finder
SWITCH TO THE FUTURE

MasterPLUS - RAILWAY
Relay interface modules for railway applications

39
SERIES

- Exterior light control
- Driver's control console
- Door control
- Internal light management
- Message panels infotainment

MasterPLUS - RAILWAY

1 Pole interface module, 6.2 mm wide, for railway applications.

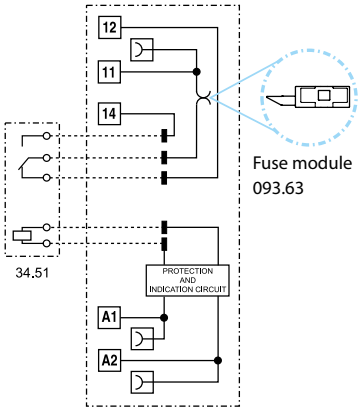
- Compliant with standards EN 45545-2:2020 (protection against fire and fumes), EN 61373 (resistance to shock and vibration, category 1 class B), EN 50155 (resistance to temperature and humidity, class OT4/ST1)
- DC multi-voltage coil with wide operating range
- Cadmium free contacts (standard version)
- Contact material options
- Accepts output fuse module 093.63 (for 5 x 20 mm fuses) - space saving protection for the output circuit
- Easy common connection of adjacent relay terminals A1, A2 and 11 using jumper links

39.31/39.61

- 6 A electromechanical relay
- 24 - 132 V DC supply
- Screw terminal and push-in terminal
- 35 mm rail (EN 60715) mounting

39.31T
Screw terminal

39.61T
Push-in terminal

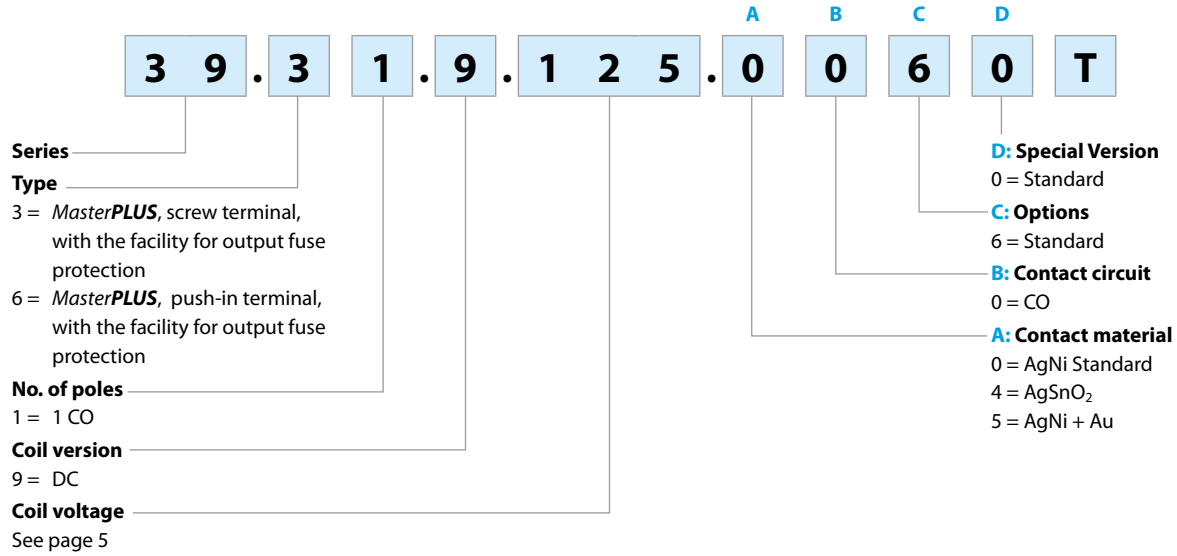


* +70°C short term rated (10 minutes or less).
For Temperature output specification see page 5
For outline drawing see page 6

