

INSIGHTqc Controller (with and without internal DIO)

INTRODUCTION

This is the software release notes for versions 200.0.0.82/400.0.3.34 for INSIGHTqc (without/with internal DIO) Corded Controllers. This document details the controller software version, new features, enhancements and upgrade instructions for the release.

1. Release Information

NOTE: Please upgrade both the tool and controller with the latest versions as outlined in this section.

The following software releases are launched as part of this release package.

CONTROLLER VERSION		
Description	INSIGHTqc without IO	INSIGHTqc with IO
Application Version	200.0.0.82	400.0.3.34
Database Version	0.0.1	0.0.1
OS Version	0.0.1	0.0.1
MCE	001.003.015	002.003.021
EthernetIP stack version	2.80	2.80
Profinet stack version	2.20.1	2.20.1

2. New Features

- **Powerhead Cycle Result Storage:** Implemented automatic removal of older cycle results when the number of stored records exceeds 500,000.
- **PFOP Trace Reliability:** Improved PFOP trace collection reliability during rapid cycle execution to prevent intermittent missing traces.

3. Enhancements and Fixes

- **Job Selection via Fieldbus Ethernet IP (EIP):** Resolved an intermittent issue where job selection commands sent through Ethernet/IP failed to be applied on the controller
- **Job Selection via PROFINET (PN):** Fixed an intermittent issue where job selection commands sent through PROFINET failed to reach the controller successfully
- **Job Re-Selection After Controller Reboot:** Corrected an issue where the previously selected job was not automatically reselected following a controller restart
- **PFOP Tightening ID Mapping:** Fixed an issue where historical cycle data retrieved through MID0064 reported a tightening ID that did not match the controller cycle ID
- **Cycle Result Step Number Reporting:** Prevented invalid step number 64 from being reported in cycle results

- **Fieldbus Ethernet IP Communication Stability:** Improved Ethernet/IP communication reliability to prevent intermittent PLC disconnections and controller communication loss.
- **PFOP MID0035 Job Status Reporting:** Corrected an issue where controller incorrectly transmitted a Job Fail event through MID0035 when the job completed successfully
- **Internal I/O Socket Selection:** Improved socket selection reliability via internal I/O and prevented unintended job deselection
- **PFOP Connection Handling:** Improved PFOP connection management to prevent controller hanging during rapid connection and disconnection events
- **Shutdown Code 16 Reporting:** Fixed an issue where shutdown code 16 (Early Trigger) was reported in End of Run (EOR) results even when torque, angle, and cycle results were valid and passed. Shutdown code 16 is now reported only for failed cycles
- **In-Cycle Output for Internal I/O:** Resolved an issue where the Internal I/O "In-Cycle" output remained active after a QE tool completed a free-run operation. The output now resets correctly when the trigger is released
- **Powerhead Cycle Result Download:** Improved downloading of powerhead cycle results to ensure complete and accurate retrieval of cycle data logs
- **Password Character Support:** Added support for the "#" character in Local UI password entry, matching browser behavior
- **Job Pset Transition:** Resolved an intermittent issue in job containing multiple Psets, where execution failed to transition from the first Pset to the subsequent Pset
- **In-Cycle Output Handling:** Improved PLC output reporting to eliminate incorrect "In-Cycle" indications when the tool was not running

4. Known Issues

In DHCP network mode, delay of 500ms-2000ms can be overserved. It is recommended to configure powerhead setup in dedicated eth2(External adapter) network to avoid the delay.

5. Upgrade Instructions

5.1 Controller Firmware Update

If updating from QCD Controller to Multi-Spindle platform - See link:

[Updating a QCD Controller to the Multi-Spindle Platform \(Powerhead or Single Spindle\) – IRTToolHelp](#)

Please follow the instruction below to download the firmware file.

- Go to our SendSafely/FTP and copy the Application (.irb) file to your PC or USB drive.
- Copy the file to your PC.
- Use Eth1 port for IRB firmware update or use USB drive to update IRB on controller local UI.

