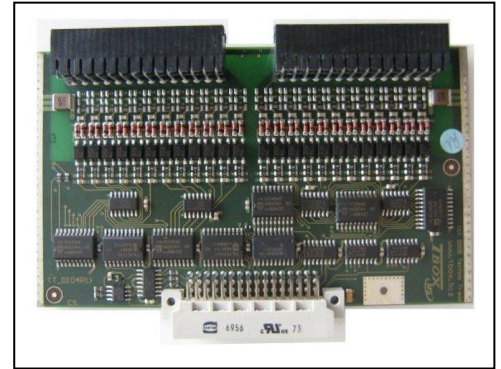


TBOX MS-48DI

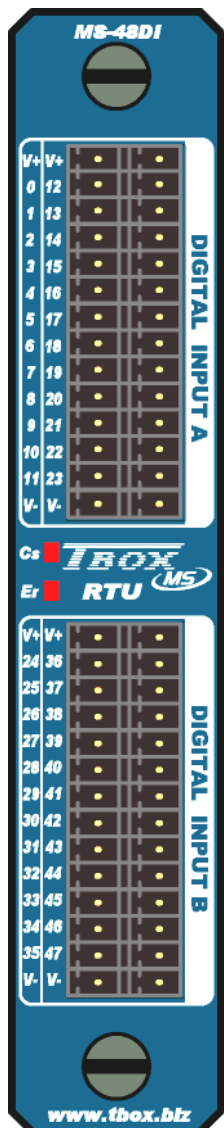
Version 3.06

TBOX MS-48DI

- 48 x digital Inputs: 4 groups of 12 digital inputs
- Isolation by group of 12 inputs.



Technical Specifications



General

Consumption	20 mA
Replacement	Hot insertable/removable. There is no risk to damage hardware, but a reset is required
Compatibility	Concerning voltages, with type 1 and 2 of IEC61131-2
Connector	Spring Cage Terminal (14 x 2.54mm) Wire range: 0.14 – 0.75 mm ² (with ferrule)

LED

Individual	No individual LED
Cs	Card Selection: card corresponding to card declared in TWinSoft.
ER	Error: card type not corresponding to the one declared in TWinSoft.

Isolation

Isolation from the Ground	Isolation from the CPU ground and the earth
4 groups isolated	Isolation by group of 12 inputs: One Common by group of 12 Inputs.
Level of isolation	1500 Vrms - between groups - between Inputs and ground - between Inputs and earth

Protection

Test	Automatic test of the access of the card by the CPU (see LED 'CS' above)
RC filter	1592 Hz
Voltage inversion	Up to 55 VDC
Protection EMC	

Voltage at input

Typical	24 VDC
Maximum for a LOW level	5 VDC
Minimum for a HIGH level	11 VDC
Maximum	60 VDC

Current

Maximum at the input	2.0 mA at 30 VDC 4.5 mA at 60 VDC
Resistance	12 kΩ

Sampling

Minimum period LOW – HIGH	Task switching between process cycle has to be taken into account, as well as cycle time itself: <u>MS-CPU16</u> : 10 ms. + cycle time. <u>MS-CPU32</u> : 4 ms. + cycle time.
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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

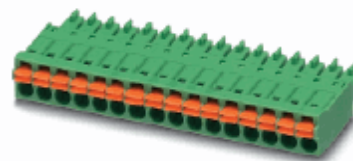
Approvals

CE, UL, CSA, C-Tick

Cabling Schematic

MS-48DI card is equipped with compact **spring-cage terminal blocks**.

This connector allows a high density of connections. Press the orange plastic with a screwdriver for **inserting and removing the cable**.



Connection capacity

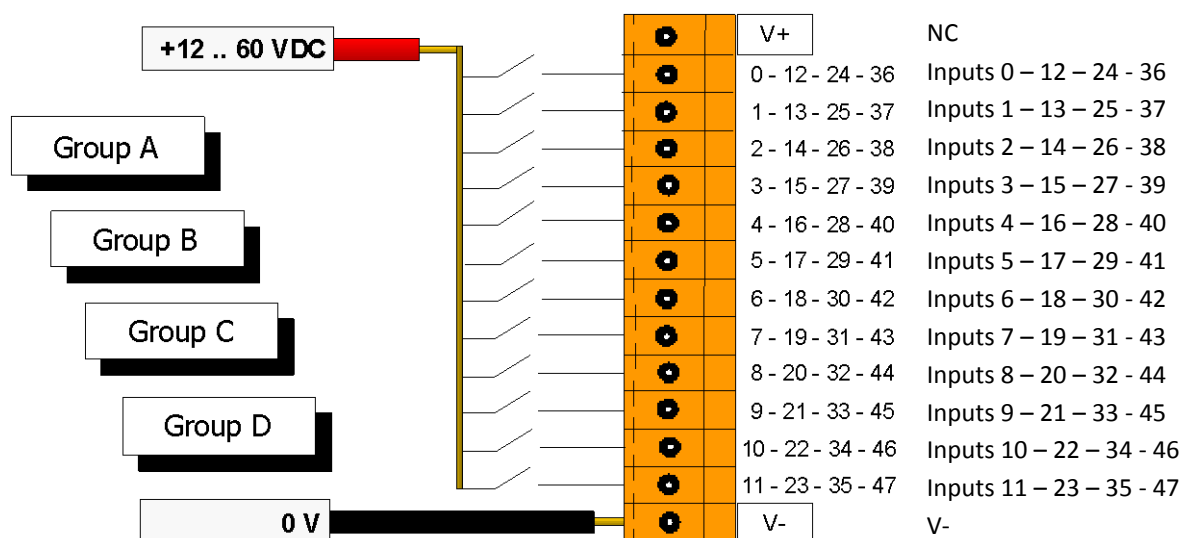
Without ferrule	Solid cable: 0.2 .. 1.5 mm ² (24..16 AWG)
With ferrule without plastic sleeve	Solid or Stranded cable: 0.2 .. 1.5 mm ²
With ferrule with plastic sleeve	Solid or Stranded cable: 0.2 .. 0.75 mm ²

Ferrule specification for 0.75mm² cable

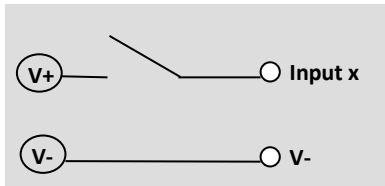
	B: minimum 10 mm C: 1.5 mm D: 3.5 mm
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Connector: **Spring Cage Terminal**

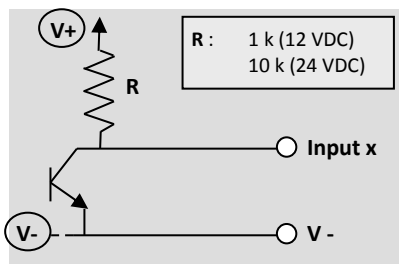
Pin Out:



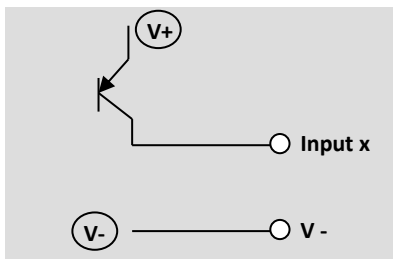
Cabling to Dry contact



Cabling to NPN transistor



Cabling to PNP transistor (or OPTO)



Cabling to Voltage sensor

