

TECOMAT TC700 - Binary input/output combined modules

Type	IS-7510	IR-7551
Binary inputs DI, binary outputs DO	32 DI / 32 DO	8 DI / 8 RO
Input voltage	24 V DC/ AC	24 V DC/AC
Output voltage	24 V DC/ 24 V DC	230 V AC
Connecting	4 × 20pin DIN 41651 Flat Cable Connector	20pin Screw type connector Screwless connector

Basic features

- Combined expansion input /output modules for enlarging number of I/O of the TC700 configuration.
- Inputs and outputs are organized in groups with common wire.
- Galvanic isolation of inputs and outputs from internal circuits of controller is provided.
- Status of the module and of each input and output is indicated by LED on the front panel.
- Modules can be placed in any position of the rack.
- Modules support a hot-swap. This feature is programmable and must be enabled by the programmer.

Connecting

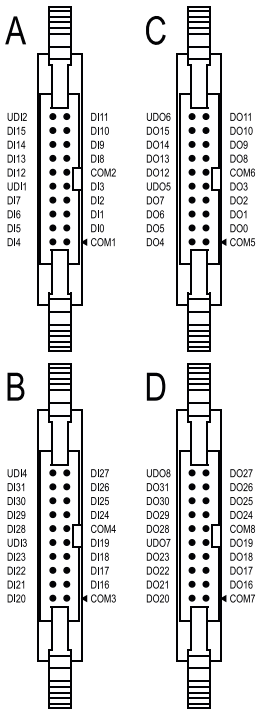
- Front end connectors are ordered separately since user can choose the screw/screwless one.
- The high density modules IS-7510 has to be connected by the cable to external input/output modules with protection elements.
- Modules are to be fixed in the rack by one screw at the top of the module.
- Modules are addressed by their position in the rack.
- Modules are power supplied from the rack. The loads must be supplied from external power supply.

Use

- Modules are to connect binary, logic input and output signals, provide galvanic isolation, filtering of breakdowns and at the other side to switch on/off the loads of controlled process or machine at the 24 V DC or 230 V AC levels. Suitable when it is necessary to add some inputs or outputs and to spare positions in the rack.

Connection examples

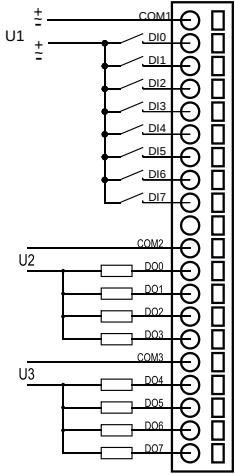
IS-7510



Conductors cross-section

4× 20pin
DIN 41651 Flat Cable Connector

IR-7551



20pin
Screw/screwless connector
TXN 102 3
max. 2.5 mm2



IS-7510



IR-7551

Binary inputs		IS-7510	IR-7551
No. of inputs/ groups		32/ 4	8/ 1
Type of input according to IEC EN 61131-2		Type 3	Type 3
Common wire		Minus	Minus, plus or alternating
Input voltage		24 V DC	24 V DC/ AC
Input current at log. 1		max. 3 mA	max. 10 mA
Time of open/ close the input		5 ms/ 5 ms	5 ms/ 5 ms
Galvanic isolation		Yes	Yes
External supply voltage of module input circuits		24 V DC	24 V AC/DC
Max. power consumption from external source (1 group)		30 mA	
Insulation voltage among inputs and internal circuits		500 V DC	3750 V AC
Insulation voltage among groups of inputs		500 V DC	–

Binary outputs		IS-7510	IR-7551
No. of outputs / groups		32 / 4	8 / 2
Type of input		Semiconductor switch	Relay contact NO
Galvanic isolation		yes	yes
Common wire		Minus, for each group	yes
Switching voltage		24 V DC	12 – 250 V
Switching current		max. 0.05 A	3 A
Common pole current		max. 2 A	max. 10 A
Leakage current		max. 300 µA	
Switch-on/switch-off period		400 µs / 400 µs	5 ms/ 6 ms
Mechanical lifetime (operations)		N/A	5.10 ⁶ switchings
Electrical lifetime (operations)		N/A	400 000 switchings
External supply voltage of module input circuits		24 V DC	
Max. power consumption from external source (1 group)			
Short-circuit protection		No	External
Overload protection		No	External
Spike supressor of inductive load		External RC element, varistor, snubber	External RC element, varistor, snubber
Insulation voltage among outputs and internal circuits		500 V DC	3 750 V AC
Insulation voltage among groups of outputs		500 V DC	1 000 V AC

Power supply		IS-7510	IR-7551
Power supply voltage (SELV)		Internal 24 V from the rack	Internal 24 V from the rack
Module power loss		15 W	4 W
Power consumption		1.5 W	2 W

Dimensions and weight		IS-7510	IR-7551
Dimensions		137 × 30 × 198 mm	137 × 30 × 198 mm
Weight		300 g	300 g

Order number	
TXN 175 51	IR-7551 8 inputs 24 V DC/ AC, 5 ms, common pole for group of 8 inputs, 8 outputs 230 V AC/ 3 A, relay contacts NO,
TXN 175 10	IB-7510 32 DI, 24 V DC, 5 ms, 32 DO, 24 V DC, basic module for external modules IB-04xx, OS-04xx and OR-04xx
TXN 102 30	Connector, screwless type, 20 pins, pitch 5.08 mm
TXN 102 31	Connector, screw type, parallel, 20 pins, pitch 5.08 mm
TXN 102 32	Connector, screw type, right angle, 20 pins, pitch 5.08 mm
TXN 102 45	4 IDC connectors according to DIN41651 for flat cables, 20 pins
TXN 102 11.04	KB-0211 cable for external I/ O modules, 20 pin/ 20 pin, shielded – (faston 2.8), 1m
TXN 102 12.04	KB-0212 cable for external I/ O modules, 20 pin/ 20 pin, unshielded 1m
TXN 102 13.04	KB-0213 cable for external I/ O modules, 20 pin/ free end, shielded-(faston 2.8), 1m



TXN 102 30



TXN 102 32