10100/2/1 Horizontal bus driver (HBD)

Description

The horizontal bus driver (HBD) module is a basic module which is installed in the I/O racks.
The horizontal bus driver consists of two parts:

- electronic part (10100/2/1), and
- an A1, A21 or A22 flatcable.

The vertical bus flatcable between the Central Part and the I/O rack is connected to the HBD module via the back connector CN1 (see Figure 2).
The flatcable which extends from the front of the module connects the HBD module to the horizontal bus above the I/O rack.
The address selection lines of the I/O modules terminate on the back of the horizontal bus(es) via a flatcable on connector CN3.

The HBDs are used as follows:

– 10100/2/1 with flatcable A1	used for non-redundant I/O
– 10100/2/1 with flatcable A21	used for redundant I/O (one rack per HBD)
– 10100/2/1 with flatcable A22	used for redundant I/O (two racks per HBD)

The HBD may be replaced with the power switched on, but the Central Part will shut down if the HBD is safety-related.

Pin allocation

The HBD is fitted with a male connector according to DIN 41612 type F, with the 'd', 'b' and 'z' rows used.
The back view of the 10100/2/1 rack connector is as follows:

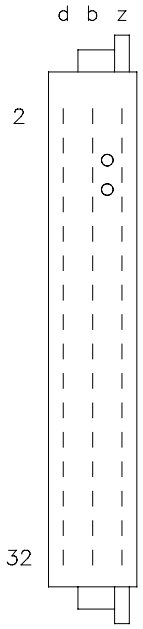


Figure 1 Back view of 10100/2/1 connector

Address setting

The rack address of the HBD is programmed by means of jumpers on the 10314/1/1, 10315/1/1, 10316/1/1 or 10317/1/1 modules (RA0 to RA3).

Table 1 Address setting for HBD

	RA3	RA2	RA1	RA0
HBD1	0	0	0	1
HBD2	0	0	1	0
HBD3	0	0	1	1
HBD4	0	1	0	0
HBD5	0	1	0	1
HBD6	0	1	1	0
HBD7	1	0	0	0
HBD8	1	0	0	1
HBD9	1	0	1	0
HBD10	1	1	0	0

0 = GND 5 Vdc 1 = Supply 5 Vdc

Flatcable routing

Figure 2 to Figure 4 below show the flatcable routing for the various configurations.

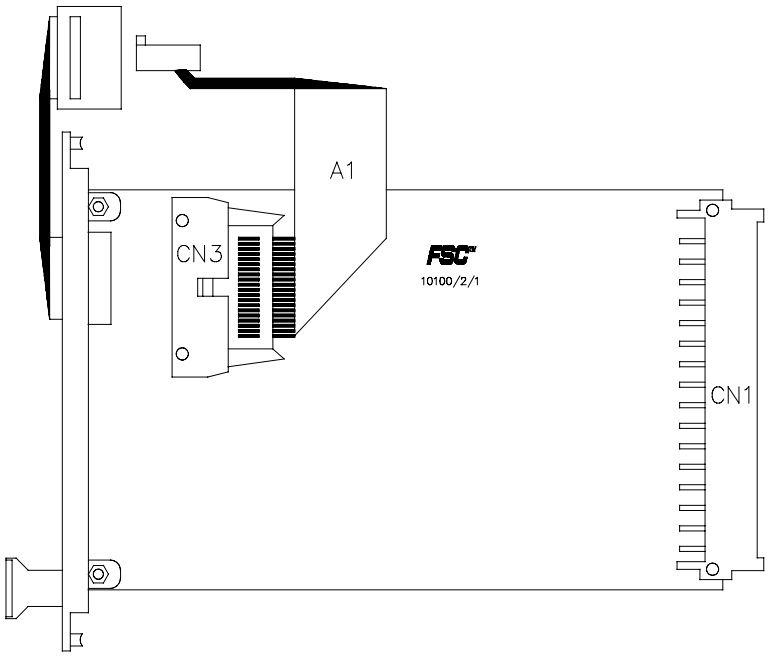


Figure 2 Schematic diagram for flatcable routing from the HBD (non-redundant I/O)

