ADP-TSX-DO-03

16 channels - Discrete Outputs adapter with electromechanical relays - Sinking Type

Description :

The **ADP-TSX-DO-03** interface adapter allows to connect up to 8 Discrete Outputs to a Sinking type Distributed Control System (DCS), or a Programmable Logic Controller (PLC).

It is particularly suitable for migration of existing Télémécanique TSX7™ I/O card with reference as follow :

- TSX-DST 16 35 : 16CH Discrete Output card

The main advantages of the **ADP-TSX-DO-03** for TSX7™ migration are as follow :

- The “BLK” connector is simply disconnected from the TSX7 I/O card and reconnected to the front connector of the **ADP-TSX-DO-03** without modification of the wiring (same labels and same electrical characteristics).
- Since the wiring is not affected, the sync times are reduced.

The **ADP-TSX-DO-03** interface adapter can be connected to a DO card of a DCS or a PLC using one DSUB 37 pin male connector located on the BC-11406 rack.
The connection is done using a shielded cable, with a DSUB 37 socket female connector at one end, and labeled flying wires or a suitable connector matching with the new system DO card used at the other end.

Each control signal commands a 24Vdc relay in order to drive a load (a motor, a valve, a solenoid…)
A yellow LED indicates the command status of each channel through the “BLK” connector.

Product options :

Option **-1** : *ADP-TSX-DO-03-1* Standard version

Technical specifications :

Dimensions :		**Channel characteristics :**
Length : 290 mm		Each output controls a 24Vdc relay (1 contact) protected by a varistor
Width : 51 mm		
Height : 176.7 mm		**Protection for each channel :**
Weight :		External fuse available on the existing installation
300 g		**Insulation voltage :**
Temperature range :		1500 Vac between input (control signal) and output (contacts)
Operating : 0°C to 50°C		**Contact characteristics :**
Storage : -20°C to 60°C		See relay specifications sheet page 2
Humidity :		**Mounting :**
Up to 90% (no condensation)		In a BC-11406-1 or a BC-11406-2 rack

Connection to the DCS or to the PLC :

The BC-11406 rack provides the connection to the DCS or PLC by a DSUB 37 pin male connector with UNC 4-40 female lock

TYPE	**ELECTROMECHANICAL RELAY**

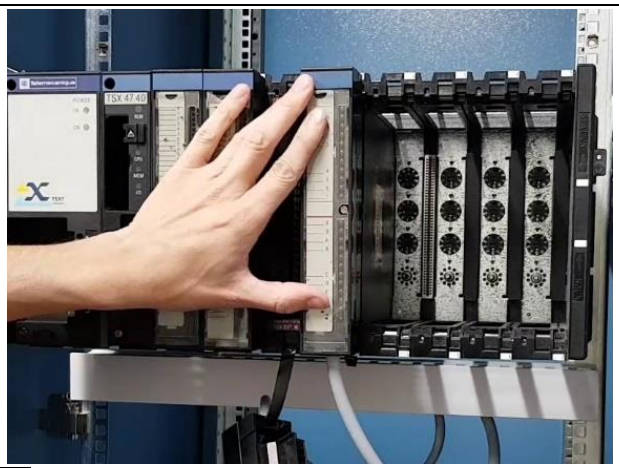
REFERENCE	**REL24-STD-945144**

General characteristics :	
Mechanical expected life	10 000 000 cycles
Expected life at max load	60 000 cycles
Operate time / release time / debound	5ms / 3ms / 5ms
Coil / contacts insulation	6000 Vac
Dielectric strength between open contacts	1000 Vac
Ambient temperature	-40°C to 85°C (Socket : -40 / +70)
Initial insulation resistance	1000MΩ
Environmental protection	RT II
Dimensions	L : 28mm / W : 5mm / H : 15mm
Weight	6g

