

**Date: September 4, 2024**

## About

This document provides users of the CANopen-DP product assistance to migrate to its successor CANopen-DP/2.

## Affected Products

Old Device	Lifecycle Status	Recommended Successor Device	Lifecycle Status
<b>CANopen-DP</b> (C.2908.02)	End of Life (EOL <sup>[1]</sup> )	<b>CANopen-DP/2</b> (C.2909.02)	Available (VERF <sup>[1]</sup> )

## Background and Information

The CANopen to PROFIBUS-DP gateway CANopen-DP (C.2908.02) is at end of life. It is replaced by its successor CANopen-DP/2 (C.2909.02). The CANopen-DP/2 is designed as a direct replacement, but may require adaptations in the application or at the place of use. The points to be observed are described below.

### Technical differences

The following tables list the main differences between the CANopen-DP and the CANopen-DP/2.

Device Property	CANopen-DP	CANopen-DP/2
<b>Temperature Range</b>	0 °C ... 50 °C	0 °C ... 55 °C
<b>InRailBus</b>	No	Yes
<b>Device wait time</b>	Internal wait times during startup: 1 ms between RTR frames 1 s after baud rate setup before continuing initialization	No internal wait times
<b>Detection of non-existing outputs in configuration</b>	No	Yes
<b>Extended CAN Bus state detection</b>	No	Yes
<b>Timing of NMT-frame reception</b>	Frames received already outside of Data-Exchange-Mode	Frames only received after device entered Data-Exchange-Mode
<b>Follow NMT_RESET and NMT_COMM_RESET commands</b>	No	Yes
<b>CAN RTR DLC</b>	Always 0x10 e.g. length is 3: 0x10	Includes length e.g. length is 3: 0x13
<b>Physical IN and OUT data size</b>	244 Bytes	240 Bytes
<b>Hardware Version in PROFIBUS I&amp;M service</b>	Minor version HW-version "1.3" is "3" in I&M	Major version HW-version "2.3" is "2" in I&M

## Contact for Questions

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## Configuration File




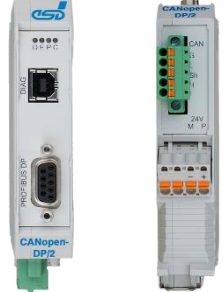
GSD File Property	CANopen-DP	CANopen-DP/2
<b>GSD File Version entry</b>	V 1.2	V 1.3
<b>Model_Name entry</b>	CANopen-DP	CANopen-DP/2

## LED Labels and Properties

LED Property	CANopen-DP	CANopen-DP/2
<b>PROFIBUS DP Status</b>	P	E
<b>PROFIBUS DP Data Exchange</b>	D	D
<b>Power / Module Status</b>	S	P
<b>CAN Bus Status</b>	C	C

The way in which the error states of the two PROFIBUS LEDs are displayed differs between the two devices. A detailed description of the diagnostics via flash code can be found in the software manuals in chapter 3.3 “Diagnostics via LED display” of both devices. [2]

## Housing and connectors

	CANopen-DP	CANopen-DP/2
<b>Dimensions (incl. connectors)</b>	Depth: 120 mm Height: 100 mm Width: 23 mm	Depth: 114.5 mm Height: 99 mm Width: 22.5 mm
<b>Connector position</b>	CAN: front PROFIBUS: front	CAN: bottom PROFIBUS: front
<b>CAN connector</b>	5-pin Combicon (Phoenix MSTB 2,5/5-GF-5,08)	5-pin Mini-Combicon (Phoenix MC 1,5/5-GF-3,81)
<b>PROFIBUS address coding switch position</b>	side	top
<b>Side</b>		
<b>Front / bottom</b>	 front	 front      bottom

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## Necessary changes in application

### Housing and connectors

The different connector positions need to be taken into account. The power-cable-routing needs to be moved from top to bottom. The CAN-cable-routing needs to be moved from upper front to bottom.

### GSD file

Given that the CANopen-DP/2 is designed as a direct replacement, the file name and the functional content of the files are identical. Both devices have the same PNO ID. Only the version and the device name differ, as shown in the Configuration File section. This means that only one of the two GSD files can be loaded into a PLC software. However, both devices can be configured with the same file (regardless of the version), but only the device name, version and image of the device from the file used will be displayed, eg. a CANopen-DP/2 can be configured with the GSD file of the CANopen-DP, but will be displayed as "CANopen-DP" with the image of the CANopen-DP. There are no functional differences.

### LED blinking codes

There are minor differences in the blinking codes between the CANopen-DP and CANopen-DP/2. This is caused by the change of behavior of the Profibus state LED from a "green OK" display to a "red NOT OK" view on the state.

Please refer to chapter 3.3 of the software manual for the list of codes. [2]

## Links

[1] <https://esd.eu/en/support/product-lifecycle-management>

[2] <https://esd.eu/en/support/manuals>

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## Document History

Rev.	Changes	Date
1.0	Initial version of the application note	2024-09-04

Technical details are subject to change without further notice.

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