DRIVE CENTRE **DC**
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3.3.2   OPTD2

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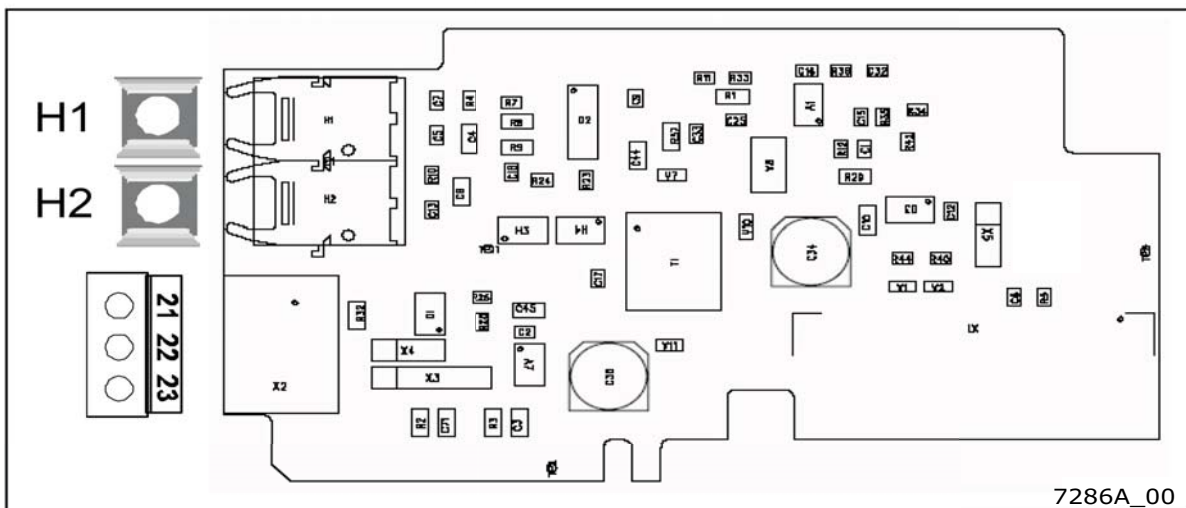
Note!	This figure presents the layout of D2 board version H or later. See Chapter Jumper selections below.
Description:	System Bus adapter board for VACON® NXP with single optical input and output; Interface to fast monitor bus used by the NCDrive PC tool.
Allowed slots:	(B,)D, E; Note: If only the Monitor Bus (terminals 21 to 23) will be used, the board can also be placed in slot B. The System Bus is then unavailable. Remove therefore jumpers X5 and X6. See page 74.
Type ID:	17458
Terminals:	Single optical input and output; one screw terminal block (M3), Agilent HFBR-1528 (Receiver), HFBR-2528 (Transmitter).
Jumpers:	Jumpers:4; X3, X4 and X5. See page 74.
Board parameters:	None

Local contacts: http://drives.danfoss.com/danfoss-drives/local-contacts/

I/O terminals on OPTD2

Table 41. OPTD2 I/O terminals

	Terminal	Technical information
1	H1	System Bus optical input 1 (RX1) Use 1-mm optical cable (e.g. Agilent HFBR-RUS500 & HFBR-4531/4532/ 4533 connectors) **NOTE:** Not available if the board is placed in slot B
2	H2	System Bus optical output 1/2 (TX1/TX2); Selected with jumper X5 Use 1-mm optical cable (e.g. Agilent HFBR-RUS500 & HFBR-4531/4532/4533 connectors) **NOTE:** Not available if the board is placed in slot B
21	CAN_L	Monitor Bus negative data
22	CAN_H	Monitor Bus positive data
23	CAN_SHIELD	Monitor Bus shield

Jumper selections

There are four jumper blocks on the OPTD2 board. The factory defaults and other available jumper selections are presented below.
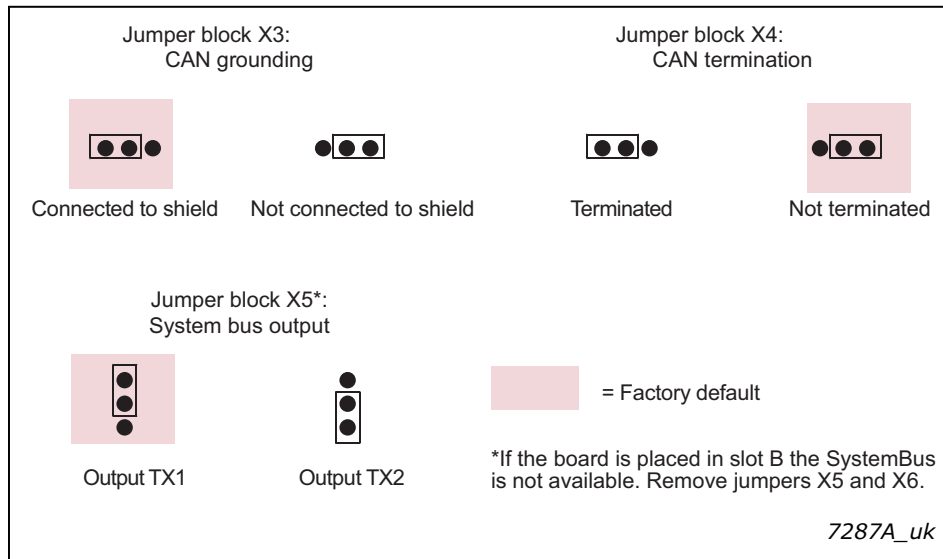

