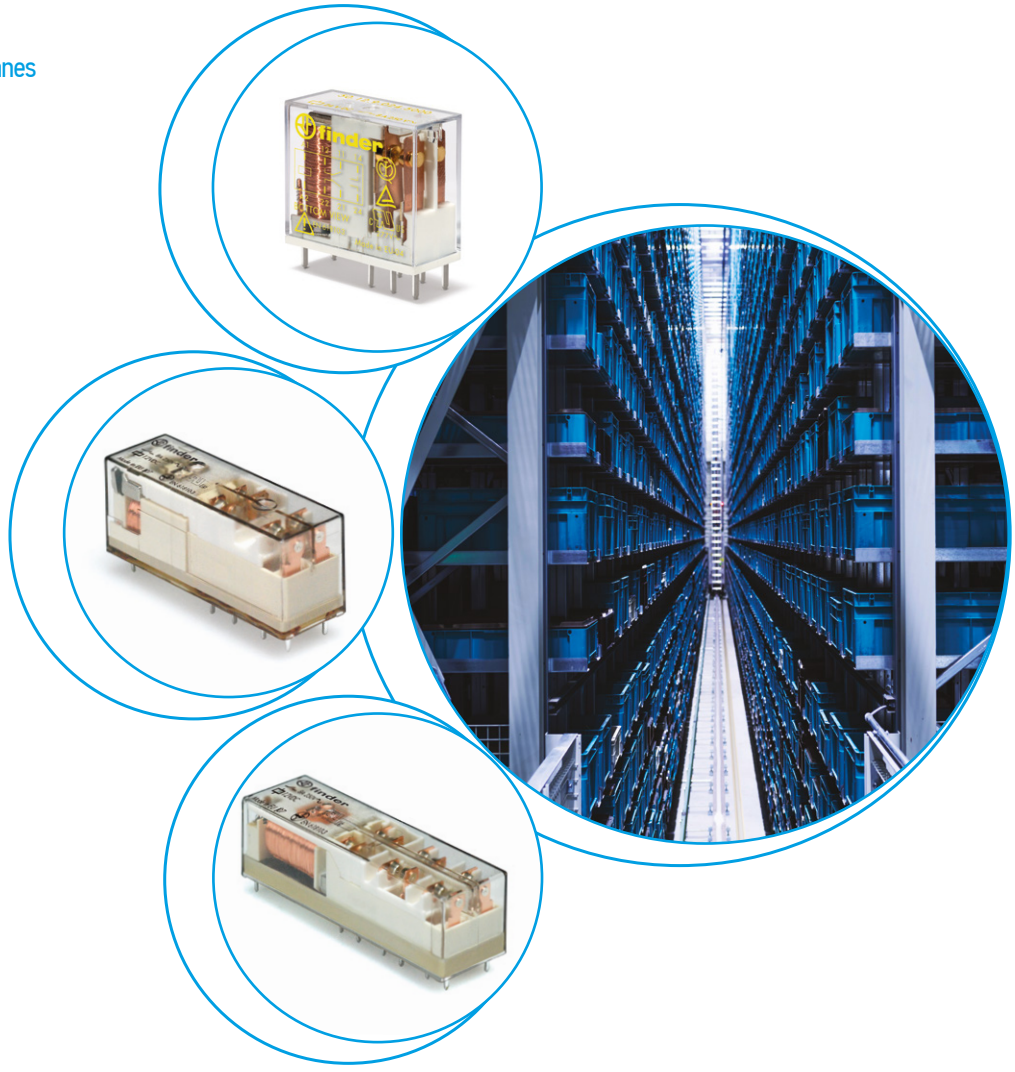
finder
RELAYING INNOVATION

50
SERIES

PCB Relay with forcibly guided contacts 8 A

- Hoists and cranes
- Escalators
- Medical and dentistry
- Hospitals
- Carousel warehouses
- Elevators and lifts
- Disabled lift
- Wood-processing machines



Prices, features, specifications, capabilities, appearance and availability of our products and services are subject to change without notice.
FINDER assumes no responsibility for the presence of possible errors or insufficient information in this document.
In case of discrepancies between the printed and online versions, the latter prevails.

