

NWIO-01

Watchdog and Digital I/O Module

CONTROLLED ENGINEERING COPY

ABB NWIO-01 is a watchdog and digital I/O option module for documented AC 800M/CI858 DriveBus or ACS 600 Special I/O installations. It provides two individually isolated digital inputs, two relay outputs and a selectable watchdog function on DO2.

INSTALLATION IDENTITY	REQUIRED VALUE
Complete model	NWIO-01
Manufacturer	ABB
System family	ABB AC 800M DriveBus / ACS 600 Special I/O
Record scope	Installation, application and verification

1

PLAN

2

ISOLATE

3

CONNECT

4

CONFIGURE

5

TEST

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01 PRE-INSTALLATION PLAN

1

Confirm NWIO-01 and ABB item number 64168533 on the module and maintenance record.

2

Place the controller, drive system and connected process in the approved maintenance state.

3

Isolate field power and the Special I/O ring before removing wiring or optical connections.

4

Record S1 device number, X1 watchdog-time selection, input voltage class and every terminal assignment.

5

Confirm each input uses the documented 24 VDC or 115/230 VAC circuit and the selected 1 ms or 8 ms filter.

MATCHED HARDWARE

- NWIO-01 with item number 64168533
- Matched CI858 or ACS 600 Special I/O host
- Recorded digital input and relay-output circuits
- DDCS fibre-optic ring and approved configuration record

INSTALLATION CONTROL RECORD

CONTROL ITEM	REQUIRED RECORD
Identity	NWIO-01 recorded
Physical interface	Input voltage class, filter selection, relay loads and DDCS connections matched
Configuration	S1 ID, hardware-tree ID and NWIO1DI/NWIO1DO configuration restored
Functional proof	DI1, DI2, DO1, DO2 and selected watchdog response confirmed

02 WIRING & INTERFACE CHECKS

CHECK ITEM	REQUIRED VALUE
ABB item number	64168533
Module type	Watchdog and digital I/O option unit
Digital inputs	2
Input voltage alternatives	24 VDC or 115/230 VAC
Input isolation	Individually isolated
Input hardware filter	1 ms or 8 ms selectable
Relay outputs	2
Maximum continuous relay current	2 A
Relay capacity at 24 VDC	8 A resistive
Relay capacity at 120 VDC	0.4 A resistive
Relay capacity at 250 VAC	2000 VA
Watchdog output	DO2 when selected
Watchdog time	1 s default; 0.2 s via X1

