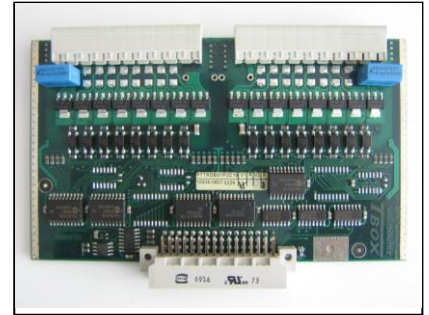


# TBOX MS-16DO

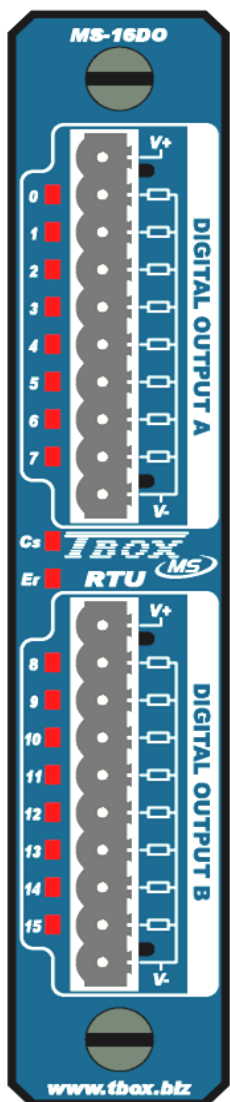
Version 3.05

# TBOX MS-16DO

- 16 x digital outputs: 2 groups of 8 digital outputs
- Isolation by group of 8 outputs



## Technical Specifications



### General

Consumption	40 mA
Type	Current Sourcing (PNP transistor)
Replacement	<b>Hot insertable/removable.</b> There is no risk to damage hardware, but a reset is required.
Connector	Screw connector (10x5.08mm) Wire range: 0.14 – 2.5 mm <sup>2</sup> (or max. 12 AWG)

### LED

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

### Isolation

Isolation from the Ground	Isolation from the CPU ground and the earth
2 groups isolated	Isolation by group of 8 outputs: One Common by group of 8 outputs.
Level of isolation	1500 Vrms - between groups - between outputs and ground - between outputs and earth

### Protection

Test	Automatic test of the access of the card by the CPU (see LED 'CS' above)
Protection diode	Protection against inverted voltage when working with inductive load <b>WARNING: if the output is connected to a DC relay driving an AC relay, the AC relay must be protected with an RC circuit</b>
Overload	Maximum: 60 VDC
Reverse voltage	Maximum: 55 VDC
Short-circuit + Overload	Thermal protection with automatic recovery

## Voltage/Current

Working voltage on V+	6 to 60 VDC
Current per output	Maximum: 200 mA
Voltage per output	Maximum: 60 VDC (depending on V+)
Short-Circuit current	Minimum: 0.2 A Typical: 0.9A Maximum: 1.2A
Impedance	Typical: 1 ohm Maximum: 10 ohms

## Environment

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

## Dimensions

Without connector	Height x Depth x Width: <b>150 x 83 x 29 mm</b> (5.906 x 3.27 x 1.142 inches)
Weight	258 g

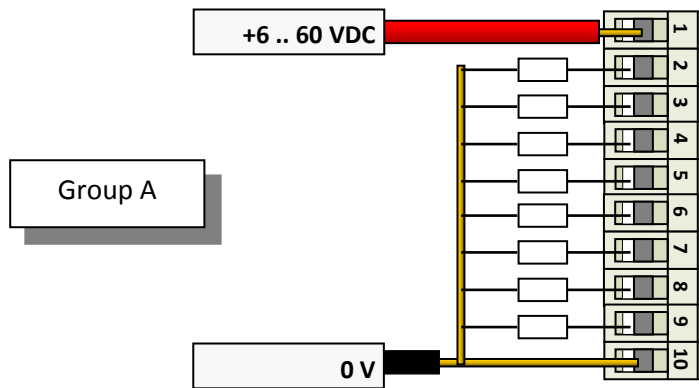
## Approvals

CE, UL, CSA, C-Tick

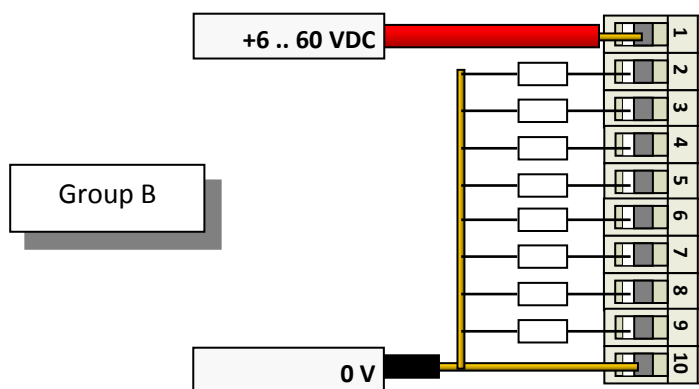
# Cabling Schematic

Connector: Screw connector

Pin Out:



- 1 V+
- 2 Output 0
- 3 Output 1
- 4 Output 2
- 5 Output 3
- 6 Output 4
- 7 Output 5
- 8 Output 6
- 9 Output 7
- 10 V-

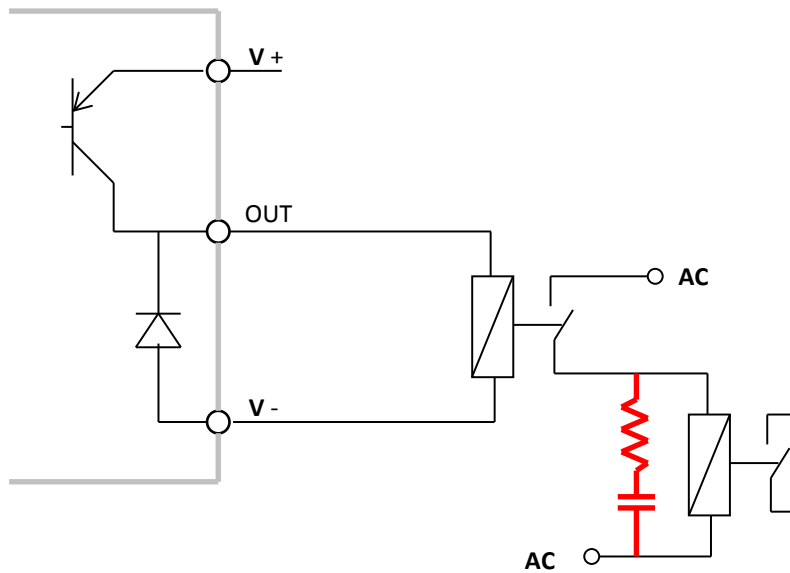


- 1 V+
- 2 Output 8
- 3 Output 9
- 4 Output 10
- 5 Output 11
- 6 Output 12
- 7 Output 13
- 8 Output 14
- 9 Output 15
- 10 V-



See precautions next page when cabling to external relays

## Cabling to external AC relay



## Cabling to external DC relay