PCB Relay with forcibly guided contacts according to EN 61810-3 (previously EN 50205)
Type B
2 CO contacts*

Type 50.12…x000
- 2 pole 8 A
- Contact AgNi, $AgSnO_2$

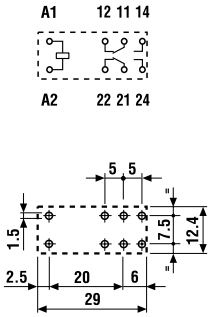
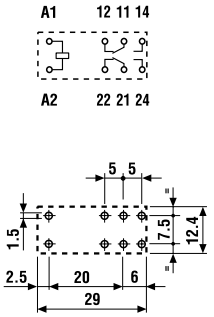
Type 50.12…5000
- 2 pole 8 A
- Contact AgNi + Au

- High physical separation between adjacent contacts
- Cadmium Free contact materials
- 8 mm, 6 kV (1.2/50 µs) isolation, coil-contacts
- 60079-1:2017 § 15.5: enclosed break device, flameproof enclosures "d": II 3G – Ex dc IIA Gc U compliant
- Flux proof: RT II

* According to EN 61810-3 only 1 NO and 1 NC (11-14 and 21-22 or 11-12 and 21-24) shall be used as forcibly guided contacts.

For UL ratings see:
"General technical information" page V

For outline drawing see page 7

	50.12…x000	**50.12…5000**
		
	• For medium duty switching, suggested for DC loads • 2 pole 8 A • 5 mm pinning • PCB mounting	• For safety applications • Gold plate contacts for low level switching capability • 5 mm pinning • PCB mounting
	 Copper side view	 Copper side view
Contact specification		
Contact configuration	2 CO (DPDT)	2 CO (DPDT)
Rated current/Maximum peak current A	8/15	8/15
Rated voltage/ Maximum switching voltage V AC	250/400	250/400
Rated load AC1 VA	2000	2000
Rated load AC15 (230 V AC) VA	500	500
Single phase motor rating (230 V AC) kW	0.37	0.37
Breaking capacity DC1: 24/110/220 V A	8/0.65/0.4	8/0.65/0.4
Minimum switching load mW (V/mA)	500 (10/10)	50 (5/5)
Standard contact material	AgNi, $AgSnO_2$	AgNi + Au
Coil specification		
Nominal voltage (U_N) V AC (50/60 Hz)	—	—
V DC	5 - 6 - 12 - 24 - 48 - 60 - 110 - 125	5 - 6 - 12 - 24 - 48 - 60 - 110 - 125
Rated power AC/DC VA (50 Hz)/W	—/0.7	—/0.7
Operating range AC (50 Hz)	—	—
DC	(0.75…1.2)U_N	(0.75…1.2)U_N
Holding voltage AC/DC	—/0.4 U_N	—/0.4 U_N
Must drop-out voltage AC/DC	—/0.1 U_N	—/0.1 U_N
Technical data		
Mechanical life AC/DC cycles	—/10 · 10^6	—/10 · 10^6
Electrical life at rated load AC1 cycles	100 · 10^3	100 · 10^3
Operate/release time ms	10/4	10/4
Insulation between coil and contacts (1.2/50 µs) kV	6 (8 mm)	6 (8 mm)
Dielectric strength between open contacts V AC	1500	1500
Ambient temperature range °C	–40…+70	–40…+70
Environmental protection	RT II	RT II
Approvals (according to type)		

50 SERIES
Forcibly guided contacts relay 8 A

PCB Relay with forcibly guided contacts according to EN 61810 (previously EN 50205)
Type A

Type 50.14...4220/4310
- 4 pole 8 A (2 NO + 2 NC) or (3 NO +1 NC)
- Contact $AgSnO_2$

