

# ELMDENE

Protecting People & Property

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## 24Vdc 1A DOOR RETAINER SMPSU

WITH REMOTE CONTROL SWITCHING FACILITY

Models:

TRS1

## FEATURES

High efficiency cost effective power supply ideal for use in Fire and Access Control applications, where electromagnet door retainers on Fire doors need to be powered and controlled.

A 24V dc output is provided for direct connection to the door retainer electromagnet whilst versatile remote control inputs permit flexible connection to various remote control sources to switch off the output in the event of a fire alarm or other command:

The three input options for the remote control of the output are as follows:

- Removal of an external 24V dc supply (BS 7273 Compliant – See Typical Setup 1, page 3)
- Opening of a normally closed volt-free contact (See Typical Setup 2, page 3)
- Closing of a normally open volt-free contact

LED status indicators (internal) provide diagnostics showing the presence of a mains input or an output fuse failure. The products use energy efficient switch mode technology and have a universal mains supply input (90–264V ac).

Note this power supply should NOT be used for charging standby batteries.

- Continuous full rated current to load
- Remote control of output
- Choice of control switching options
- Installer safe design with all high voltage electronics fully shrouded
- Universal mains input voltage 90-264Vac
- Modular construction for ease of maintenance and installation
- Full electronic short circuit and overload protection on load output
- Mains transient protection circuit
- Mains and Fault status LED
- Efficient switch mode operation

## SPECIFICATION

### Input Specification

Voltage (rated)	100-240Vac
Voltage (operating)	90-264Vac
Frequency	50-60Hz
Max Current	1A (@ 90Vac)
Mains Input Fuse	T2A
Max standby Power	0.8W (No load connected)

**Output Specification**

Voltage	27.0 – 28.0V dc (27.6V dc nominal) on mains power
Max load current	1A
Ripple	100 mV pk-pk max
Load output Fuse	F1A
Overload	Electronic shutdown until overload or short circuit removed

**Mechanical**

Model	Enclosure Dimensions w x h x d [external] (mm)	Weight (kg)
TRS1	200 x 185 x 60	1.50

**Environmental**

Temperature	-10 to +40°C (operating) 75% RH non-condensing -20 to +80°C (storage)
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**CONNECTIONS**

Trigger:	+/-	Trigger Input – Either a contact (no polarity) or 24V dc (observe polarity)
O/P:	+	Un-switched 24V dc
	-	0V to Door Magnet
	NO	Normally Open relay output (Option 1 for +VE to Door Magnet)
	NC	Normally Closed relay output (Option 2 for +VE to Door Magnet)
I/P:	+/-	+24V dc from PSU O/P (Pre-wired)

**Trigger & Jumper Configurations**

The device has 3 modes of trigger operation set by the on-board jumpers on the interface relay PCB:

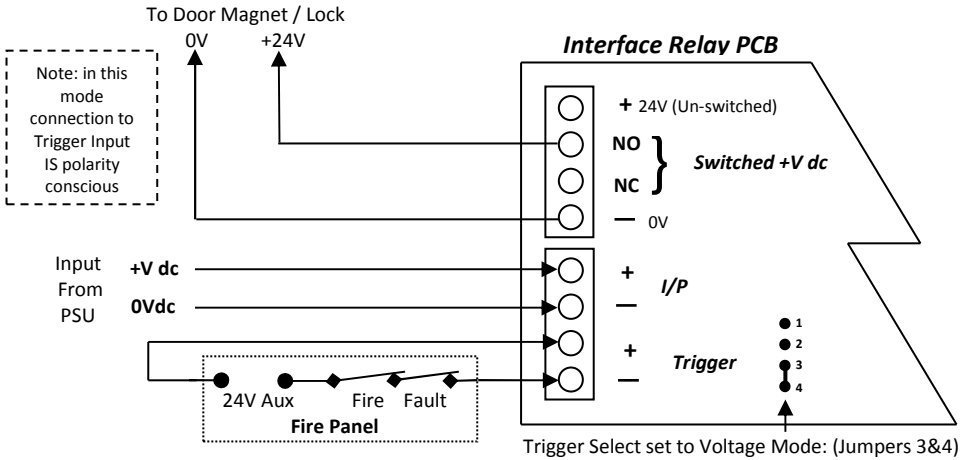
- Contact Mode (Normally Open) - Jumper across: 2 & 3
- Contact Mode (Normally Closed) - Jumpers across: 1 & 2 and 3 & 4
- Voltage Mode - Jumper across: 3 & 4

Table 1 defines the output state of the N.O and N.C contacts with respect to Mode selected and Trigger inputs.