SendSafely:

Link to SendSafely platform for collaborators –

<https://filesafe.ingersollrand.com/receive/?packageCode=R0xH0I3CZTge7FOI2JUtkroDyiqJLwxfULry0BLVYno#keycode=AFFzeIR6NhkhOTThScIWRyjOe9J-2x9fbcDhTjLCgkk>

Path to files -

Home / INSIGHTqc- Corded Controller Firmware / QCD Non Integrated I/O with Multi Spindle Support / Version 200.0.0.82

Home / INSIGHTqc- Corded Controller Firmware / QCD Integrated IO / Version 400.0.3.34

Register for Sendsafely :

<https://irtoolhelp.ingersollrand.com/hc/en-us/articles/25600256116243--INSIGHT-Control-Latest-Global-Releases>

6. MID List

6.1 PFOP MID SUPPORTED

MID	Description	QCD_Multi Standalone	QCD_Multi Powerhead	MID	Description	QCD_Multi Standalone	QCD_Multi Powerhead
1	Communication start	Yes	Yes	54	Vehicle Id Number upload unsubscribe	Yes	Yes
2	Communication start acknowledge	Yes	Yes	60	Last tightening result data subscribe	Yes	Yes
3	Communication stop	Yes	Yes	62	Last tightening result data acknowledge	Yes	Yes
4	Command error	Yes	Yes	63	Last tightening result data unsubscribe	Yes	Yes
5	Command accepted	Yes	Yes	64	Old tightening result upload request	Yes	Yes
8	Trace data Subscribe	Yes	Yes	65	Old tightening result reply	Yes	Yes
9	Trace data unsubscribe	Yes	Yes	70	Alarm subscribe	Yes	Yes
10	Parameter set numbers upload request	Yes	Yes	71	Alarm Upload	Yes	Yes
11	Parameter set numbers upload reply	Yes	Yes	72	Alarm Upload acknowledge	Yes	Yes
12	Parameter set data upload request	Yes	Yes	73	Alarm Unsubscribe	Yes	Yes
13	Parameter set data upload reply	Yes	Yes	74	Alarm Acknowledged on torque controller	Yes	Yes
14	Parameter set "selected" subscribe	Yes	Yes	75	Alarm Acknowledged Ack	Yes	Yes
15	Parameter set "selected"	Yes	Yes	76	Alarm Status	Yes	Yes
16	Parameter set "selected" acknowledge	Yes	Yes	77	Alarm Status acknowledge	Yes	Yes
17	Parameter set "selected" unsubscribe	Yes	Yes	78	Acknowledge alarm remotely on torque controller	Yes	Yes
18	Select Parameter set	Yes	Yes	80	Read time upload request	Yes	Yes
19	Set Parameter set batch size	Yes	Yes	81	Time upload reply	Yes	Yes
20	Reset Parameter set batch size	Yes	Yes	82	Set Time in the Torque Controller	Yes	Yes
30	Job numbers upload request	Yes	Yes	127	Abort job	Yes	Yes
31	Job numbers upload reply	Yes	Yes	128	Job batch increment	Yes	Yes
32	Job data upload request	Yes	Yes	129	Job batch decrement	Yes	Yes
33	Job data upload reply	Yes	Yes	130	Job off	Yes	Yes
34	Job "info" subscribe	Yes	Yes	200	Set "external controlled" relays	Yes	Yes
35	Job "info"	Yes	Yes	210	Status "external monitored inputs" subscribe	Yes	Yes
36	Job "info" acknowledge	Yes	Yes	211	Status "external monitored inputs" upload	Yes	Yes
37	Job "info" unsubscribe	Yes	Yes	212	Status "external monitored inputs" upload acknowledge	Yes	Yes
38	Select Job	Yes	Yes	213	Status "external monitored inputs" unsubscribe	Yes	Yes
39	Job restart	Yes	Yes	214	IO device status request	Yes	Yes
40	Tool data upload request	Yes	Yes	215	IO device status	Yes	Yes
41	Tool data upload reply	Yes	Yes	250	Selector socket info subscribe	Yes	NA
42	Disable tool	Yes	Yes	251	Selector socket info	Yes	NA
43	Enable tool	Yes	Yes	252	Selector socket info acknowledge	Yes	NA
44	Disconnect tool	Yes	NA	253	Selector socket info unsubscribe	Yes	NA
50	Vehicle Id Number download request	Yes	Yes	410	AutoDisable settings request	Yes	Yes
51	Vehicle Id Number upload subscribe	Yes	Yes	411	AutoDisable settings reply	Yes	Yes
52	Vehicle Id Number upload	Yes	Yes	900	Trace	Yes	Yes
53	Vehicle Id Number upload acknowledge	Yes	Yes	9999	Keep alive message	Yes	Yes