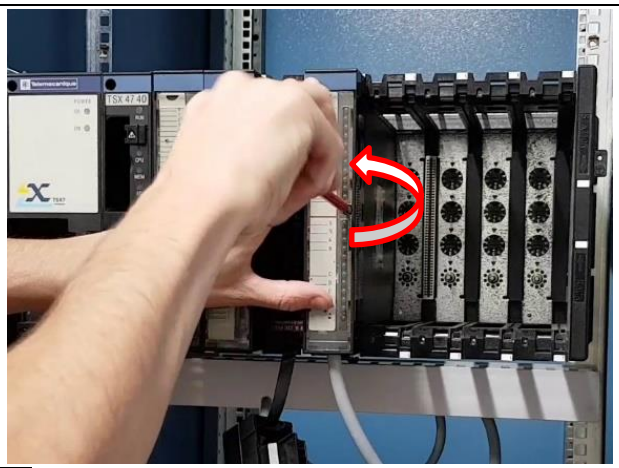
Coil characteristics :	
Nominal voltage	24Vcc
Voltage operating range	17 - 36Vdc
Holding voltage	9,6Vdc
Must drop-out voltage	1,2Vdc
Nominal operating current	7,1mA
Coil resistance	3300Ω +/-10%
Nominal power	0,17W (24Vdc)

Contacts characteristics :	
Contact material	AgNi (or AgSnO2)
Arrangement	1 contact (SPDT)
Rated current / Max peak current	6A / 10A
Rated voltage / Max switching voltage	250Vac / 400Vac
Minimum switching load	500mW (12Vdc / 10mA)
Breaking capacity in DC	6A (30V). 0,5A (48V).0,12A (220V)
Breaking capacity in AC	6A (250V)

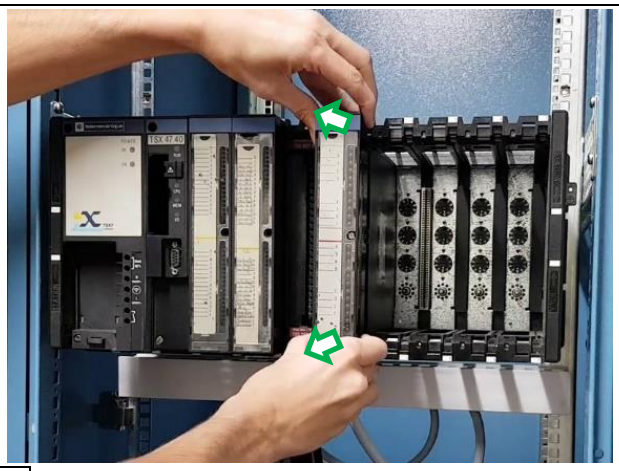
Disconnecting the BLK terminals and removing the TSX rack :



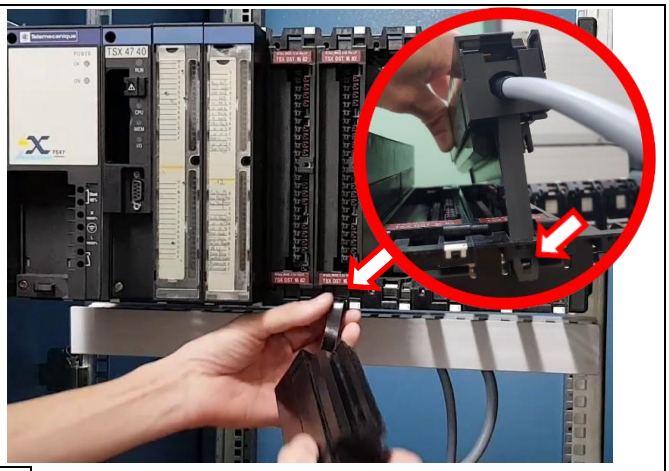
1	Hold the BLK connector to avoid it to wiggle when you unscrew it.



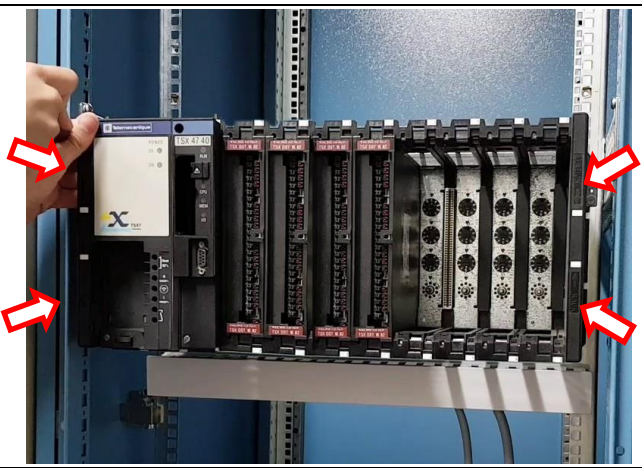
2	While holding the BLK connector to keep it straight, unscrew the fast action screw to unsecure the BLK connector.