Type 50.16...5420/5510/5330
- 6 pole 8 A (4 NO + 2 NC) or (5 NO +1 NC) or (3 NO+ 3 NC)
- Contact $AgSnO_2$ + Au

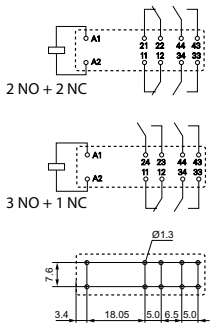
- High physical separation between adjacent contacts
- Cadmium Free contact materials
- DC coil 800 mW
- 8 mm, 6 kV (1.2/50 µs) isolation, coil-contacts
- PCB mounting
- Wash tight: RT III

C

NEW 50.14

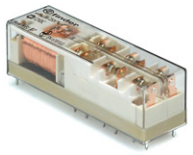


- For safety applications
- 4 pole 8 A
- PCB mounting

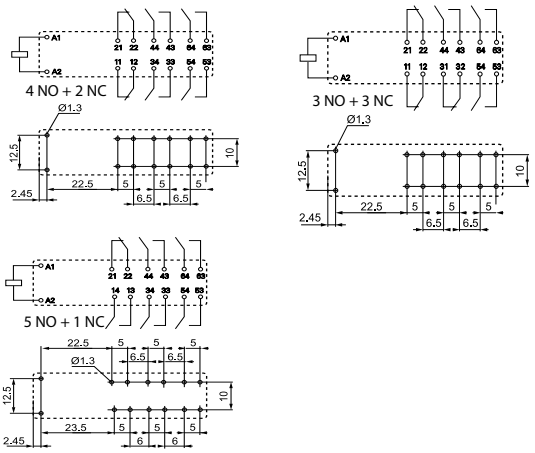


Copper side view

NEW 50.16



- For safety applications
- 6 pole 8 A
- PCB mounting



Copper side view

For UL ratings see:
"General technical information" page V

For outline drawing see page 7

Contact specification			
Contact configuration		2 NO + 2 NC, 3 NO + 1 NC	4 NO + 2 NC, 5 NO + 1 NC, 3 NO+ 3 NC
Rated current/Maximum peak current	A	8/15	8/15
Rated voltage/ Maximum switching voltage	V AC	250/400	250/400
Rated load AC1	VA	2000	2000
Rated load AC15 (230 V AC)	VA	700	1100
Single phase motor rating (230 V AC)	kW	0.37	0.37
Breaking capacity DC1: 24/110/220 V	A	8/0.6/0.2	8/0.6/0.2
Minimum switching load	mW (V/mA)	50 (5/10)	50 (5/10)
Standard contact material		$AgSnO_2$	$AgSnO_2$ + Au
Coil specification			
Nominal voltage (U_N)	V AC (50/60 Hz)	—	—
	V DC	12 - 24 - 48 - 110	12 - 24 - 48 - 110
Rated power AC/DC	VA (50 Hz)/W	—/0.8	—/0.8
Operating range	AC (50 Hz)	—	—
	DC	(0.75...1.2)U_N	(0.75...1.2)U_N
Holding voltage	AC/DC	—/0.4 U_N	—/0.4 U_N
Must drop-out voltage	AC/DC	—/0.1 U_N	—/0.1 U_N
Technical data			
Mechanical life AC/DC	cycles	—/10 · 10^6	—/10 · 10^6
Electrical life at rated load AC1	cycles	100 · 10^3	100 · 10^3
Operate/release time	ms	10/4	10/4
Insulation between coil and contacts (1.2/50 µs)	kV	6 (8 mm)	6 (8 mm)
Dielectric strength between open contacts	V AC	1500	1500
Ambient temperature range	°C	–40...+70	–40...+70
Environmental protection		RT III	RT III
Approvals (according to type)			

IX-2025, www.findernet.com

Ordering information

Example: 50 series forcibly guided contacts, 2 CO (DPDT) 8 A contacts, 24 V DC coil.

