Features

1 & 2 Pole relay interface modules

5 µm Gold plate contacts for low level switching capability

49.31-50x0 - 1 Pole 10 A (screw terminal) 49.52-50x0 - 2 Pole 8 A (screw terminal) 49.72-50x0 - 2 Pole 8 A (screwless terminal)

- 15.5 mm wide
- Ideal interface for PLC and electronic systems
- · AC coils & DC coils
- Instant ejection of relay using plastic retaining clip
- Supply status indication and coil suppression module
- Identification labels
- 35 mm rail (EN 60715) mounting

For outline drawing see page 8

Contact specification

49.31-50x0 / 49.52



49.72-50x0



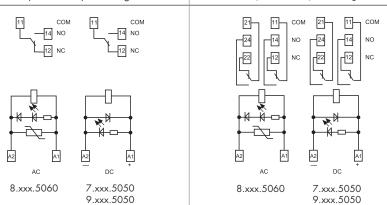




- 1 pole, 10 A
- AgNi + Au contact material
- Screw terminal
- 35 mm rail (EN 60715) mounting



- 2 pole, 8 A
- · AgNi + Au contact material
- Screw terminal and screwless terminal
- 35 mm rail (EN 60715) mounting



* By external parallel connection of the contacts the values within [1 (0.1/1)] can be acheived.

1 CO (SPDT) 2 CO (DPDT) Contact configuration Rated current/Maximum peak current 10/20 8/15 Rated voltage/Maximum switching voltage V AC 250/400 250/250 2,000 Rated load AC1 2,500 VA ۷A Rated load AC15 (230 V AC) 500 400 Single phase motor rating (230 V AC) kW 0.37 0.3 Breaking capacity DC1: 30/110/220V 10/0.3/0.12 8/0.3/0.12 Minimum switching load mW (V/mA) 50 (5/2) 50 (5/2) - [1 (0.1/1)]* Standard contact material AgNi + Au AgNi + Au Coil specification Nominal voltage (UN) V AC (50/60 Hz) 12 - 24 - 110 - 120 - 230 12 - 24 - 110 - 120 - 230 V DC 12 - 24 - 125 12 - 24 - 125 Rated power AC/DC/sens.DC VA (50 Hz)/W/W 1.2/0.65/0.5 1.2/0.65/0.5 (0.8...1.1)U_N $(0.8...1.1)U_N$ Operating range DC/sensitiv DC $(0.73...1.5)U_N/(0.73...1.5)U_N$ $(0.73...1.5)U_N/(0.73...1.5)U_N$ AC/DC 0.8 U_N /0.4 U_N $0.8 U_{N} / 0.4 U_{N}$ Holding voltage Must drop-out voltage AC/DC $0.2 U_{N} / 0.1 U_{N}$ $0.2 U_{N} / 0.1 U_{N}$ Technical data Mechanical life 10 · 106 $10 \cdot 10^{6}$ cycles Electrical life at rated load AC1 200 · 10³ 100 · 10³ cycles Operate/release time 7/4 (AC) - 12/12 (DC) 7/4 (AC) - 12/12 (DC) Insulation between coil and contacts (1.2/50 µs) kV 6 (8 mm) 6 (8 mm) Dielectric strength between open contacts V AC 1,000 1,000 **-40...+70**

-40...+70

IP 20

Ambient temperature range

Approvals relay (according to type)

Protection category

IP 20

49 Series - Relay interface modules 8 - 10 - 16 A

finder

Features

1 & 2 Pole relay interface modules

AgNi contacts for medium duty switching

49.31-00x0 - 1 Pole 10 A (screw terminal) 49.52-00x0 - 2 Pole 8 A (screw terminal) 49.72-00x0 - 2 Pole 8 A (screwless terminal)

- Ideal interface for PLC and electronic systems
- AC coils & DC coils
- Instant ejection of relay using plastic retaining clip
- Supply status indication and coil suppression module
- Identification labels
- 35 mm rail (EN 60715) mounting

49.31-00x0 / 49.52



49.72-00x0 Screwless terminal



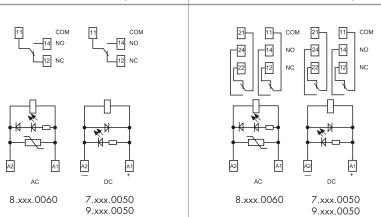
49.31-00x0



- 1 pole, 10 A
- AgNi contact material
- Screw terminal
- 35 mm rail (EN 60715) mounting