3	Once the central screw is completely unscrewed, remove the BLK terminal block by pulling it straight (do not tilt the terminal block out)

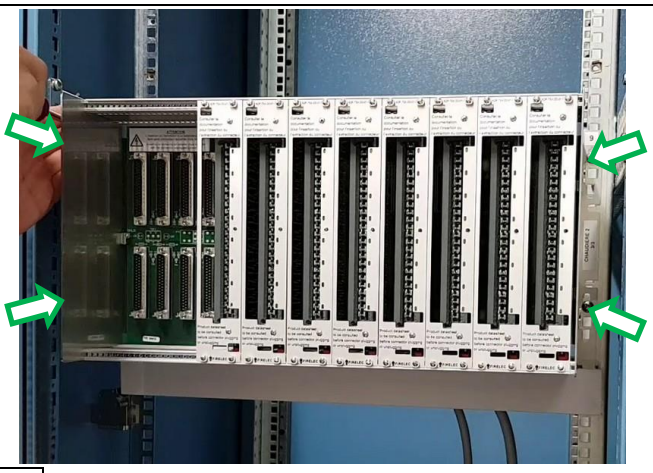


4	Extract the securing tabs by pressing the inner clips to fully disengage the terminal block from the TSX rack.

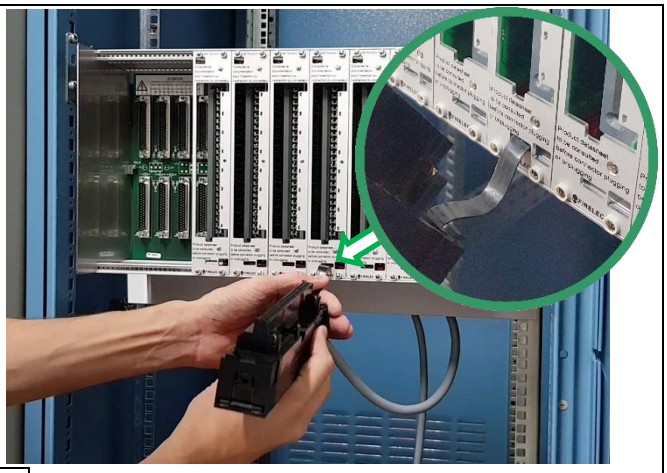


5	When all BLK connectors are removed from the rack, unsecure the rack using the screws and remove it.

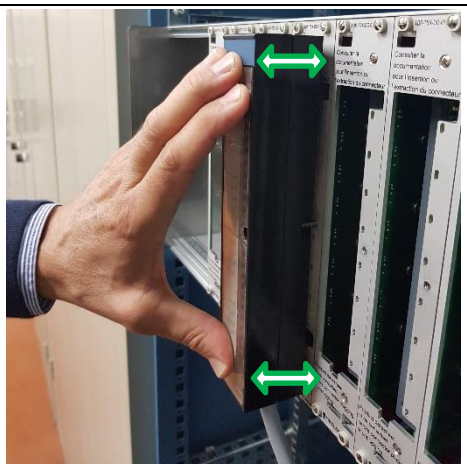
Installation :



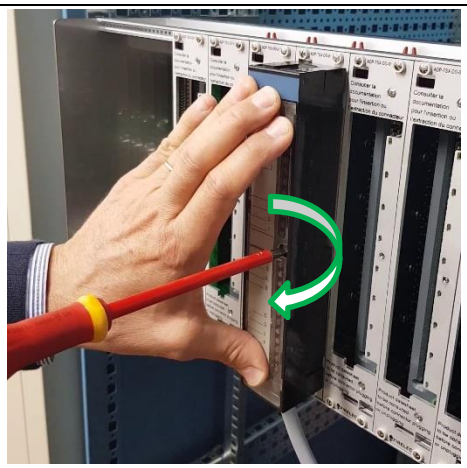
1	Install the FIRELEC BC-11406 in place of the legacy TSX file and secure it with the screws.



2	Insert the securing tabs fir each ADP-TSX into the intended slot.



3	Place the BLK connector and hold it in place with the screw being in contact with the adapter faceplate. Be sure to verify the correct alignment. Don't push it, it will be secured just using the fast action screw.



4	While holding the BLK connector to keep it straight, screw the fast action screw to secure the BLK connector.

5	Once the BLK connectors are secured, connect the BC-11406 to the I/O cards of the new system using FIRELEC cables.