

## Industrial Plugin Electromagnetic Relays

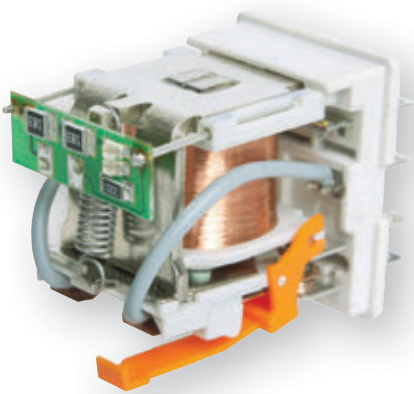
### Description

Relays of general application - the new relays are distinguished by a modern design, high reliability and functionality. Modern technology ensures high quality and effectiveness

- ERM2 (2 pole CO »change over contact«) and ERM4 (4 pole CO »change over contact«)
- AC and DC coils (12, 24V), 230V AC only
- Two types of plug-in sockets (M type and T type)
- Accessories ( connection terminals, retainer/retractor clips, description plates, RC modules...)
- Colour: grey

### Features

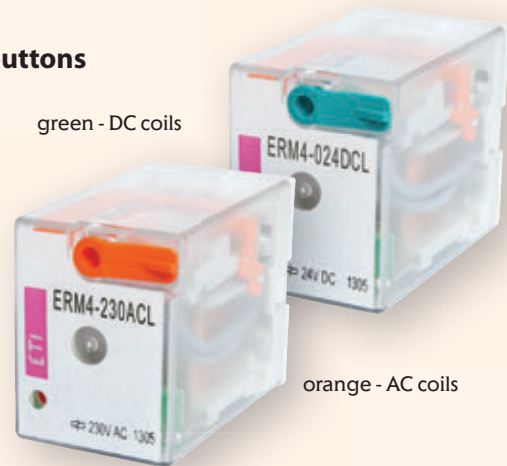
- Mechanical indicator with lockable test button as a standard version
- Optional: Light indication (with built in smd LED)
- Mounting on panel or 35 mm rail in accordance with EN60715
- Improved electromagnet efficiency
- Strong insulation between contacts ( applied polyamide PA66)
- Cadmium - free contacts



**Robust design**

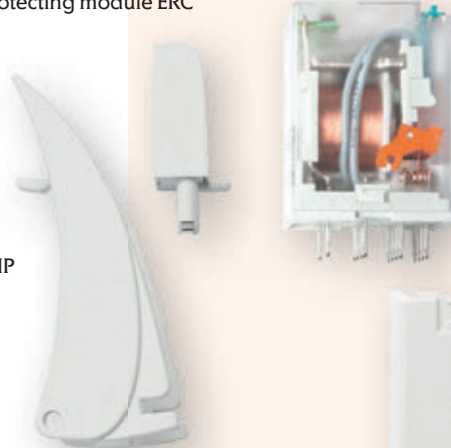
### Test buttons

green - DC coils



orange - AC coils

Protecting module ERC



Electromagnetic relay ERM

Retainer / retractor clip - ER-CLIP



Description plate ER-PLATE



Screw terminals plug-in socket ERB



\* All parts must be ordered separately

**Electromagnetic Plugin Relays with Mechanical Indication and Lockable Test Button**

Type	Code	Uc rated coil voltage [V]	No. Of contacts	Weight [g]	Packaging [pcs]
ERM4-012DC	002473021	12 V DC	4 x CO (6A, AC1)	33	10/100
ERM2-024DC	002473000	24 V DC	2 x CO (12A, AC1)	33	10/100
ERM2-024DCL	002473001	24 V DC	2 x CO (12A, AC1)	33	10/100
ERM2-024AC	002473002	24 V AC	2 x CO (12A, AC1)	33	10/100
ERM2-024ACL	002473003	24 V AC	2 x CO (12A, AC1)	33	10/100
ERM2-230AC	002473004	230 V AC	2 x CO (12A, AC1)	33	10/100
ERM2-230ACL	002473005	230 V AC	2 x CO (12A, AC1)	33	10/100
ERM4-024DC	002473006	24 V DC	4x CO (6A, AC1)	33	10/100
ERM4-024DCL	002473007	24 V DC	4x CO (6A, AC1)	33	10/100
ERM4-024AC	002473008	24 V AC	4x CO (6A, AC1)	33	10/100
ERM4-024ACL	002473009	24 V AC	4x CO (6A, AC1)	33	10/100
ERM4-230AC	002473010	230 V AC	4x CO (6A, AC1)	33	10/100
ERM4-230ACL	002473011	230 V AC	4x CO (6A, AC1)	33	10/100

\*L - built in LED light indicator (red)

Other coil (control) voltages available upon special request:

V DC: 5, 6, 48, 60, 80, 110, 220

V AC: 6, 12, 42, 48, 60, 80, 110, 115, 120, 127, 220, 240

**Ordering designation**

ERMX-YYYYYZ

X - Number of contacts:

4: 4 CO (4 changeover)

2: 2 CO (2 changeover)

YYYYY - Coil code:

024AC: 24 V AC 50/60 Hz

230AC: 230 V AC 50/60 Hz

024DC: 24 V DC

012DC: 12 V DC

Z - Additional features:

L - Light indicator (smd LED - red)

Example:

ERM4-024DCL Electromagnetic relay for plugin sockets with mechanical indication and lockable test button, four changeover contacts, coil voltage 24 V DC with light indicator.