- 2 pole, 8 A
- · AgNi contact material
- Screw terminal and screwless terminal
- 35 mm rail (EN 60715) mounting



For outline drawing see page 8		
Contact specification		
Contact configuration	1 CO (SPDT)	2 CO (DPDT)
Rated current/Maximum peak current	A 10/20	8/15
Rated voltage/Maximum switching voltage V	C 250/400	250/250
Rated load AC1	'A 2,500	2,000
Rated load AC15 (230 V AC)	'A 500	400
Single phase motor rating (230 V AC)	V 0.37	0,3
Breaking capacity DC1: 30/110/220V	A 10/0.3/0.12	8/0.3/0.12
Minimum switching load mW (V/	300 (5/5)	300 (5/5)
Standard contact material	AgNi	AgNi
Coil specification		
Nominal voltage (U_N) V AC (50/60	z) 12 - 24 - 110 - 120 - 230	12 - 24 - 110 - 120 - 230
V	C 12 - 24 - 125	12 - 24 - 125
Rated power AC/DC/sens.DC VA (50 Hz)/W	N 1.2/0.65/0.5	1.2/0.65/0.5
Operating range	C (0.81.1)U _N	(0.81.1)U _N
DC/sensitiv	C $(0.731.5)U_N/(0.731.5)U_N$	(0.731.5)U _N /(0.731.5)U _N
Holding voltage AC	C 0.8 U _N /0.4 U _N	0.8 U _N /0.4 U _N
Must drop-out voltage AC	C 0.2 U _N /0.1 U _N	0.2 U _N /0.1 U _N
Technical data		
Mechanical life cy	es 10 · 10 ⁶	10 · 10 ⁶
Electrical life at rated load AC1 cy	es 200 · 10³	100 · 10³
Operate/release time	ns 7/4 (AC) - 12/12 (DC)	7/4 (AC) - 12/12 (DC)
Insulation between coil and contacts (1.2/50 µs)	6 (8 mm)	6 (8 mm)
Dielectric strength between open contacts V	C 1,000	1,000
Ambient temperature range	C –40+70	-40+70
Protection category	IP 20	IP 20
Approvals relay (according to type)	(6 0 D H 0 C 0 W	N RINA S & CAN US &

B



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Features

1 & 2 Pole relay interface modules

AgCdO contacts for heavy duty switching

49.31-20x0 - 1 Pole 10 A (screw terminal) 49.52-20x0 - 2 Pole 8 A (screw terminal) 49.72-20x0 - 2 Pole 8 A (screwless terminal)

- Ideal interface for PLC and electronic systems
- AC coils & DC coils
- Instant ejection of relay using plastic retaining clip
- Supply status indication and coil suppression module
- Identification labels
- 35 mm rail (EN 60715) mounting

49.31-20x0 / 49.52 Screw terminal



49.72-20x0 Screwless terminal



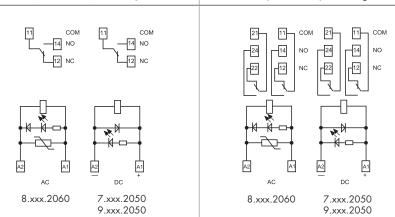
49.31-20x0



- 1 pole, 10 A
- AgCdO contact material
- Screw terminal35 mm rail (EN 60715) mounting



- 2 pole, 8 A
- AgCdO contact material
- Screw terminal and screwless terminal
- 35 mm rail (EN 60715) mounting



