

RELAYS

WITH FORCIBLY GUIDED CONTACTS



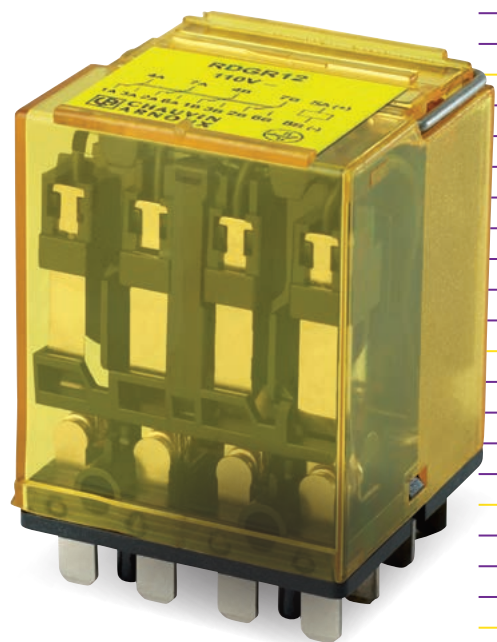
Plug-in instantaneous relays
with 2 and 4 CO contacts

Compliant with
IEC 61810-3 (Type A)

Suitable for safety applications

Self-cleaning engraved
contacts

Magnetic blow-out for high
breaking capacity



RELAYS COMPLIANT WITH THE IEC 61810-3 STANDARD

In relays with forcibly guided contacts, special design and construction features make it possible to guarantee that NO (normally open) contacts cannot be in the same state as NC (normally closed) contacts.

- If an NC contact does not open when a relay is energized, the remaining NO contact must not close and a contact distance ≥ 0.5 mm must be maintained
- When the relay is no longer energized, if an NO contact does not open, the remaining NC contact must not close and a contact distance ≥ 0.5 mm must be maintained

The IEC 61810-3 standard specifies the requirements for relays with forcibly guided contacts. This standard defines two types of forcibly guided relays:

- Type A: relays whose contacts are all forcibly guided,
- Type B: relays containing both forcibly guided and non-forcibly-guided contacts.

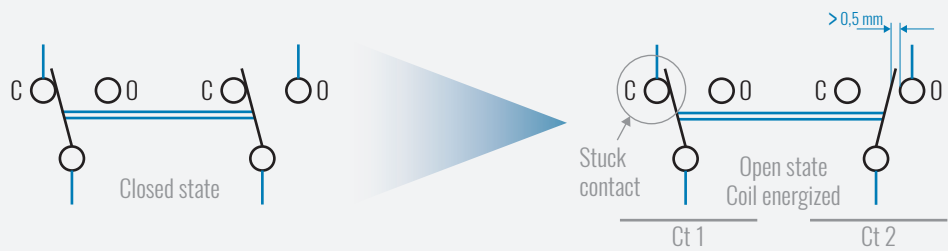
In the case of relays incorporating changeover contacts, they can be considered compliant with the standard if the NO circuit or the NC circuit of a changeover contact fulfils the requirements of this standard.

PRINCIPLE OF RELAYS WITH FORCIBLY GUIDED CONTACTS

Standard relays



IEC 61810-3* compliant relay



* Formerly EN 50205

ROLLING STOCK AND POWER SUBSTATIONS: FORCIBLY GUIDED CONTACTS MEET ALL THE



ERTMS ETCS
CBTC
ATP ATO
AUTOMATIC TRAINING OPERATION SYSTEMS



Applicable standards

COMPLIANCE WITH RAILWAY STANDARDS

**IEC
61810-3**

Type A

**EN
60077-1**

Electric equipment for rolling stock
General service conditions and general rules

**EN
50125-1**

Environmental conditions for equipment. Rolling stock and on-board equipment. Temperature class T3 (-25 °C to +70 °C)

**EN
61373**

Rolling stock equipment
Shock and vibration tests:
Cat. 1 - Class B

**EN
45545-2+A
May 2016**

Fire protection on railway vehicles - Part 2: requirements for fire behaviour of materials and components