5	0	.	1	2	.	9	.	0	2	4	.	5	0	0	0
												A	B	C	D

Series

Type
1 = PCB

No. of poles
2 = 2 pole 8 A
4 = 4 pole 8 A
6 = 6 pole 8 A

Coil version
9 = DC

Coil voltage
See coil specifications

A: Contact material
1 = AgNi (50.12)
4 = $AgSnO_2$ (50.12, 50.14)
5 = AgNi + Au (50.12)
5 = $AgSnO_2$ + Au (50.16)

B: Contact circuit
0 = CO (nPDT)
2 = 2 NO (DPST-NO)
3 = 3 NO (3PST-NO)
4 = 4 NO (4PST-NO)
5 = 5 NO (5PST-NO)

D: Special versions
0 = Flux proof (RT II)
0 = Wash tight (RT III), 50.14, 50.16

C: Options
0 = CO (nPDT)
1 = 1 NC (SPST-NC)
2 = 2 NC (DPST-NC)
3 = 3 NC (3PST-NC)

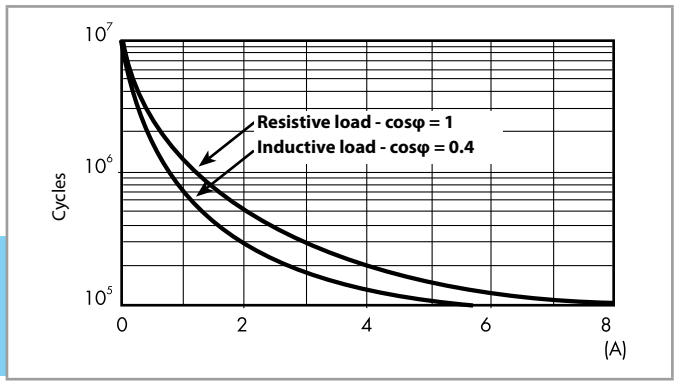
C

Technical data

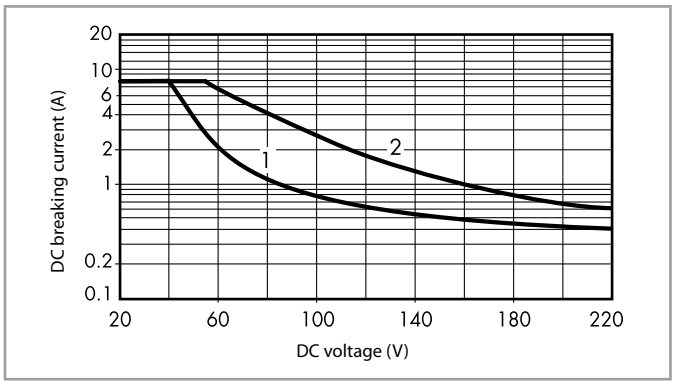
Insulation according to EN 61810-1				
Nominal voltage of supply system		V AC	230/400	
Rated insulation voltage		V AC	250	400
Pollution degree			3	2
Insulation between coil and contact set				
Type of insulation			Reinforced (8 mm)	
Overvoltage category			III	
Rated impulse voltage		kV (1.2/50 µs)	6	
Dielectric strength		V AC	4000	
Insulation between adjacent contacts				
Type of insulation			Basic	
Overvoltage category			III	
Rated impulse voltage		kV (1.2/50 µs)	4	
Dielectric strength (50.12, 50.16)		V AC	3000	
Dielectric strength (50.14)		V AC	2500	
Insulation between open contacts				
Type of disconnection			Micro-disconnection	
Dielectric strength		V AC/kV (1.2/50 µs)	1500/2.5	
Insulation between coil terminals				
Rated impulse voltage (surge) differential mode (according to EN 61000-4-5)		kV (1.2/50 µs)	2	
Other data				
Bounce time: NO/NC		ms	2/10	
Vibration resistance (10…200)Hz: NO/NC		g	20/6	
Shock resistance NO/NC		g	20/5	
Power lost to the environment	without contact current	W	0.7	
	with rated current	W	1.2	
Recommended distance between relays mounted on PCB		mm	≥ 5	

