A4 Airgap exceeded limits

C514A5 Radial sensor offset exceeded limits

C514A6 Disc tilt exceeded limits

C514A7 The encoder variant {string} is not valid for this joint type

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.221. C515 Limit Violation - Motor Parameters

C515A0 Calculated back-emf constant (Kb) exceeded limits

C515A1 Calculated torque constant (Kt) exceeded limits

C515A2 Measured phase resistance (Rpp) exceeded limits

C515A3 Measured phase inductance (Lpp) exceeded limits

C515A4 Measured phase time constant (Tau_pp) exceeded limits

C515A5 Coulomb friction in negative direction exceeded limits

C515A6 Coulomb friction in positive direction exceeded limits

C515A7 Friction Model. Viscous friction coefficient limit violation in the negative direction

C515A8 Friction Model. Viscous friction coefficient limit violation in the positive direction

C515A9 Quality of linear fit r^2 limit violation in the negative direction

C515A10 Quality of linear fit r^2 limit violation in the positive direction

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.222. C516 Selftest disagreement

C516A0 Torque information disagreement between uA and uB

C516A1 Size disagreement between uA and uB

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.223. C517 Limit Violation - Vibration Measurement

C517A0 Not all vibration samples received from joint

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.224. C518 Joint Selftest Data Message

C518A0 Received unhandled message:{unsigned}

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.225. C519 Limit Violation - Hardware Information

C519A0 Mismatch between rotor and stator type {hex}

C519A1 Mismatch between gear box and shaft type {hex}

C519A2 Microprocessor A did not echo the correct hardware info back

C519A3 Microprocessor B did not echo the correct hardware info back

C519A4 Timed out after {unsigned} seconds while loading hardware serial numbers from QDA

C519A5 The received serial number {string} is not a recognized gear serial number

C519A6 The received serial number {string} is not a recognized motor serial number

C519A7 The received serial number {string} is not a recognized motor encoder platform serial number

C519A8 Hardware serial numbers was received while the joint was in {string} state, which is not allowed

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.226. C520 Limit Violation - Commutation Offset Correction

C520A0 The commutation offset correction brings the offset outside of the uncertainty area measured in the commutation offset calibration

C520A1 No data was received for the commutation offset correction step

C520A2 The Q axis voltage of {float} V was higher than expected after the calibration

C520A3 The current of {float} A was higher than expected after the calibration

C520A4 The D voltage was less symmetric after the calibration than before

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.227. C522 Limit Violation - Kinematic Error Calibration

C522A0 Did not receive data from all the expected velocities

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.228. C710 ROM Test

C710A0 Critical error

EXPLANATION
A critical error occurred during ROM validation

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software, (C) Contact your local Universal Robots service provider for assistance

C710A1 ROM corrupted

EXPLANATION
Failed to validate CRC on ROM

SUGGESTION
Reboot or contact your local Universal Robots service provider for assistance.

C710A2 Failed to validate CRC on invariant data in RAM

EXPLANATION
Safety critical data stored in RAM was corrupted

SUGGESTION
Reboot or contact your local Universal Robots service provider for assistance.

C710A3 Unexpected size of invariant data, size: {hex}

EXPLANATION
Size is in bytes. Size must be 32bit aligned

SUGGESTION
Contact your local Universal Robots service provider for assistance.

C710A4 Failed to validate CRC on code segment in RAM

EXPLANATION
Parts of the Firmware stored in RAM was corrupted

SUGGESTION
Contact your local Universal Robots service provider for assistance.

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.229. C720 LVD (low voltage detection)

C720A1 Reset due to LVD or power off

C720A2 Low Voltage warning level reached

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.230. C740 Hardware monitoring

C740A0 Critical error

EXPLANATION
A critical error occurred during hardware monitoring

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Update software, (C) Contact your local Universal Robots service provider for assistance

C740A1 1V2 voltage is outside of the allowed range: {float}

C740A2 1V8 voltage is outside of the allowed range: {float}

C740A3 2V5 voltage is outside of the allowed range: {float}

C740A4 3V3 voltage is outside of the allowed range: {float}

C740A5 PC's 3V3 voltage is outside of the allowed range: {float}

C740A6 uA's 3V3voltage is outside of the allowed range: {float}

C740A7 uB's 3V3 voltage is outside of the allowed range: {float}

C740A8 5V voltage is outside of the allowed range: {float}

C740A9 12V voltage is outside of the allowed range: {float}

C740A10 24V voltage is outside of the allowed range: {float}

C740A11 48V voltage is outside of the allowed range: {float}

C740A12 58V voltage is outside of the allowed range: {float}

C740A13 -4V voltage is outside of the allowed range: {float}

C740A14 Robot voltage is outside of the allowed range: {float}

C740A15 Robot current is outside of the allowed range: {float}

C740A17 Inrush protected 48V voltage is outside of the allowed range: {float}

C740A20 24V SPI IO voltage is outside of the allowed range: {float}

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check for loose connections, (C) Check for damages to the Tool/sensor, (D) Update software, (E) Contact your local Universal Robots service provider for assistance

C740A21 24V SPI IO current is outside of the allowed range: {float}

SUGGESTION
Try the following actions to see which resolves the issue: (A) Conduct a complete rebooting sequence, (B) Check for loose connections, (C) Check for damages to the Tool/sensor, (D) Update software, (E) Contact your local Universal Robots service provider for assistance

C740A22 The solenoid voltage is not 0 before activation: {float}

C740A23 The solenoid voltage is not 48V after activation: {float}

C740A24 The left Three-Position Enabling button is inconsistent

SUGGESTION
Try the following actions to see which resolves the issue: (A) Do not press the button repeatedly, (B) Remove any pressure off the button, (C) Press the button with more pressure. Light pressing may not work, (D) Update software, (E) contact your local Universal Robots service provider for assistance.

C740A25 The right Three-Position Enabling button is inconsistent

SUGGESTION
Try the following actions to see which resolves the issue: (A) Do not press the button repeatedly, (B) Remove any pressure off the button, (C) Press the button with more pressure. Light pressing may not work, (D) Update software, (E) contact your local Universal Robots service provider for assistance.

C740A26 State for the Three-Position Enabling button: {hex}

EXPLANATION
Bit 0: Button, Bit 4: Button negated, Bit 8: Monitor 1, Bit 12: Monitor 2

If you unable to resolve the issue, login to http://myUR.universal-robots.com and create a new case.

1.231. C900 Debug message data: {data}

Software Name: PolyScope
Software Version: 5.16
Document Version: 1.0

2. Glossary

I

inertia

Inertia is a property of matter where the object resists changes in velocity (speed and/or direction).