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PR3 Relay Base for:

Octal Relays With DPDT or 3PDT Contacts

Universal Modular System

The 38 mm (1.496 in.) wide PR3 relay base range is a modular system consisting of PR3-B... relay bases, robust REL-OR... electromechanical octal relays with DPDT and 3PDT contacts, and a range of practical accessories. These include:

- Plug-in input/interference suppression modules
- Relay retaining bracket
- Continuous jumpers

Depending on the application, complete coupling relays can be created, which are optimized in terms of cost and function.

Base Versions

PR3-B... relay bases are available in two versions with screw connections - the PR3-BSC1/2x21 type for octal relays with DPDT contacts and the PR3-BSC1/3x21 for octal relays with 3PDT contacts. Both bases can be extended in terms of functions through the use of keyed plug-in modules with various display and interference suppression elements.

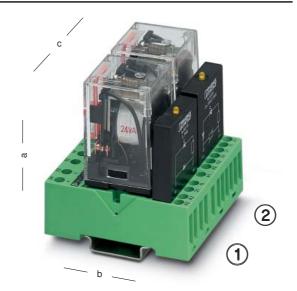
Robust Octal Relays

Octal relays have been used in many sectors of industry for years due to their robust structure, with an 8 or 11-pos. circular connector. They are ideal for use in applications where a solid mechanical structure, powerful power contacts, and easy, error-free operation of a miniature product are important and where global availability is required. The Phoenix Contact REL/OR... series includes the following versions:

- With two 10 A PDT contacts
- With three 10 A PDT contacts
- In all major AC and DC coil voltages

Considerably more expensive miniature contactors can thus be replaced cost-effectively in many applications without adversely affecting machine or system operation. All octal relays have the following standard features:

- Manual test key (AC coil = red key, DC coil = blue
- Mechanical switch setting display
- Keying to prevent connection errors



	1	2		
	PR3-BSC1/2x21	PR3-BSC1/3x21		
Nominal voltage U ¹) Nominal current I ¹)	400 V AC 10 A	400 V AC 10 A		
Conductor cross section - Solid - Flexible American Wire Gauge	2 x 2.5 mm ² 2 x 2.5 mm ² 2 x 14 AWG	2 x 2.5 mm ² 2 x 2.5 mm ² 2 x 14 AWG		
Connection type	M 3	M 3		
Approvals ²)	⊕ ₹\	⊕ ₹1		
Stripping length	10 mm (0.39 in.)	10 mm (0.39 in.)		
Height (a) with retaining bracket: – EL3-M52 Depth (b) Width (c)	84 mm (3.307 in.) 75 mm (2.953 in.) 38 mm (1.496 in.)	86 mm (3.386 in.) 75 mm (2.953 in.) 38 mm (1.496 in.)		
Ambient temperature	-40°C+85°C (-40°F+185°F)	-40°C+85°C (-40°F+185°F)		

The maximum electrical data is relay dependent.
 Details on request.

PR3 Relay Base for Octal Relays With DPDT or 3PDT Contacts

Description	Туре	Order No.	Pcs. Pkt.
PR3 relay base, for REL-OR octal relays with DPDT contacts, screw connections, optional connection of input/interference suppression modules, for mounting on 3	PR3-BSC1/2x21	28 33 60 2	10
PR3 relay base, for REL-OR octal relays with 3PDT contacts, screw connections, optional connection of input/interference suppression modules, for mounting on 3	PR3-BSC1/3x21	28 33 61 5	10
Relay retaining bracket, wire version, suitable for PR3 relay base: – For 52 mm (2.047 in.) high octal relays	EL3-M52	28 33 62 8	10
Plug-in module, for mounting on PR3, with free-wheeling diode and yellow LED, polarity: A1 +, A2 – Input voltage: - 12 - 24 V DC ±20% - 48 - 60 V DC ±20% - 110 V DC ±20%	LDP3-12-24DC LDP3-48-60DC LDP3-110DC	28 33 77 0 28 33 78 3 28 33 79 6	10 10 10
Plug-in module, for mounting on PR3, with free-wheeling diode and yellow LED, polarity: A1 -, A2 + (Japanese standard) Input voltage: - 12 - 24 V DC ±20% - 48 - 60 V DC ±20% - 110 V DC ±20%	LDM3-12-24DC LDM3-48-60DC LDM3-110DC	28 33 80 6 28 33 81 9 28 33 82 2	10 10 10
Plug-in module, for mounting on PR3, with varistor and yellow LED Input voltage: - 12 - 24 V AC/DC ±20% - 48 - 60 V AC/DC ±20% - 120 - 230 V AC/110 V DC ±20%	LV3-12-24UC (30 V varistor LV3-48-60UC (75 V varistor LV3-120-230AC/110 DC (275 V varistor	28 33 84 8	10 10 10
Plug-in module, for mounting on PR3, with varistor Input voltage: - 12 - 24 V AC/DC ±20% - 48 - 60 V AC/DC ±20% - 120 - 230 V AC/DC ±20%	V3-12-24UC (30 V varistor V3-48-60UC (75 V varistor V3-120-230UC (275 V varistor	28 33 93 2	10 10 10
Plug-in module, for mounting on PR3, with RC element Input voltage: - 12 - 24 V AC/DC ±20% - 48 - 60 V AC/DC ±20% - 120 - 230 V AC/DC ±20%	RC3-12-24UC (220 nF/100 Ω RC3-48-60UC (220 nF/220 Ω RC3-120-230UC (100 nF/470 Ω	28 33 90 3	10 10 10
Wire jumper, 50-pos., can be separated, maximum jumpering distance of 60 mm (2.36 in.), 0.5 mm² (20 AWG), insulation: – Blue – Black – Gray	DB 50-90 BU DB 50-90 BK DB 50-90 GY	28 21 18 0 28 20 91 6 28 20 92 9	1 1 1