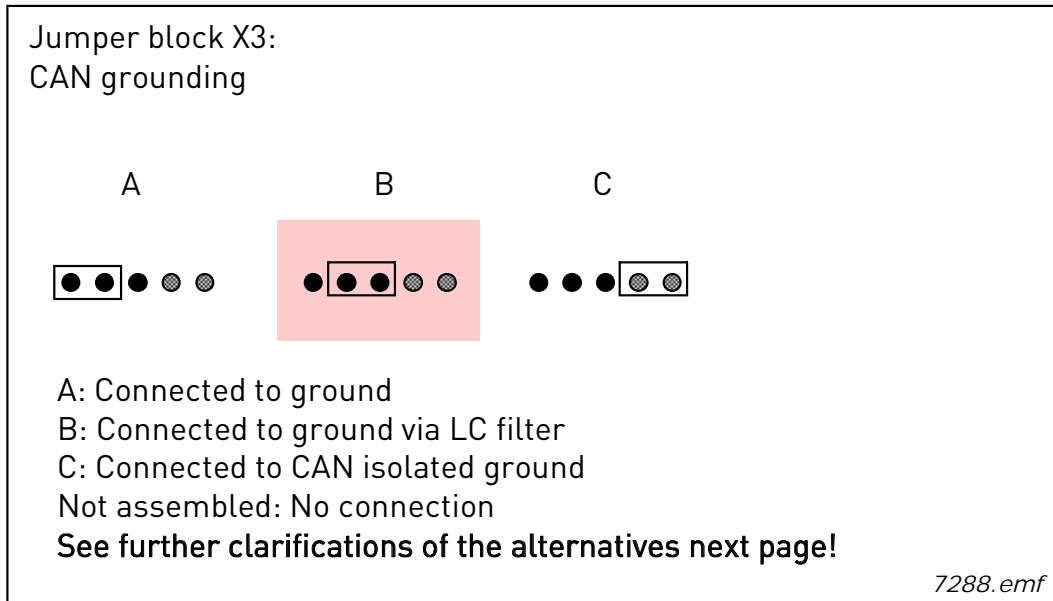*Figure 25. Jumper selections for OPTD2, up to version G*

Jumper block X3:
CAN grounding

A   B   C

A: Connected to ground
B: Connected to ground via LC filter
C: Connected to CAN isolated ground
Not assembled: No connection
See further clarifications of the alternatives next page!

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Figure 26. X3 jumper selections for OPTD2, version H and later

NOTE! Position C can be used with 3- or 4-wire can cable to interconnect isolated CAN ground levels in the network. It is recommended to connect the cable shield to the grounding clamp of the drive.
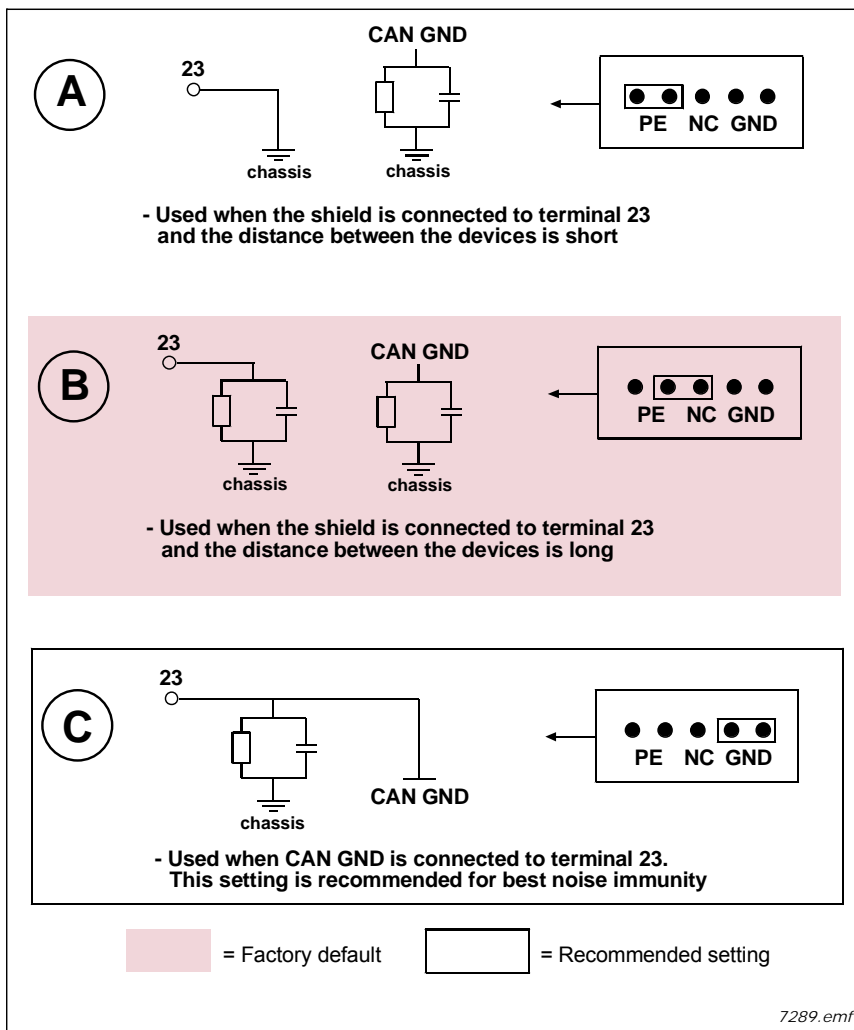
A