RELATED PRODUCT PAGES

1 ABB FEIP-21 3AXD50000192793

2 ABB FEN-21 68679303

3 ABB FPBA-01-M

4 ABB NBRA-657C 59006410

5 ABB PM511V08 3BSE011180R1

6 ABB PM566-TP-ETH
1SAP121500R0071

7 ABB PFTK101A YM222001-UC

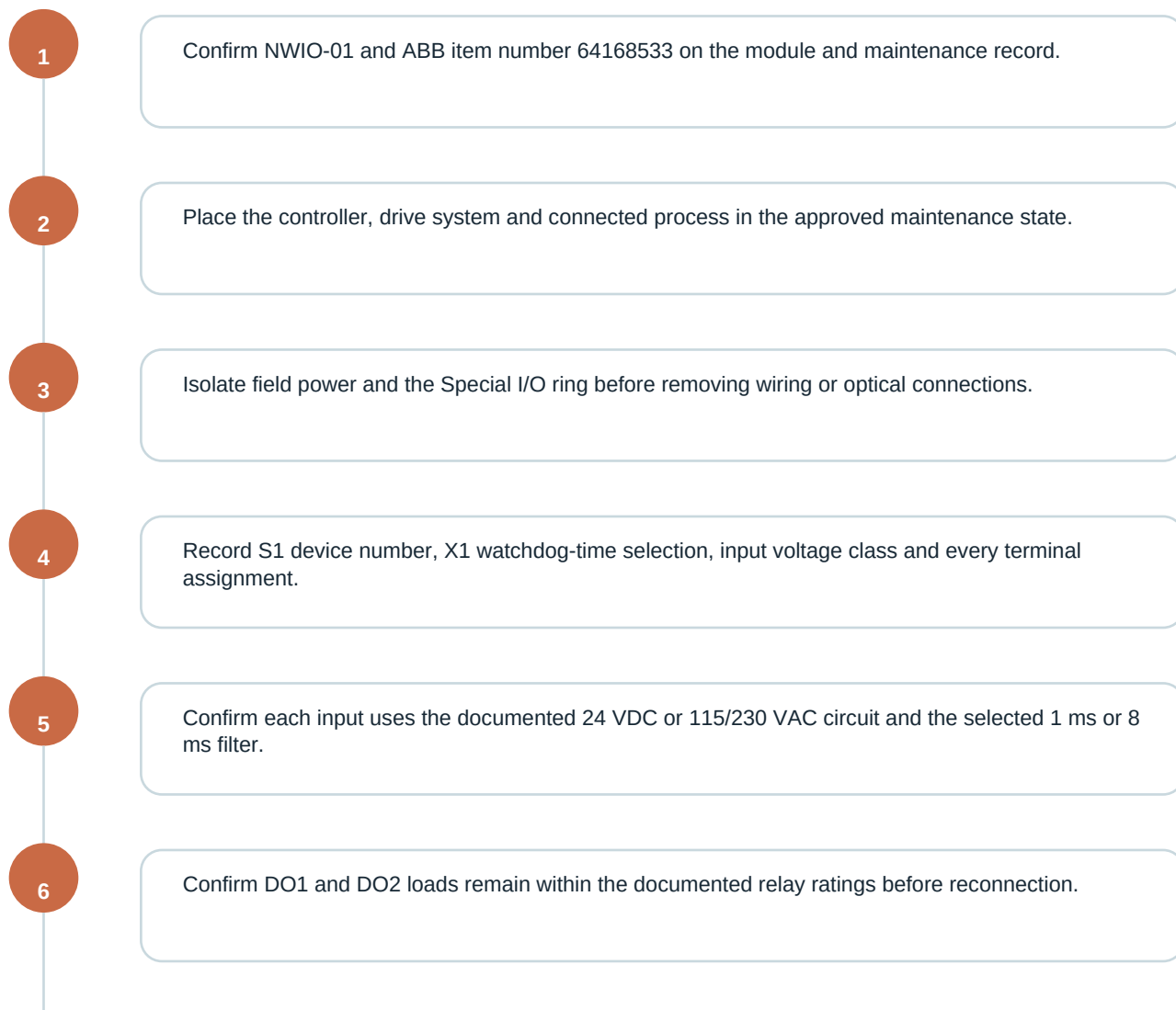
8 ABB DSTD196 3BSE004725R1

9 ABB DLM02

FIELD NOTE

Do not move NWIO-01 between ring positions without first recording the S1 device number, hardware-tree ID, X1 selection and every field circuit.

03 COMMISSIONING WORKFLOW



COMMISSIONING ACCEPTANCE EVIDENCE

EVIDENCE ITEM	ACCEPTANCE CONDITION
Identity	NWIO-01
Physical interface	Input voltage class, filter selection, relay loads and DDCS connections matched
Configuration	S1 ID, hardware-tree ID and NWIO1DI/NWIO1DO configuration restored
Functional proof	DI1, DI2, DO1, DO2 and selected watchdog response confirmed

04 RETURN-TO-SERVICE RECORD

- ☐
- Confirm each input uses the documented 24 VDC or 115/230 VAC circuit and the selected 1 ms or 8 ms filter.

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VERIFICATION RECORD

PRODUCT IDENTITY	NWIO-01
INSTALLED POSITION	Documented ABB Special I/O ring position
VERIFICATION METHOD	Controlled inspection and functional test
RELEASE RECORD	Final diagnostic state retained before service

FUNCTIONAL ACCEPTANCE CHECKLIST

- ☐
- Confirm each input uses the documented 24 VDC or 115/230 VAC circuit and the selected 1 ms or 8 ms filter.

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SOURCE IDENTIFIERS

ABB AC 800M DriveBus 2PAA113566-600 and ACS 600 MultiDrive System Description 3AFY 63700151 R0325 | ABB official DriveBus and ACS 600 documentation