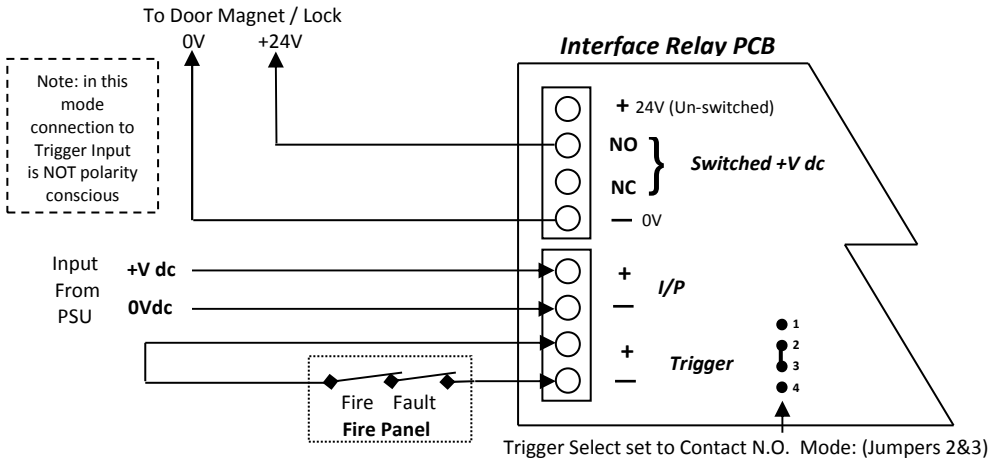
Table 1	Trigger Select	Jumper(s)	Trigger + & -	Output		LED
				N.O	N.C	
Contact Mode	N.O	2 & 3	open	no output	+24V	OFF
			closed	+24V	no output	ON
Contact Mode	N.C	1 & 2 3 & 4	open	+24V	no output	ON
			closed	no output	+24V	OFF
Voltage Mode	+VE	3 & 4	removed	no output	+24V	OFF
			applied	+24V	no output	ON

Note: Trigger Input terminals + and - are only polarity conscious when used in Voltage mode

**Typical Setup 1:** In this example power to the lock is removed when the 24V dc signal from the Fire Alarm Panel is lost/disconnected (*BS7273-4 Compliant*).



**Typical Setup 2:** In this example power to the lock is removed when the Fire and or Fault contacts at the Fire Alarm Panel open



## INSTALLATION INSTRUCTIONS

This unit is only suitable for installation as permanently connected equipment. This PSU is *NOT SUITABLE* for external installation. This unit must be fed from a mains power source having a separate (approved) disconnect device and fitted with a fuse or other over-current protection device rated at 3A maximum. Ensure that the disconnect device used has appropriate earth fault protection to the applicable standard. *EQUIPMENT MUST BE EARTHED*. Before installation, ensure that external disconnect device is *OFF*. The PSU should be installed according to all relevant safety regulations applicable to the application.

**Mounting**

- 1) Mount securely in correct orientation allowing minimum 100mm clearance on all sides.
- 2) Route mains and low voltage output cables via different knockouts and/or cable entry holes.
- 3) Use bushes and cable glands rated to UL94 HB minimum.

**Mains Power Up**

- 4) Attach correctly rated mains cable (minimum 0.5mm<sup>2</sup> [3A], 300/500V ac). Fasten with cable ties.
- 5) Apply mains power. Check for 27.6V dc on load output. Check Green Mains LED is ON.
- 6) Disconnect mains power.

**OPERATING INSTRUCTIONS**

This unit is intended for use by Service Personnel only - There are NO USER SERVICEABLE parts inside. The Green Mains LED will be illuminated whilst the mains supply is present. In the event of a fault condition, the Yellow Fault LED will be illuminated.

**MAINTENANCE**

There is no regular maintenance required of the PSU. If the output of the PSU fails the cause of the failure should be investigated e.g. short circuit load. The fault should be rectified before restoring power to the PSU. The fuses may need to be replaced. Ensure the correct fuse rating and type is used.

**LOCAL INDICATORS**

MAINS LED (Green)	Mains present
FAULT LED (Yellow)	Fault present: Output fuse fail

**COMPLIANCE**

This power supply unit meets the essential requirements of the following European Directives:

Low Voltage 2014/35/EU	EMC 2014/30/EU
WEEE 2012/19/EU	RoHS 2011/65/EU

**DISPOSAL OF PRODUCT AT END OF LIFE**

This product falls within the scope of EU Directives 2012/19/EU Waste Electrical and Electronic Equipment (WEEE) and 2013/56/EU (Battery). At the end of life, the product must be separated from the domestic waste stream and disposed via an appropriate approved WEEE disposal route in accordance with all national and local regulations.

Before disposal of the product, any batteries must be removed, and disposed separately via an appropriate approved battery disposal route in accordance with all national and local regulations. Package used batteries safely for onward transport to your supplier, collection point or disposal facility.

*The packaging supplied with this product may be recycled.*

*Please dispose of packaging accordingly.*

**Explanation of symbols: (Not all may apply)**

Fault Indication



Shock Risk - isolate before attempting access



Certification Level



Mains Present



Protective Earth



Do not dispose of in unsorted waste

Specifications subject to change without notice