CAN GND

23

chassis   chassis

PE   NC GND

- Used when the shield is connected to terminal 23 and the distance between the devices is short

B

23   CAN GND

chassis   chassis

PE   NC GND

- Used when the shield is connected to terminal 23 and the distance between the devices is long

C

23

chassis

CAN GND

PE   NC GND

- Used when CAN GND is connected to terminal 23. This setting is recommended for best noise immunity

= Factory default   = Recommended setting

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Figure 27. CAN grounding alternatives

Alternative connection of "CAN GND" signal: connect 'CAN GND' together between all nodes. Use the signal wire inside the shield for this purpose, see figure below:
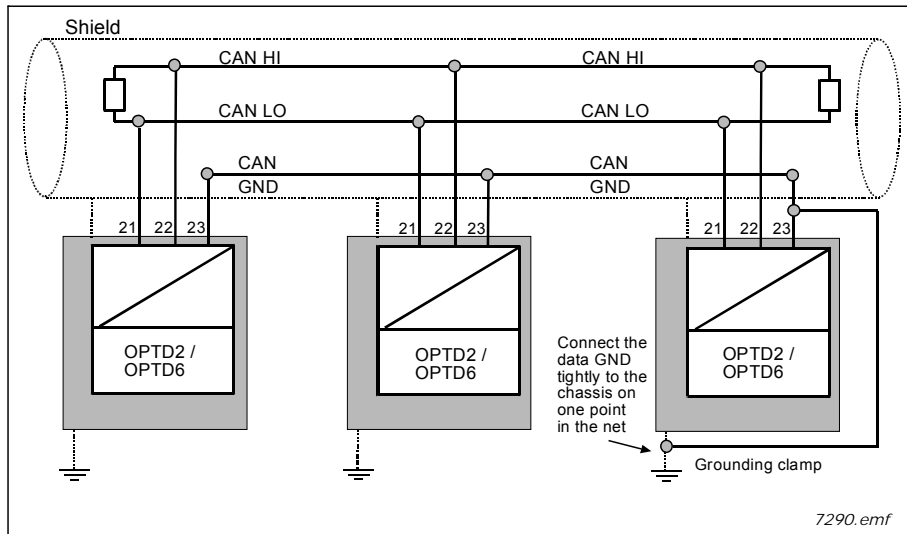

Figure 28. Alternative connection of "CAN GND" signal

Connections between AC drives with OPTD2

Special connection:

In this connection example, the leftmost device is the Master and the others are slaves. The Master can send and receive data from the slaves. The slaves cannot communicate with each other. Changing of masters is not possible, the first device is always the Master.

The OPTD2 board in the Master has the default jumper selections, i.e. X5:1-2. The jumper positions have to be changed for the slaves: X5:2-3.

Table 42.

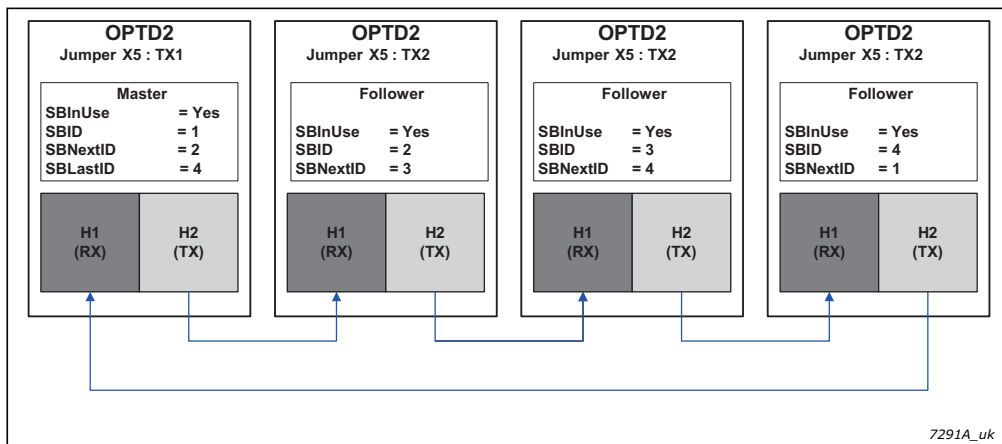| Max. number of devices in line	Max. speed achieved [Mbit/s]
3	12
6	6
12	3
24	1.5

3

Figure 29. Connection example of AC drives with OPTD2