Contact specification		
Contact configuration		1 CO (SPDT)
Rated current/ Maximum peak current	A	6/10
Rated voltage/ Maximum switching voltage	V AC	250/400
Rated load AC1	VA	1500
Rated load AC15 (230 V AC)	VA	300
Single phase motor rating (230 V AC)	kW	0.185
Breaking capacity DC1: 24/110/220 V	A	6/0.2/0.12
Minimum switching load	mW (V/mA)	500 (12/10)
Standard contact material		AgNi
Supply specification		
Nominal voltage (U_N)	V DC	24…132
Rated power	W	0.25
Operating range	V DC	16.8…165
Release voltage	V DC	6
General characteristics		
Mechanical life AC/DC	cycles	$10 \cdot 10^6$
Electrical life at rated load AC1	cycles	$60 \cdot 10^3$
Operate/release time	ms	5/6
Insulation between coil and contacts (1.2/50 µs)	kV	6 (8 mm)
Dielectric strength between open contacts	V AC	1000
Ambient temperature range	°C	–20…+55*
Protection category		IP 20
Approvals relay (according to type)		CE UK CA

Ordering information

Example: *Master**PLUS*** 39 series screw terminal interface module, electromechanical relay output, 1 CO (SPDT), 24…132 V DC, Railway.



D

Selecting features and options

Preferred selections for best availability are shown in **bold**.

Type	Coil version	A	B	C	D
39.31/61	**9.125**	**0** - 4 - 5	**0**	**6**	**0**

Technical data

Insulation according to EN 61810-1			
Nominal voltage of supply system	V AC	230/400	
Rated insulation voltage	V AC	250	400
Pollution degree		3	2
Insulation between coil and contact set			
Type of Insulation		Reinforced	
Overvoltage category		III	
Rated impulse voltage	kV (1.2/50 µs)	6	
Dielectric strength	V AC	4000	
Insulation between open contacts			
Type of disconnection		Micro-disconnection	
Dielectric strength	V AC/kV (1.2/50 µs)	1000/1.5	

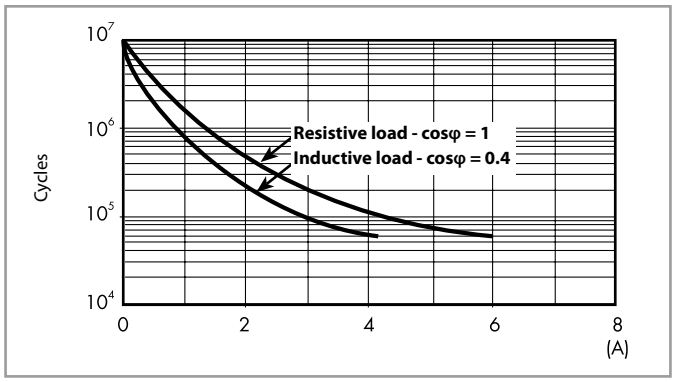
Conducted disturbance immunity			
Voltage pulses (surge 1.2/50 µs) according to EN 61000-4-5 at supply terminals (differential mode)	kV	0.8	

Other data			
Bounce time: NO/NC	ms	1/6	
Vibration resistance (10…55 Hz): NO/NC	g	10/15	
Power lost to the environment	without contact current W	0.2 (24 V)	
	with rated current W	0.6 (24 V)	

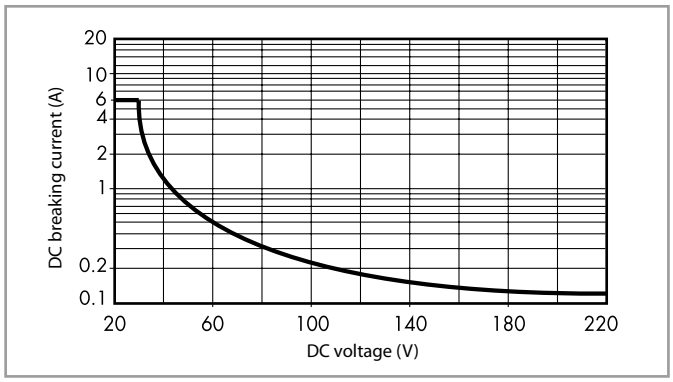
Terminals			
		Screw terminal	**Push-in terminal**
Wire strip length	mm	10	8
Screw torque	Nm	0.5	—
		Solid and stranded cable	**Solid and stranded cable**
Min. wire size	mm²	1 x 0.5	1 x 0.5
	AWG	1 x 21	1 x 21
Max. wire size	mm²	1 x 2.5	1 x 2.5
	AWG	1 x 14	1 x 14