**Plug-in Sockets (Base)**

Type	Code	For use with	Single product weight [g]	Packaging [pcs]
ERB2-T	002473012	ERM2	60	10/100
ERB2-M	002473013	ERM2	71	10/80
ERB4-T	002473014	ERM4	60	10/100
ERB4-M	002473015	ERM4	71	10/80

T - T type

M - M type



ERB2-T, ERB4-T



ERB2-M, ERB4-M

## Technical data

## Industrial plugin electromagnetic relays

**Relays for general application**

For plug-in sockets: 35 mm rail mount acc. to EN 60715; panel mounting

Miniature dimensions

Cadmium - free contacts

AC and DC coils

Recognitions, certifications, directives: RoHS, CE

Standards: EN61810-1:2008 (electromechanical relays); EN61984:2002, EN60998-2-1:2001, EN60664-1:2003 (sockets)

**Table 1: Technical data**

	ERM2	ERM4
Number and type of contacts	2 CO	4 CO
Contact material	AgNi	
Rated / max. switching voltage AC	250 V / 440 V	250 V / 250 V
Min. switching voltage	10 V	10 V AgNi, 10 V AgNi/Au 0,2 µm, 5 V AgNi/Au 5 µm
Rated load (capacity)		
AC1	12 A / 250 V AC	6 A / 250 V AC
AC15	3 A / 120 V 1,5 A / 240 V	1,5 A / 120 V 0,75 A / 240 V (C300)
AC3	370 W (single-phase motor)	125 W (single-phase motor)
DC1	12 A / 24 V DC (see Fig. 3)	6 A / 24 V DC (see Fig. 3)
DC13	0,22 A / 120 V 0,1 A / 250 V	0,22 A / 120 V 0,1 A / 250 V (R300)
Min. switching current	5 mA	
Max. inrush current	24 A	12 A
Rated current	12 A	6 A
Max. breaking capacity AC1	3 000 VA	1 500 VA
Min. breaking capacity	0,3 W	0,3 W AgNi, 0,3 W AgNi/Au 0,2 µm, 0,1 W AgNi/Au 5 µm
Contact resistance	≤ 100 mΩ	
Max. operating frequency (cycles/hour)		
• at rated load AC1	1 200	
• no load	18 000	
<b>Coil data</b>		
Rated voltage 50/60 Hz AC DC	See table 2	
Must release voltage	AC: ≥ 0,2 Un DC: ≥ 0,1 Un	
Operating range of supply voltage	see Table 2	
Rated power consumption AC DC	1,6 VA 0,9 W	
<b>Insulation according to EN 60664-1</b>		
Insulation rated voltage	250 V AC	
Rated surge voltage	4 000 V 1,2 / 50 µs	2 500 V 1,2 / 50 µs
Overvoltage category	III	II
Insulation pollution degree	3	2
Dielectric strength		
• between coil and contacts	2 500 V AC type of insulation: basic	
• contact clearance	1 500 V AC type of clearance: micro-disconnection	
• pole - pole	2 500 V AC type of insulation: basic	
Contact - coil distance		
• clearance	≥ 2,5 mm	≥ 1,6 mm
• creepage	≥ 4 mm	≥ 3,2 mm
<b>General data</b>		
Operating / release time (typical values)	AC: 10 ms / 8 ms	DC: 13 ms / 3 ms
Electrical life		
• resistive AC1	> 10 <sup>9</sup> 12 A, 250 V AC	> 10 <sup>9</sup> 6 A, 250 V AC
• cosΦ	see Fig. 2	see Fig. 2
Mechanical life (cycles)	> 2 x 10 <sup>7</sup>	
Dimensions (L x W x H)	27,5 x 21,2 x 35,6 mm	
Weight	35 g	
Ambient temperature		
• storage	-40...+85 °C	
• operating	AC: -40...+55 °C	DC: -40...+70 °C
Cover protection category	IP 40	EN 60529
Environmental protection	RTI	EN 116000-3
Shock resistance (NO/NC)	10 g / 5 g	
Vibration resistance	5 g 10...150 Hz	