For outline drawing see page 8

Contact specification			
Contact configuration		1 CO (SPDT)	2 CO (DPDT)
Rated current/Maximum peak current A		10/20	8/15
Rated voltage/Maximum sw	ritching voltage V AC	250/400	250/250
Rated load AC1	VA	2,500	2,000
Rated load AC15 (230 V A	AC) VA	500	400
Single phase motor rating	(230 V AC) kW	0.37	0.3
Breaking capacity DC1: 30	0/110/220V A	10/0.3/0.12	8/0.3/0.12
Minimum switching load	mW (V/mA)	500 (10/5)	500 (10/5)
Standard contact material		AgCdO	AgCdO
Coil specification			
Nominal voltage (U_N)	V AC (50/60 Hz)	12 - 24 - 110 - 120 - 230	12 - 24 - 110 - 120 - 230
	V DC	12 - 24 - 125	12 - 24 - 125
Rated power AC/DC/sens.D	C VA (50 Hz)/W/W	1.2/0.65/0.5	1.2/0.65/0.5
Operating range	AC	(0.81.1)U _N	(0.81.1)U _N
	DC/sensitiv DC	(0.731.5)U _N /(0.731.5)U _N	(0.731.5)U _N /(0.731.5)U _N
Holding voltage	AC/DC	0.8 U _N /0.4 U _N	0.8 U _N /0.4 U _N
Must drop-out voltage	AC/DC	0.2 U _N /0.1 U _N	0.2 U _N /0.1 U _N
Technical data			
Mechanical life	cycles	10 · 10°	10 · 10°
Electrical life at rated load	AC1 cycles	200 · 10³	100 · 10³
Operate/release time	ms	7/4 (AC) - 12/12 (DC)	7/4 (AC) - 12/12 (DC)
Insulation between coil and co	ontacts (1.2/50 µs) kV	6 (8 mm)	6 (8 mm)
Dielectric strength between	open contacts V AC	1,000	1,000
Ambient temperature range	e °C	-40+70	-40+70
Protection category		IP 20	IP 20

Approvals relay (according to type)

Features

1 Pole relay interface module

AgCdO contacts for heavy duty switching

49.61-00x0 - 1 Pole 16 A (screw terminal) 49.81-00x0 - 1 Pole 16 A (screwless terminal)

AgSnO₂ contacts for heavy duty, high current inrush switching

49.61-40x0 - 1 Pole 16 A (screw terminal) 49.81-40x0 - 1 Pole 16 A (screwless terminal)

- 15.5 mm wide
- Ideal interface for PLC and electronic systems
- AC coils & DC coils
- Instant ejection of relay using plastic retaining clip
- Supply status indication and coil suppression module
- Identification labels
- 35 mm rail (EN 60715) mounting

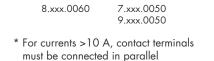
49.61 Screw terminal



Screwless terminal



49.81-00x0/40x0



(21 with 11, 24 with 14, 22 with 12).

49.61/81-00x0 49.61/81-40x0



- 1 pole, 16 A*
- AgCdO contact material
- Screw terminal and screwless terminal

СОМ

NO

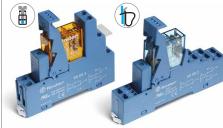
22

14 NO

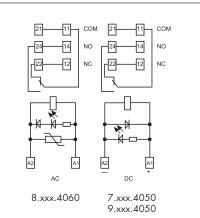
12

• 35 mm rail (EN 60715) mounting





- 1 pole, 16 A*
- AgSnO₂ contact material
- Screw terminal and screwless terminal
- 35 mm rail (EN 60715) mounting



* For currents > 10 A, contact terminals must be connected in parallel (21 with 11, 24 with 14, 22 with 12).