Contact specification

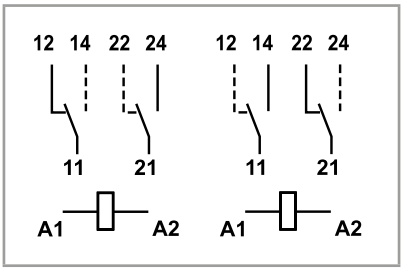
F 50 - Electrical life (AC) v contact current (type 50.12)



H 50 - Maximum DC1 breaking capacity (type 50.12)



- When switching a resistive load (DC1) having voltage and current values under the curve, an electrical life of ≥ 100 · 10³ can be expected.
- In the case of DC13 loads, the connection of a diode in parallel with the load will permit a similar electrical life as for a DC1 load.
  Note: the release time for the load will be increased.



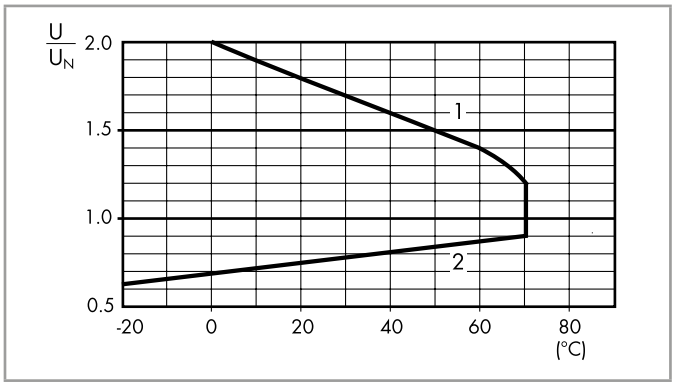
Alternative selection of NO and NC contacts to provide Forcibly guided (mechanically linked) contacts, in accordance with EN 61810-3 (type B).

Coil specifications

DC coil data (type 50.12)

Nominal voltage U_N	Coil code	Operating range U_{min}	Operating range U_{max}	Resistance R	Rated coil consumption I at U_N
V		V	V	Ω	mA
5	**9**.005	3.8	6	35	143
6	**9**.006	4.5	7.2	50	120
12	**9**.012	9	14.4	205	58.5
24	**9**.024	18	28.8	820	29.3
48	**9**.048	36	57.6	3280	14.4
60	**9**.060	45	72	5140	11.7
110	**9**.110	82.5	131	17250	6.4
125	**9**.125	93.7	150	22300	5.6

R 50 - DC coil operating range v ambient temperature
Standard coil (type 50.12)



1 - Max. permitted coil voltage.
2 - Min. pick-up voltage with coil at ambient temperature.

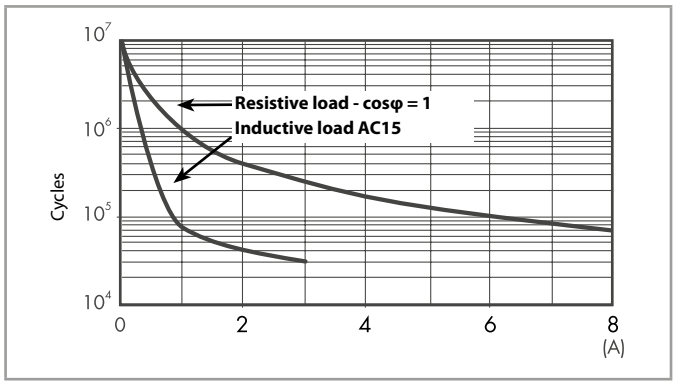
DC coil data (type 50.14/16)

Nominal voltage U_N	Coil code	Operating range U_{min}	Operating range U_{max}	Resistance R	Rated coil consumption I at U_N
V		V	V	Ω	mA
12	**9**.012	9	14.4	180	66.6
24	**9**.024	18	28.8	720	33.3
48	**9**.048	36	57.6	2880	16.6
110	**9**.110	82.5	131	15125	7.7

