



Mini-FRI Field Relay Interface

Datasheet

A miniature, low power relay for interface to security and other equipment

Converts a DC voltage signal into a single pole double throw dry contact.

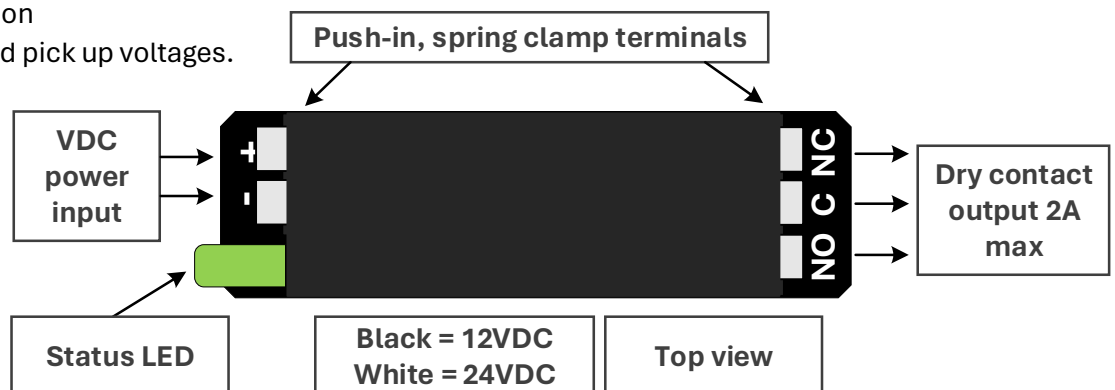
Suitable for small spaces and inline connections.

Applications

- Interface, bypass and override of security devices
- Converting a DC voltage to a dry contact
- Converting transistor outputs for use with high current devices
- Automatic door & gate control
- Monitoring

Features

- 2A relay contacts SPDT (1 Form C)
- 12 & 24VDC versions
- Onboard polarity and kick back protection
- LED status indicator
- Miniature size
- Low power
- Secure spring clamp terminals
- Wide cable size range
- Simple installation
- Low drop out and pick up voltages.



Benefits

The Mini-FRI interface relay is perfect for most security and EACS interface requirements. It requires a simple two wire DC voltage for operation and its miniature size allows it to be installed into tight spaces such as door frames, behind switch plates and inside automatic door/gate controllers without using fixings or DIN rail.

An on-board LED indicator allows the relay status to be identified without needing to use a multi-meter.

Spring clamp terminals are used to secure the connecting wires. Unlike screw terminals that can loosen with movement and changes in temperature, the Mini-FRI terminals maintain a constant pressure on the conductors over the life of the connection. This makes the Mini-FRI an ideal choice for use in door frames, automatic door heads, gates and other challenging environments. The terminals can also be operated by hand reducing the number of tools required and increasing installation/repair efficiency.

Low drop out & pick up voltages allow the Mini-FRI relay to keep working even when there is a significant voltage drop due to long cables or a failing power supply. For example, the Mini-FRI-12 will work as intended at 8VDC or 5.6V below a typical security power supply voltage rating.

Reverse polarity and inductive kick back (sometimes called back EMF) protection is included onboard eliminating the need to add external diodes and reducing the chance of damage to the Mini-FRI and upstream devices.

Technical Data

Conductor size	.2 - 1.5mm ² (24-16AWG)
Relay contact max current	2.2A @ 5-30VDC
Relay contact configuration	SPDT (1 Form C)
Coil current draw	25mA @ 13.8VDC (.35W)
Coil operating voltage (Mini-FRI-12)	8-15 VDC*
Coil operating voltage (Mini-FRI-24)	20-35 VDC*
Suitable for stranded conductors	Yes
Suitable for solid conductors	Yes
Dimensions L X W X H	48X13X11mm
RoHS	Compliant
AUS/NZ (RMC-EMC) 61000.6.3	Compliant
Primary materials	Polyamide 46, fiberglass, polyolefin
Country of origin	China

*Drop out voltages may exceed stated values.

Function

Relay Coil

The relay coil is powered via the terminals marked + and -. Apply a DC voltage to energise the relay. An energised relay is indicated by an illuminated green LED.

The Mini-FRI has both reverse polarity and energy spike protection diodes on board.

Relay Contacts

A Single Pole Double Throw (SPDT) also known as a 1 Form C configuration is used for the relay contacts. The relay contact terminals are marked NC, C and NO. The normally closed (NC) contact is closed and connected to the common (C) terminal when the Mini-FRI is unpowered. Once power is supplied this contact changes over and the normally open (NO) contact is then connected to the common terminal.



Mounting

The small size and slim design of the Mini-FRI allow it to be connected inline with security cables without mounting. To provide strain relief the Mini-FRI can be cable tied directly to security cables. For indoor environments no enclosure is necessary.

Specifier Text

Where an interface relay is required, it shall be an inline, low power, miniature type. The relay shall include an SPDT contact and status LED. The relay shall feature low drop out and pick up voltages and shall be capable of operating (on and off) at least 30% below normal supply voltage. The relay contact current capacity should exceed requirements by at least 10%.

Ordering Code

Mini-FRI-12	Black – Field relay interface for use with 12VDC systems
Mini-FRI-24	White – Field relay interface for use with 24VDC systems

Learning

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More Information: For complete installation notes, data sheets and technical support please visit www.jackfuse.com