¹⁾ See INTERFACE catalog

Plug-In Octal Relays With DPDT or 3PDT Contacts, Suitable for PR3 Relay Base

Description		Туре	Order No.	Pcs. Pkt.
Plug-in octal relays, with power contacts, DPDT contacts, test key, mechanical switch setting display Coil voltage: — 24 V DC	0	REL-OR-24DC/2x21	28 34 23 2	20
 24 V AC 120 V AC 230 V AC with power contacts, 3PDT contacts, test key, mechanical switch setting display Coil voltage:	(A1) (14) (12) (12) (22) (A2) (24)	REL-OR-24AC/2x21 REL-OR-120AC/2x21 REL-OR-230AC/2x21	28 34 24 5 28 34 25 8 28 34 26 1	20 20 20
- 24 V DC	2 Form C contacts	REL-OR-24DC/3x21	28 34 27 4	20
- 24 V AC - 120 V AC - 230 V AC	(A1) (14) (12) (22) (21) (21) (21) (21) (24) (34) (32) (32) (34)	REL-OR-24AC/3x21 REL-OR-120AC/3x21 REL-OR-230AC/3x21	28 34 28 7 28 34 29 0 28 34 30 0	20 20 20

Technical Data

Coil Side DC Coils

Nominal input voltage U_N Permissible range (with reference to U_N) Typical input current at UN Response time at U_N Release time at U_N
DC coil resistance at 20°C (68°F)

Coil Side AC Coils (50 Hz/60 Hz)

Nominal input voltage U_N

Permissible range (with reference to U_N)

Typical input current at U_N (50 Hz/60 Hz) Response time at U_N (depending on phase relation) Release time at U_N (depending on phase relation)

DC coil resistance at 20°C (68°F)

Contact Side

Contact type

Contact material

Maximum switching voltage

Minimum switching voltage

Limiting continuous current Minimum switching current

Maximum shutdown power (ohmic load)

Minimum switching power

General Data

Test voltage: Winding/contact Contact/contact

Ambient operating temperature range

Nominal operating mode

Mechanical service life

Electrical service life

Standards/specifications

Approvals

Mounting position/mounting

24 V DC 0.8 - 1.1 56 mA 30 ms, maximum 20 ms, maximum 430 Ω ±15%

120 V AC

20 mA/18 mA

230 V AC 12 mA/11 mA

98 mA/88 mA 20 ms, maximum

20 ms, maximum

24 V AC 0.8 - 1.1

62 Ω ±15% 1520 Ω ±15% 6170 Ω ±15%

REL-OR...2x21 and REL-OR...3x21

Single contact

Ag 250 V AC/DC

1 V 10 A

10 mA

2500 VA

250 V AC

For additional data, see diagram on page 4 $0.01\ W$

2.5 kV, 50 Hz, 1 minute 2.5 kV, 50 Hz, 1 minute -10°C to +40°C (+14°F to +104°F) 100% ED

 10×10^6 cycles

See diagram on page 4

IEC 60 664/IEC 60 664 A/DIN VDE 0110,

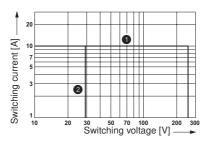
degree of pollution 3, Surge Voltage Category II UL; CSA; VDE

Any/can be mounted without spacing

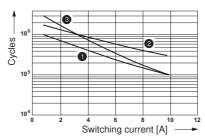
Diagrams for REL-OR... Octal Relays

REL-OR...2x21 (DPDT Contacts) and REL-OR...3x21 (3PDT Contacts)

Shutdown power



Electrical service life



1 AC, ohmic load 2 DC, ohmic load

- 1 250 V AC, ohmic load 2 120 V AC, ohmic load 3 28 V DC, ohmic load