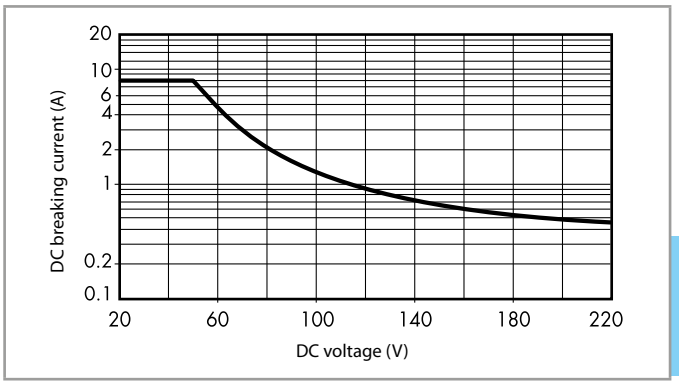
IX-2025, www.findernet.com

Contact specification

F 50 - Electrical life (AC) v contact current (type 50.14)

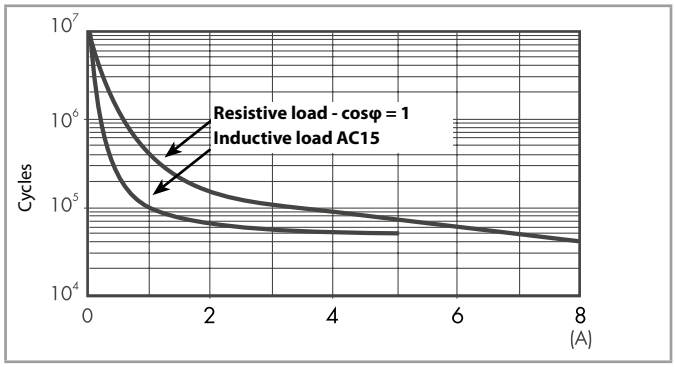


H 50 - Maximum DC1 breaking capacity (type 50.14)

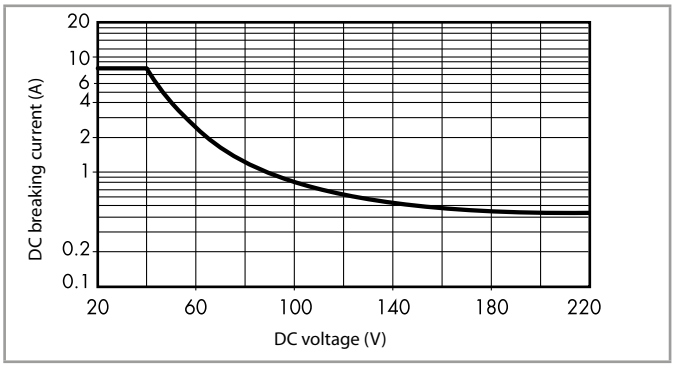


- When switching a resistive load (DC1) having voltage and current values under the curve, an electrical life of ≥ $100 \cdot 10^3$ can be expected.
- In the case of DC13 loads, the connection of a diode in parallel with the load will permit a similar electrical life as for a DC1 load.
  Note: the release time for the load will be increased.

F 50 - Electrical life (AC) v contact current (type 50.16)



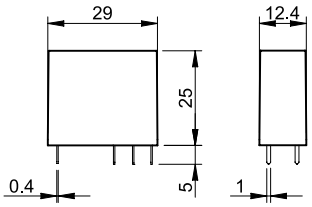
H 50 - Maximum DC1 breaking capacity (type 50.16)



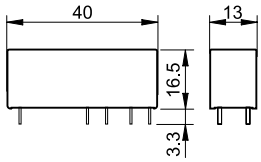
- When switching a resistive load (DC1) having voltage and current values under the curve, an electrical life of ≥ $100 \cdot 10^3$ can be expected.
- In the case of DC13 loads, the connection of a diode in parallel with the load will permit a similar electrical life as for a DC1 load.
  Note: the release time for the load will be increased.

Outline drawings

Types 50.12…x000/50.12…5000



Type 50.14



Type 50.16