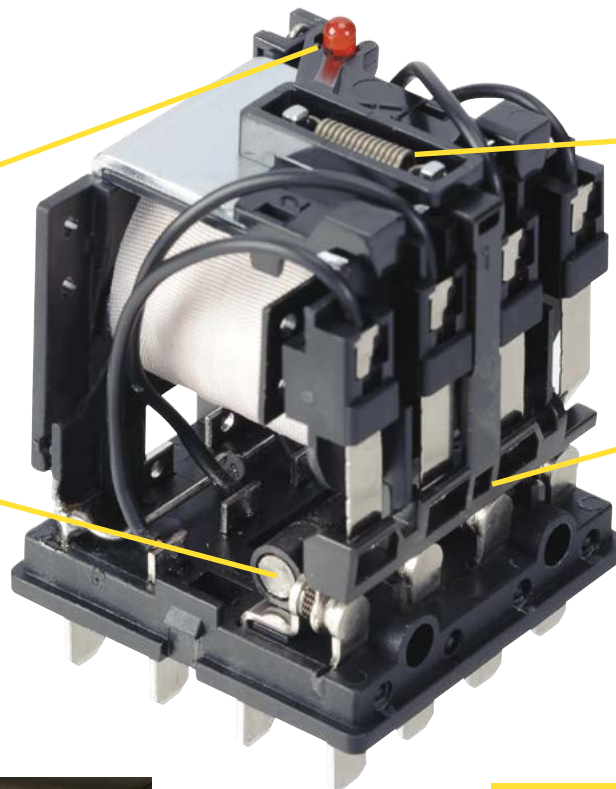
CHAUVIN ARNOUX® RELAYS WITH FORCIBLY GUIDED CONTACTS: MAIN FEATURES

Coil status display diode

To check quickly whether a voltage is present in the coil

Magnetic blow-out

Increases the contacts' breaking capacity



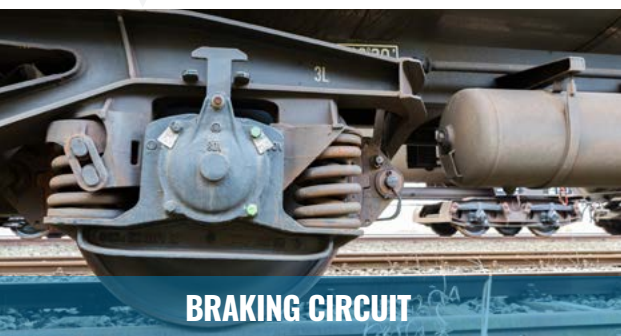
Protection of the return spring

Prevents the spring from falling into the body of the relay if it fails

CO contacts

The relays are equipped as standard with changeover contacts for a wider choice of configurations compared with relays equipped only with normally-closed (NC) or normally-open (NO) contacts

REQUIREMENTS



BRAKING CIRCUIT



POWER SUBSTATIONS

Engraved contacts which are unique on the market

Relays with engraved forcibly guided contacts, a technology developed by Chauvin Arnoux, offer the advantage of breaking both light and heavy loads on the same contact.



Specifications




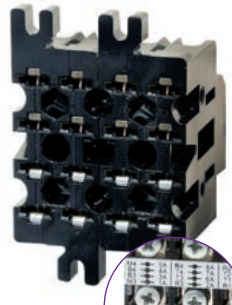



Enerdis proposes more than 200 references for instantaneous, time-delay and function relays for all your industrial requirements

Continuously-powered coil	
Rated voltage	24 - 36 - 48 - 72 - 110 - 125 - 132 - 230 V _{DC} *
Coil consumption	2.2 W
Range of action	0.7 to 1.25 U _n
Specifications of contacts	
Number and type	2 type-A CO contacts
Intensité nominale	4 type-A CO contacts
Inter-rupting capacity	10 A
Standard	0.2 A - 110 V _{DC} - L/R 40ms (500,000 operations)
with blow-out magnet	0.5 A - 110 V _{DC} - L/R 40ms (150,000 operations)
with blow-out super-magnet	0.7 A - 110 V _{DC} - L/R 40ms (100,000 operations)
Minimum load	200 mW (V _{min} : 10 V - I _{min} : 10 mA)
Mechanical specifications	
Mechanical life span	20 x 10 ⁶
Ingress protection	IP50
Dimensions (LxH)	40 x 20 x 50 mm
Weight	60 g
	115 g
Environment	
Operating temperature	-40 °C to +70 °C (85°C for 10 min)
Available options	
	Gold-plated contacts
	Display diode
	Free-wheel diode
	Transil TVS diode
	Safety blank
	blow-out magnet
	blow-out super-magnet (High Power)

* Other voltages on request

Accessories

Front connector		Rear connector		
PAIR080 / PAIR160	48BIP20 / 50IP20	PRIR080 / PRIR160	53IL / 43IL	ADF1 / ADF2
Cage Clamp connection	Screw connection	Cage Clamp connection	Screw connection	Double faston connection
				

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