

TBOX MS-10DI-HS

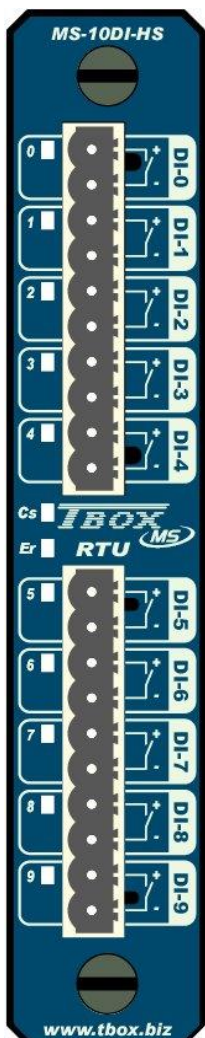
Version 3.05

TBOX MS-10DI-HS

- 10 isolated inputs, one by one
- 50 kHz counter
- Quadrature inputs
- Adjustable debounce filter



Technical Specifications



General

Consumption	120 mA
Replacement	Hot insertable/removable. There is no risk to damage hardware, but a reset is required
Connector	Screw connector (10x5.08mm) Wire range: 0.14 – 2.5 mm ² (or max. 12 AWG)

LED

Individual	LED corresponding to the activation of each digital input. By software, possibility to disable the LED to save energy
Cs	Card Selection: card corresponding to card declared in TWinSoft.
ER	Error: card type not corresponding to the one declared in TWinSoft.

Isolation

Isolation Level	1500 Vrms - between inputs - between Inputs and ground
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Protection

Test	Automatic test of the access of the card by the CPU (see LED 'CS' above)
Voltage inversion	Up to 55 VDC
Protection EMC	

Voltage at input

Maximum for a LOW level	1.234 VDC (or 470 μ A)
Minimum for a HIGH level	5 VDC (or 7mA)
Maximum	30 VDC

Current

Typical	8.0 mA
Maximum	12.5 mA @ 30 VDC

Frequencies

Frequency max.	50 khz
Debounce filter	Software filter

Variables

Digital Input (Group 0)	10 variables giving the current digital state
Counter (Group 1)	10 variables associated to each channel
Quadrature (Group 2)	5 counter variables associated to a pair of channels (0-1; 2-3; 4-5; 6-7;8-9)

Environment

Temperature storage	-40°C to 85°C
Temperature working (ambient)	Industrial Temperature: -40°C to 70°C
Humidity	15 to 95 % without condensation
Altitude	Max. 5000 m

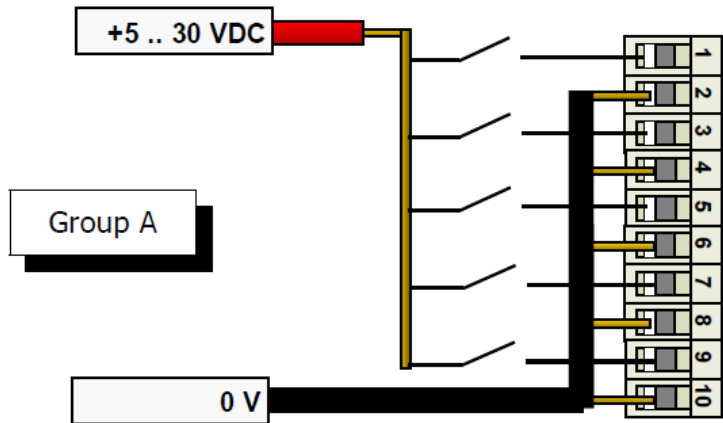
Dimensions

Without connector	Height x Depth x Width: 150 x 83 x 29 mm (5.906 x 3.27 x 1.142 inches)
Weight	254 g

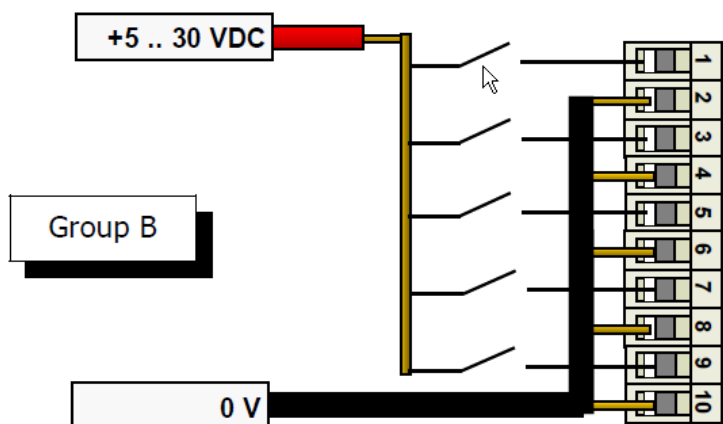
Cabling Schematic

Connector: Screw connector

Pin Out:

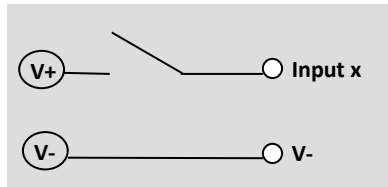


- 1** Input 0 +
- 2** Input 0 -
- 3** Input 1 +
- 4** Input 1 -
- 5** Input 2 +
- 6** Input 2 -
- 7** Input 3 +
- 8** Input 3 -
- 9** Input 4 +
- 10** Input 4 -

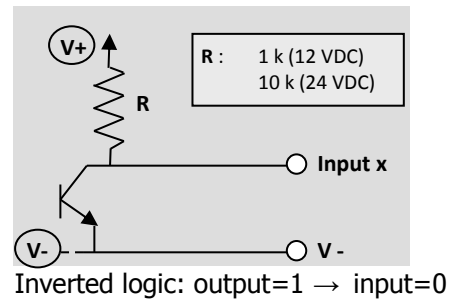


- 1** Input 5 +
- 2** Input 5 -
- 3** Input 6 +
- 4** Input 6 -
- 5** Input 7 +
- 6** Input 7 -
- 7** Input 8 +
- 8** Input 8 -
- 9** Input 9 +
- 10** Input 9 -

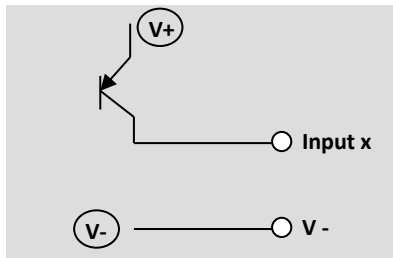
Cabling to Dry contact



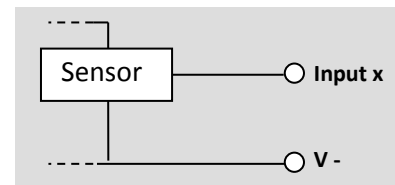
Cabling to NPN transistor



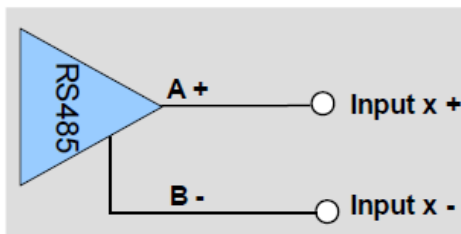
Cabling to PNP transistor (or OPTO)





Cabling to Voltage sensor



"RS485" cabling



Quadrature cabling

Quadrature Variables	Pulse Train 1 	Pulse Train 2 
Quadrature 1	Input 0	Input 1
Quadrature 2	Input 2	Input 3
Quadrature 3	Input 4	Input 5
Quadrature 4	Input 6	Input 7
Quadrature 5	Input 8	Input 9