

AMIKON TECHNICAL DOCUMENTATION

Installation Instructions

ABB NWIO-01 64168533

Watchdog Digital I/O Module

INPUTS	OUTPUTS	WATCHDOG	LINK
2 digital inputs	2 relay outputs	1 s / 0.2 s	Optical Special I/O

For qualified personnel only. Follow the complete manufacturer and site isolation procedures. This reference does not replace approved terminal wiring, mechanical installation or safety instructions.

01

BEFORE INSTALLATION

Identity	Match NWIO-01, ABB ID 64168533 and the installed unit label.
Host support	Confirm the documented AC 80 or AC 800M/CI858 Special I/O arrangement.
Project records	Preserve hardware configuration, optical routing, terminal wiring and software settings.
Input circuits	Check 24 VDC or 115/230 VAC signal arrangements; do not treat these as supply ratings.
Output load	Check load-dependent switching capacity and the separate 2 A continuous-current limit.

02

EVIDENCE BOUNDARIES

- Do not transfer CI858 mounting, power, protection or environmental ratings to this I/O board.
- No verified NWIO terminal pinout, mounting torque or cabinet clearance is reproduced here. Obtain the applicable controlled installation drawing before field wiring.

03 CONFIGURATION AND COMMISSIONING

01	Record the digital-input filter selection. ABB documents selectable 1 ms or 8 ms filtering and individually isolated inputs.
02	Configure input reading through NWIO1DI and output writing through NWIO1DO in the documented AC 800M arrangement.
03	Select the intended DO2 mode using both the physical WATCHDOG ENABLED / DISABLED switch and the application WD_SEL signal.
04	Check jumper X1: pins 1-2 select 0.2 s; pins 3-4 select the 1 s factory setting.
05	For a 1 s time constant, the NWIO1DO task interval must be below 100 ms. For 0.2 s, it must be below 20 ms. The oscillator cycle equals twice that interval.
06	Use the approved commissioning procedure to verify both input states, both output states, communication status and the intended watchdog response.

04 FINAL VERIFICATION

- Match the observed DO2 response to the selected hardware and software mode before returning equipment to service.
- Watchdog supervision alone does not establish a safety-integrity rating or an emergency-stop function.

05 ORIGINAL ABB PROCEDURE

DriveBus pp. 80-83 - NWIO logic, function blocks and timing

Read the original procedure and the installed project drawings together. ABB document revision and software applicability must match the host configuration.

AMIKON PRODUCT SUPPORT

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06 ORIGINAL FUNCTIONAL REFERENCE

ABB NWIO-01 64168533 | Original ABB functional figures; not terminal wiring diagrams.

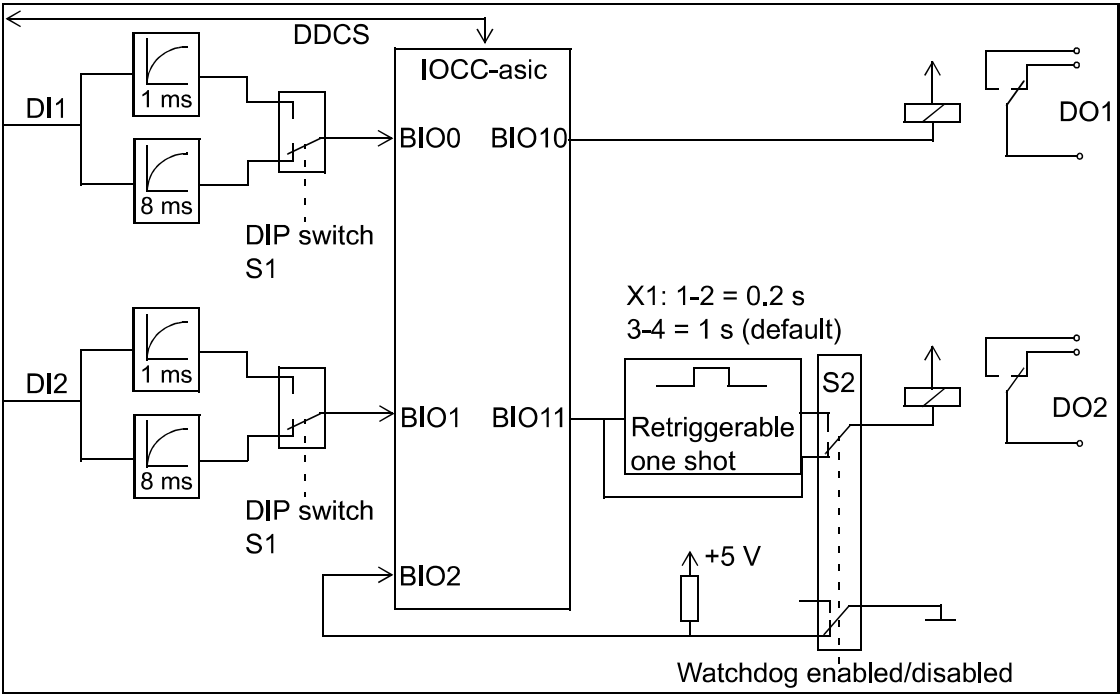


Figure 16. Simplified block diagram of the NWIO-01 unit.

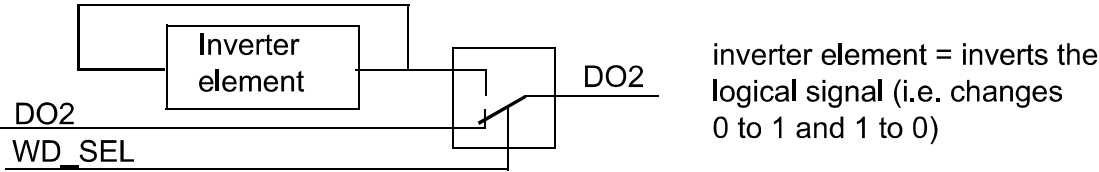


Figure 17. Watchdog operation.

07 MANUFACTURER FIGURE LINKS

Figure 16 - NWIO-01 block diagram (original ABB page 80)

Figure 17 - Watchdog operation (original ABB page 83)

Original ABB figures from AC 800M DriveBus, 2PAA113566-600 (2014), pp. 80 and 83. These functional drawings are not terminal wiring or mechanical installation drawings. Consult the complete manufacturer instructions and approved project drawings before field work.