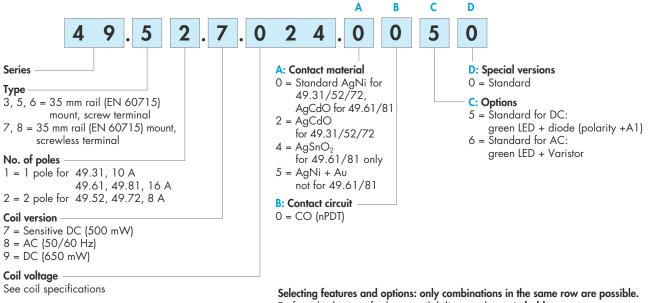
For outline drawing see page 8

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Contact specification			
Contact configuration		1 CO (SPDT)	1 CO (SPDT)
Rated current/Maximum pe	eak current A	16*/30	16*/100 (5 ms)
Rated voltage/Maximum sw	itching voltage V AC	250/400	250/400
Rated load AC1	VA	4,000	4,000
Rated load AC15 (230 V A	AC) VA	750	750
Single phase motor rating (230 V AC) kW	0.55	0.55
Breaking capacity DC1: 30)/110/220V A	16/0.3/0.12	16/0.3/0.12
Minimum switching load	mW (V/mA)	500 (5/5)	1,000 (10/10)
Standard contact material		AgCdO	AgSnO ₂
Coil specification			
Nominal voltage (U _N)	V AC (50/60 Hz)	12 - 24 - 110 - 120 - 230	12 - 24 - 110 - 120 - 230
	V DC	12 - 24 - 125	12 - 24 - 125
Rated power AC/DC/sens.DC	C VA (50 Hz)/W/W	1.2/0.65/0.5	1.2/0.65/0.5
Operating range	AC	(0.81.1)U _N	(0.81.1)U _N
	DC/sensitiv DC	(0.731.5)U _N /(0.81.5)U _N	(0.731.5)U _N /(0.81.5)U _N
Holding voltage	AC/DC	0.8 U _N /0.4 U _N	0.8 U _N /0.4 U _N
Must drop-out voltage	AC/DC	0.2 U _N /0.1 U _N	0.2 U _N /0.1 U _N
Technical data			
Mechanical life	cycles	10 · 10°	10 · 10 ⁶
Electrical life at rated load	AC1 cycles	100 · 10³	100 · 10³
Operate/release time ms		7/4 (AC) - 12/12 (DC)	7/4 (AC) - 12/12 (DC)
Insulation between coil and contacts (1.2/50 µs) kV		6 (8 mm)	6 (8 mm)
Dielectric strength between open contacts V AC		1,000	1,000
Ambient temperature range	°C	-40+70	-40+70
Protection category		IP 20	IP 20
Approvals relay (according	to type)	CE ® D FRI FD @	N RINA S & CNUS OF CAL



Ordering information

Example: 49 series, 35 mm rail (EN 60715) mount screw terminal relay interface module, 2 CO (DPDT) 8 A contacts, 24 V sensitive DC coil, green LED + diode (polarity +A1), 99.80 coil indication.



Preferred selections for best availability are shown in **bold**.

Type | Coil version | A | B | C | D

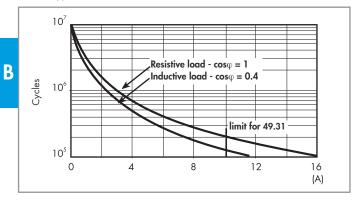
Туре	Coil version	A	В	С	D
49.31/52/72	AC	0 - 2 - 5	0	6	0
49.31/52/72	DC - sens. DC	0 - 2 - 5	0	5	0
49.61/81	AC	0 - 4	0	6	0
49.61/81	DC - sens. DC	0 - 4	0	5	0

Technical data

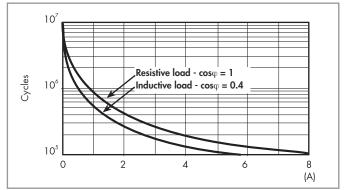
Insulation			49.31/61	49.52/72	49.31/61/81	
Insulation according to EN 61810-1	insulation rated voltage	٧	250	250	400	
	rated impulse withstand voltage	kV	4	4	4	
	pollution degree		3	2	2	
	overvoltage category		III	III	III	
Insulation between coil and contacts (1	.2/50 µs)	kV	6 (8 mm)			
Dielectric strength between open conto	acts	V AC	1,000			
Dielectric strength between adjacent co	ontacts	V AC	2,000 (49.52)	/72)		
Conducted disturbance immunity						
Burst (550)ns, 5 kHz, on A1 - A2			EN 61000-4-4 level 4 (4 kV)			
Surge (1.2/50 µs) on A1 - A2 (differen	ntial mode)		EN 61000-4-5 level 3 (2 kV)			
Other data						
Bounce time: NO/NC		ms	2/5			
Vibration resistance (10200)Hz: NC)/NC	9	20/5 (for 1 pc	ole)	15/3 (for 2 po	le)
Power lost to the environment	without contact current	W	0.7			
	with rated current	W	1.2 (49.31/61	/81)	1.3 (49.52/72	2)
Wire strip length		mm	8			
Screw torque		Nm	0.5			
Max. wire size			Screw terminal		Screwless term	inal
			solid cable	stranded cable	solid cable	stranded cable
		${\sf mm}^2$	1x6 / 2x2.5	1x4 / 2x2.5	2x(0.21.5)	2x(0.21.5)
		AWG	1x10 / 2x14	1x12 / 2x14	2x(2418)	2x(2418)

Contact specification

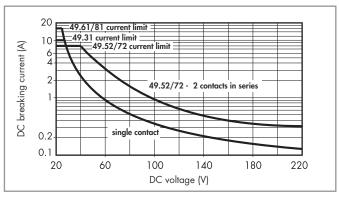
F 49 - Electrical life (AC) v contact current Types 49.31/61/81



F 49 - Electrical life (AC) v contact current Types 49.52/72



H 49 - Maximum DC1 breaking capacity Types 49.31/52/61/72/81



- When switching a resistive load (DC1) having voltage and current values under the curve, an electrical life of $\geq 100\cdot 10^3$ 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.