Contact specification

F 39 - Electrical life (AC) v contact current



H 39 - Maximum DC1 breaking capacity

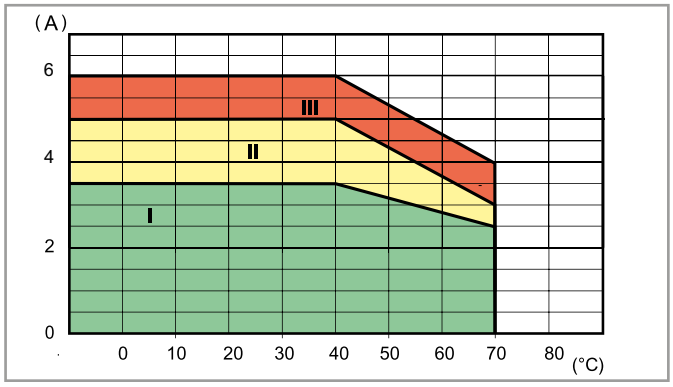


- When switching a resistive load (DC1) having voltage and current values under the curve, an electrical life of ≥ $60 \cdot 10^3$ can be expected.
- In the case of DC13 loads, the connection of a diode in parallel with the load will permit a similar electrical life as for a DC1 load.
  Note: the release time for the load will be increased.

D

Output specification

F 39 - Output current V ambient temperature



I: 39T Series installed as a group with fuse module inserted
II: 39T Series installed as a group without fuse module inserted
III: 39T Series installed individually with or without fuse module inserted

Coil specifications

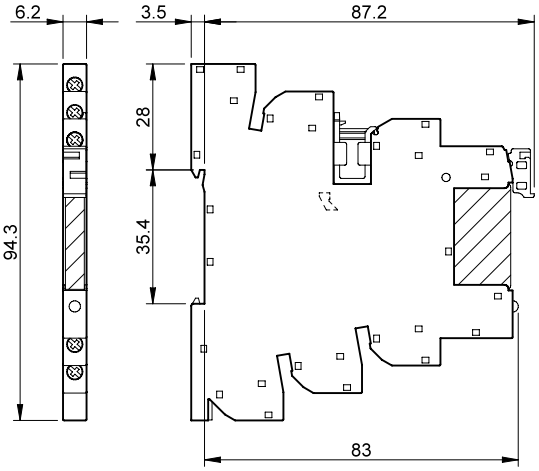
Coil data DC

Nominal voltage	Coil code	Operating range		Must drop-out voltage	Rated input current @24 V	Rated power
U_N		U_{min}	U_{max}	U_r	I_N	@24 V
V		V	V	V	mA	W
24…132	9.125	16.8	165	6	9	0.25