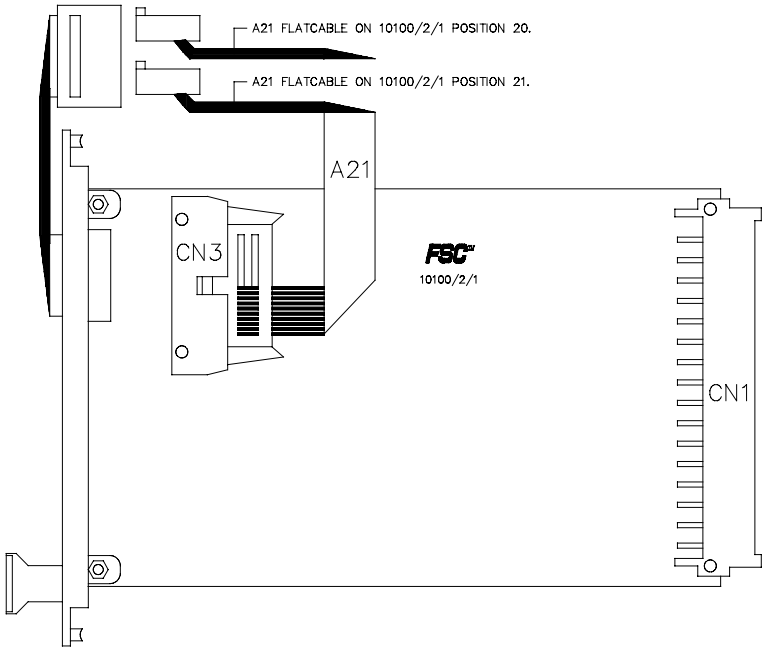


Figure 3 Schematic diagram for flatcable routing from the HBD (redundant I/O with one rack per HBD)

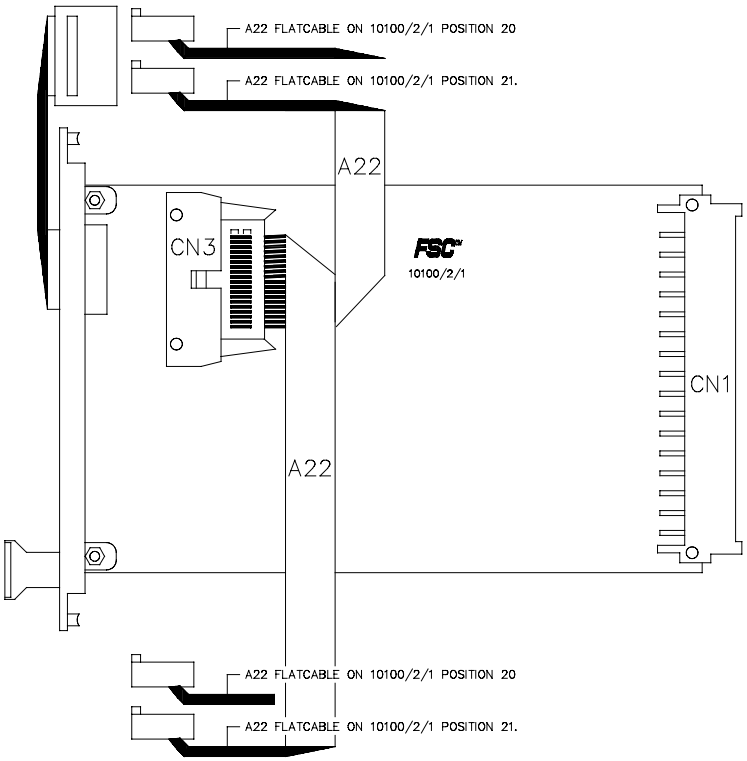


Figure 4 Schematic diagram for flatcable routing from the HBD (redundant I/O with two racks per HBD)

Technical data

The 10100/2/1 module has the following specifications:

General

Type number:	10100/2/1 10900
Approvals:	CE, TÜV, UL
Software versions:	≥ 3.00
Space requirements:	4 TE, 3 HE (= 4 HP, 3U)

Power

Power requirements:	10100/2/1 + A1 cable	5 Vdc 35 mA
	10100/2/1 + A21 cable	5 Vdc 35 mA
	10100/2/1 + A22 cable	5 Vdc 65 mA
Ripple content:	< 50 mV p-p	

Key coding

(See 'Key coding' data sheet)

Module code:

– holes A5, A7

Rack code:

– large pins A5, A7

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