Coil specifications

DC coil data (0.5 W sensitive)

Γ	Nominal	Coil	Operating range		Rated coil
	voltage	code			consumption
	U_N		U _{min*}	U _{max}	I at U _N
	V		V	V	mA
	12	7 .012	8.8	18	41
	24	7 .024	17.5	36	22.2
	125	7 .125	91.2	188	4

 $^{^*}U_{min} = 0.8 \ U_N \ for \ 49.61 \ and \ 49.81$

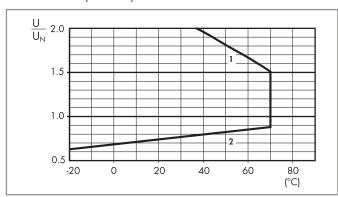
AC coil data

Nomino	ıl Coil	Opera	Operating range		
voltage	code				
U _N		U _{min}	U _{max}	I at U _N (50Hz)	
V		V	V	mA	
12	8 .012	9.6	13.2	90.5	
24	8 .024	19.2	26.4	46	
110	8 .110	88	121	10.1	
120	8 .120	96	132	11.8	
230	8 .230	184	253	7.0	

DC coil data (0.65 W)

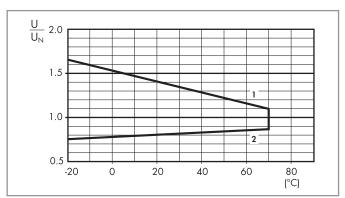
Nominal	Coil	Operating range		Rated coil
voltage	code			consumption
U _N		U _{min}	U _{max}	I at U _N
V		V	V	mA
12	9 .012	8.8	18	56
24	9 .024	17.5	36	29
125	9 .125	91.2	188	6

R 49 - DC coil operating range v ambient temperature Standard (650 mW)



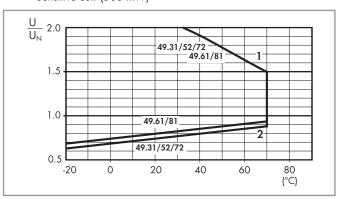
- 1 Max. permitted coil voltage.
- 2 Min. pick-up voltage with coil at ambient temperature.

R 49 - AC coil operating range v ambient temperature



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

R 49 - DC coil operating range v ambient temperature Sensitive coil (500 mW)



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

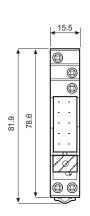
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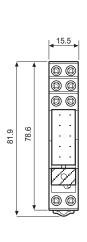


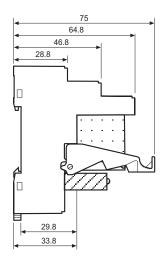
Combinations

Code	Type of socket	Type of relay	Module	Retaining clip
49.31	95.93.3	40.31	99.80	095.91.3
49.52	95.95.3	40.52	99.80	095.91.3
49.61	95.95.3	40.61	99.80	095.91.3
49.72	95.55.3	40.52	99.80	095.91.3
49.81	95.55.3	40.61	99.80	095.91.3

Outline drawing





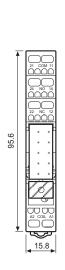


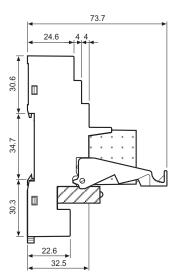
49.31

49.52 49.61

49.31-50x0 / 49.31-00x0 / 49.31-20x0 / 49.52 / 49.61







49.72

49.81

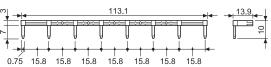
49.72-50x0 / 49.72-00x0 / 49.72-20x0 49.81-00x0 / 49.81-40x0 Screwless terminal



Accessories



8-way jumpe	r link for screw terminal vers	sions	095.08 (blue)	095.08.0 (black)
Rated values			10 A - 250 V	
	112.1	40.0		



Sheet of marker tags, plastic, retaining clip 095.91.3, 72 tags, 6x12 mm

060.72



060.72

Packaging codes

How to code and identify retaining clip and packaging options for sockets.

Example:



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