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Find the *National Instruments cFP-RLY-425* at our website: ***Click HERE***

Relay Module for Compact FieldPoint

NI cFP-RLY-425 *NEW!*

- 8 Form A (SPST) electromechanical relays
- Switch 5 A at 18 VDC or 150 VAC
- Switch 0.2 A at 125 VDC or 3 A at 250 VAC
- Direct connectivity, no connector block required
- Hot-swappable with autoconfiguration
- -40 to 70 °C operating range



Overview

The National Instruments cFP-RLY-425 is a versatile relay module for Compact FieldPoint that you can use for controlling digital signals ranging from low voltage to 125 VDC and to 250 VAC. It can switch up to 5 A on each of its eight channels and features a 250 V Category II safety installation rating. This module is commonly used to control indicator lights, motors, and power circuits.

Relay Module

The NI cFP-RLY-425 provides built-in module-to-module isolation to protect your Compact FieldPoint system and controller from high voltage levels. With the electrically isolated output relays, you can use each channel with a different voltage potential.

The module features a maximum switching frequency of 0.5 Hz (2 s/operation). Overall data throughput depends on software loop speeds and network speeds. Indicator lights show power and ready state.

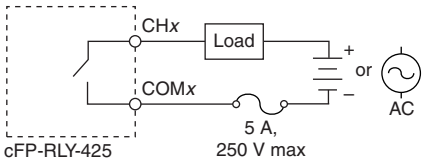


Figure 1. Wiring Schematics for RLY Module

Isolation

The cFP-RLY-425 module provides double insulation for up to 250 V_{rms} of operational isolation.

Power Requirements

Because the cFP-RLY-425 is a high power consumption module, it could limit the number of I/O modules that you can connect to a single network interface module. Controllers and network interface modules supply up to 9 W to power I/O modules. The cFP-RLY-425 requires up to 1.45 W.

Field I/O Connections

Each input channel on the cFP-RLY-425 has two terminals:

1. Relay common terminal (COMx)
2. Normally open terminal (CHx)

No terminal block is required for this module because the signal I/O connectivity is integrated directly into the module housing.

Ordering Information

NI cFP-RLY-425 777318-425

BUY NOW!

For complete product specifications, pricing, and accessory information, call (800) 813 3693 (U.S. only) or go to ni.com/compactfieldpoint.

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Relay Module for Compact FieldPoint

Specifications

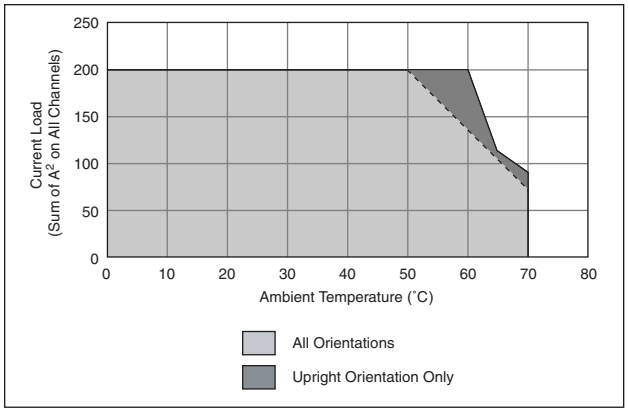
Typical for -40 to 70 °C unless otherwise noted.

Relay Characteristics

Number of channels	8
Relay type	SPST, normally open, nonlatching
Maximum switching capacity (resistive load)	
AC	5 A at 150 VAC
	3 A at 250 VAC
DC	5 A at 18 VDC
	0.2 A at 125 VDC
Maximum switching power	750 VA, 90 W
Simultaneous channels at maximum switching current (<55 °C)	8
Minimum switching load	1 mA at 5 DC
Initial contact resistance	<0.03 Ω
Expected relay life	
Mechanical	2×10^7 operations
Electrical	1.5×10^5 operations at 5 A, 30 VDC
	1.5×10^5 operations at 3 A, 120 VAC
	1.5×10^5 operations at 0.2 A, 125 VDC
	3×10^4 operations at 5 A, 250 VAC
Operate time	<10 ms
Release time	<7 ms
Contact bounce	<1 ms
Contact material	Gold overlay silver alloy

Power Derating

Load derating is dependent on the ambient temperature and the sum of the current squared of each channel simultaneously carrying a signal.



Power Requirement (from Network Module)

cFP-RLY-425	1.45 W

Physical Characteristics

LED indicators	
Power (green)	Indicates power-on and self-test passed
Ready (green)	Indicates module is configured and ready
I/O connector	Combicon type
Dimensions	4.87 by 7.29 by 12.8 cm
Weight	201.4 g (7.11 oz)

Isolation Voltage (verified by a dielectric withstand test)

Maximum isolation voltage	250 V_{rms}, Installation CAT II
Channel-to-channel and Channel-to-Bus isolation	250 V_{rms}, CAT II continuous, 2300 V_{rms}, 1 minute

Environmental

Operating temperature	-40 to 70 °C
Storage temperature	-55 to 85 °C
Relative humidity	10 to 90% noncondensing
Maximum altitude	2000 m; at higher altitudes, you must lower the isolation voltage
Pollution degree	2

Safety

This product is designed to meet the requirements of the following standards of safety for electrical equipment for measurement, control, and laboratory use:

- IEC 61010-1, EN 61010-1
- UL 3121-1, UL 61010C-1
- CAN/CSA C22.2 No. 1010.1

Electromagnetic Compatibility

CE, C-Tick, and FCC Part 15 (Class A) Compliant

Emissions	EN 55011 Class A at 10 m FCC Part 15A above 1 GHz
Immunity	EN 61326:1997 +A2:2001, Table 1

CE Compliance

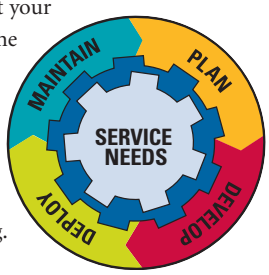
This product meets the essential requirements of applicable European Directives, as amended for CE Marking, as follows:

Low-Voltage Directive (safety)	73/23/EEC
Electromagnetic Compatibility Directive (EMC)	89/336/EEC

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