Outline drawings

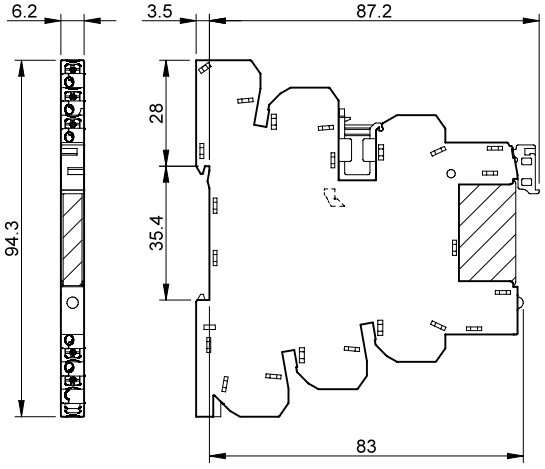
Screw terminal sockets

Type 39.31
Screw terminal



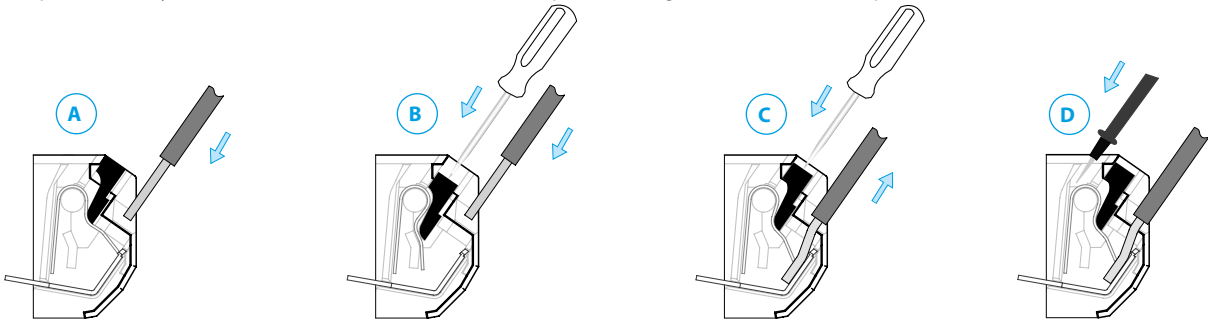
Push-in terminal sockets

Type 39.61
Push-in terminal



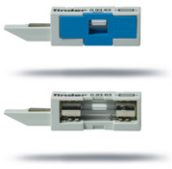
Main features-Push-in terminals

The push-in terminals permit the quick connection of solid wires or ferrules by their simple insertion into the terminal (A).
It is possible to open the terminal to extract the wire by first pushing down on the push-button using a screwdriver (C).
For stranded cable it is necessary first to open the terminal using the push button, both for the extraction (C) and insertion (B).
It is possible at any time to check the connection via the test aperture, using a 2 mm diameter test probe (D).



VI-2024, www.findernet.com

Accessories



093.63
Approvals
(according to type):

093.63.0.024
093.63.8.230

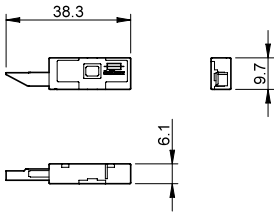
Output fuse module for 39.31/30/81/80/61/60/91/90 types	093.63	093.63.0.024	093.63.8.230

- For 5 x 20 mm fuses up to 6 A, 250 V
- Type 093.63 - Easy visibility of the fuse condition through the window
- Type 093.63.0.024 - (6…24)V AC/DC with LED fuse status indicator
- Type 093.63.8.230 - (110…240)V AC with LED fuse status indicator
- Quick connection to socket

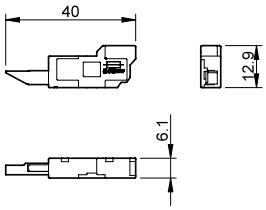
Notes

Safety: Because the output circuit can be reinstated (point 3 below), even with the fuse removed, it is important not to consider the removal of the fuse as a "safety disconnect". Always isolate elsewhere before working on the circuit.
UL: According to UL508A, the fuse module cannot be installed in power circuits (in which it is mandatory that a fuse certified according to UL category JDDZ be fitted). However, where the MasterInterface is connected as an output interface to a PLC no such restrictions apply, and the fuse module can be usefully employed.

Type 093.63

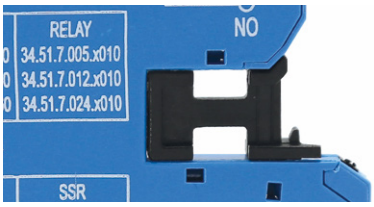


Type 093.63.0.24 / 093.63.8.230

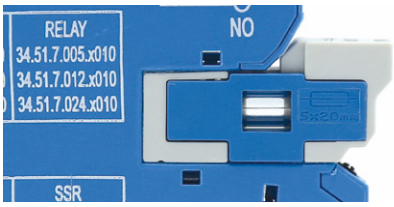


Multi-state fuse module

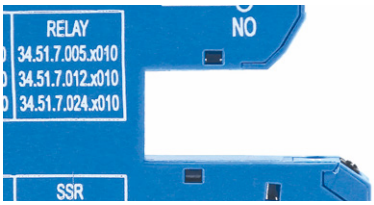
0. As delivered, the socket comes without a fuse module. However, a "bridging" module guarantee the output electrical connections.