6.2 FOP MID SUPPORTED

MID	Description	QCD_Multi Standalone	QCD_Multi Powerhead	MID	Description	QCD_Multi Standalone	QCD_Multi Powerhead
MID 0001	Communication start	Yes	Yes	MID 0041	Tool data upload reply	Yes	Yes
MID 0002	Communication start acknowledge	Yes	Yes	MID 0042	Disable tool	Yes	Yes
MID 0003	Communication stop	Yes	Yes	MID 0043	Enable tool	Yes	Yes
MID 0004	Command error	Yes	Yes	MID 0050	Vehicle Id Number download request	Yes	Yes
MID 0005	Command accepted	Yes	Yes	MID 0051	Vehicle Id Number upload subscribe	Yes	Yes
MID 0006	(Master/Slave)Spindle Connection Status	NA	Yes	MID 0052	Vehicle Id Number	Yes	Yes
MID 0007	(Master/Slave)Spindle Connection Status Ack	NA	Yes	MID 0054	Vehicle Id Number upload unsubscribe	Yes	Yes
MID 0008	(Master/Slave)Spindle connect status Subscribe	NA	Yes	MID 0060	Last tightening result data subscribe	Yes	Yes
MID 0009	(Master/Slave)Spindle connect status Unsubscribe	NA	Yes	MID 0061	Last tightening result data upload reply	Yes	Yes
MID 0010	Parameter set number upload request	Yes	Yes	MID 0062	Last tightening result data acknowledge	Yes	Yes
MID 0011	Parameter set numbers upload reply	Yes	Yes	MID 0063	Last tightening result data unsubscribe	Yes	Yes
MID 0012	Parameter set data upload request	Yes	Yes	MID 0070	Alarm subscribe	Yes	Yes
MID 0013	Parameter set data upload reply	Yes	Yes	MID 0071	Alarm Upload reply	Yes	Yes
MID 0014	Parameter set "selected" subscribe	Yes	Yes	MID 0072	Alarm upload acknowledge	Yes	Yes
MID 0015	Parameter set selected	Yes	Yes	MID 0073	Alarm unsubscribe	Yes	Yes
MID 0016	Parameter set selected acknowledge	Yes	Yes	MID 0074	Alarm Acknowledged on Torque Controller	Yes	Yes
MID 0017	Parameter set "selected" unsubscribe	Yes	Yes	MID 0075	Alarm Acknowledged ACK	Yes	Yes
MID 0018	Select Parameter set	Yes	Yes	MID 0076	Alarm Status	Yes	Yes
MID 0019	Set Parameter Set batch size	Yes	Yes	MID 0077	Alarm Status Acknowledge	Yes	Yes
MID 0020	Reset Parameter Set batch size	Yes	Yes	MID 0080	Read time upload request	Yes	Yes
MID 0030	Job numbers upload request	Yes	Yes	MID 0081	Read time upload reply	Yes	Yes
MID 0031	Job numbers upload reply	Yes	Yes	MID 0082	Set Time in Torque Controller	Yes	Yes
MID 0034	Job info subscribe	Yes	Yes	MID 0100	Multi spindle result Subscribe	NA	Yes
MID 0035	Job info	Yes	Yes	MID 0101	Multi spindle result upload	NA	Yes
MID 0037	Job info unsubscribe	Yes	Yes	MID 0102	Multi spindle result upload acknowledged	NA	Yes
MID 0038	Select Job	Yes	Yes	MID 0410	Auto Disable settings request	Yes	Yes
MID 0039	Job restart	Yes	Yes	MID 0411	Auto Disable settings reply	Yes	Yes
MID 0040	Tool data upload request	Yes	Yes	MID 9999	Keep alive message	Yes	Yes

7. Revision History

Version	Date	Summary of Changes	Author
0.01	07/29/2026	Draft	Amol Kulkarni
0.02	07/30/2026	Final	Amol Kulkarni