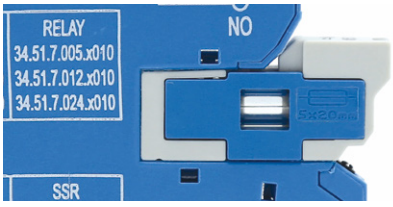
1. In order to use a fuse module, it is enough to remove the "bridging" module and replace it by the fuse module. The fuse is positioned electrically in series with the common output terminal of the interface module (11 for EMR versions, 13+ for SSR versions, 15 for EMR timer, 15+ for SSR timer). .

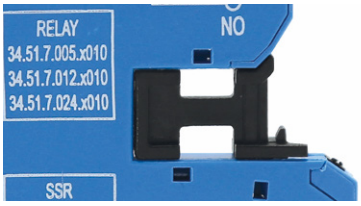


2. If the fuse module is extracted (for example; because the fuse element has blown) the output circuit will be locked open, as this will generally be the "safe option".



3. In order to reinstate the output circuit it is necessary to either re-insert the fuse module (complete with functional fuse), or, alternatively, the "bridging" module.





D

Accessories

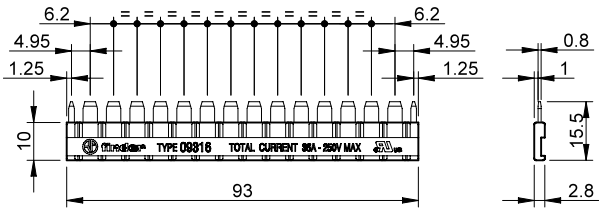
093.16

093.16.0

093.16.1

Approvals (according to type):

16-way jumper link	093.16 (blue)	093.16.0 (black)	093.16.1 (red)
Rated values	6 A - 250 V		
Possibility of multiple connection, side by side			

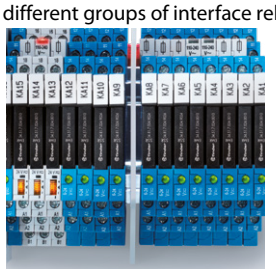


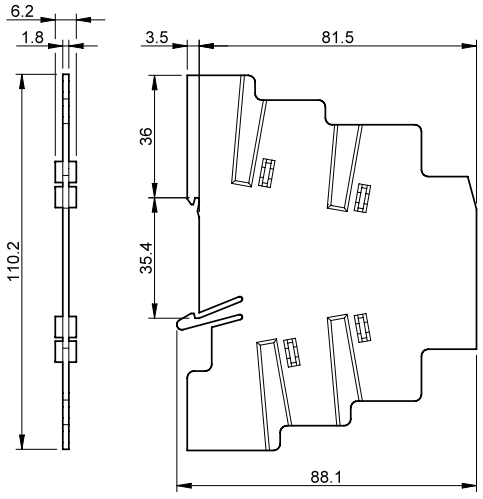
093.60

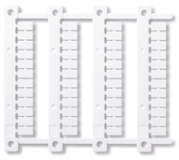
Dual-purpose plastic separator (1.8 mm or 6.2 mm separation)	093.60

1. By breaking off the protruding ribs (by hand), the separator becomes only 1.8 mm thick; useful for the visual separation of different groups of interfaces, or necessary for the protective separation of different voltages of neighbouring interfaces, or for the protection of cut ends of jumper links.

2. Leaving the ribs in place provides 6.2 mm separation. Simply cutting (with scissors) the relevant segment(s) permits the interconnection across the separator of 2 different groups of interface relays, using the standard jumper link.

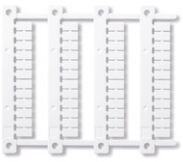






093.48

Sheet of marker tags, plastic, 48 tags, 6 x 10 mm	093.48



060.48

Sheet of marker tags (CEMBRE Thermal transfer printers),48 tags, 6 x 12 mm	060.48