


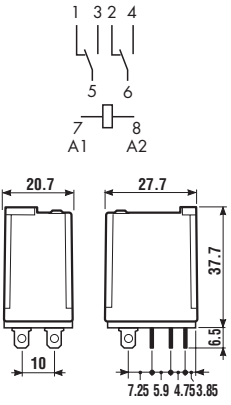
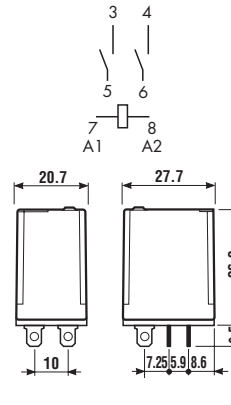
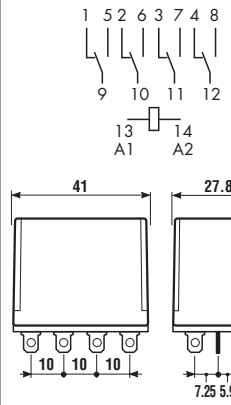



- Plug-in or P.C.B. versions
- AC or DC coils
- Lockable test button and mechanical flag indicator as standard on 2 CO relay type
- Sockets and accessories: see 96, and 99 series

	56.32	56.32 - 0300	56.34	
				
	- 2 pole - Plug-in for use with 96 Series sockets (Faston 187 - 4.8x0.5)	- 2 NO (1.5 mm gap) - Plug-in for use with 96 Series sockets (Faston 187 - 4.8x0.5)	- 4 pole - Plug-in for use with 96 Series sockets (Faston 187 - 4.8x0.5)	
				
Contact specifications				
Contact configuration	2 CO (DPDT)	2 NO (DPST - NO) 1.5 mm	4 CO (4PDT)	
Rated current/Maximum peak current A	12/20	12/20	12/20	
Rated voltage/Maximum switching voltage V AC	250/400*	250/400*	250/400*	
Rated load in AC1 VA	3,000	3,000	3,000	
Rated load in AC15 (230 VAC) VA	500	500	500	
Single phase motor rating (230 VAC) kW/HP	0.55/0.7	0.55/0.7	0.55/0.7	
Breaking capacity in DC1: 30/110/220V A	12/0.25/0.12	12/0.6/0.3	12/0.25/0.12	
Minimum switching load mW (V/mA)	500 (10/5)	500 (10/5)	500 (10/5)	
Standard contact material	AgNi	AgNi	AgNi	
Coil specifications				
Nominal voltage (U _N)	V AC (50/60 Hz)	6 - 12 - 24 - 48 - 60 - 110 - 120 - 230 - 240		
	V DC	6 - 12 - 24 - 48 - 60 - 110	—	6 - 12 - 24 - 48 - 60 - 110
Rated power AC/DC VA (50 Hz)/W	1.5/1	1.5/—	2/1.3	
Operating range	AC (50 Hz)	(0.8...1.1)U _N	(0.8...1.1)U _N	(0.8...1.1)U _N
	DC	(0.85...1.1)U _N	—	(0.85...1.1)U _N
Holding voltage AC/DC	0.8 U _N /0.6 U _N	0.8 U _N /—	0.8 U _N /0.6 U _N	
Must drop-out voltage AC/DC	0.2 U _N /0.1 U _N	0.2 U _N /—	0.2 U _N /0.1 U _N	
Technical data				
Mechanical life AC/DC cycles	20 · 10 ⁶ /50 · 10 ⁶	20 · 10 ⁶ /—	20 · 10 ⁶ /50 · 10 ⁶	
Electrical life at rated load AC1 cycles	200 · 10 ³	200 · 10 ³	150 · 10 ³	
Operate/release time (bounce included) ms	10/15	20/—	15/15	
Insulation according to EN 61810-5	4 kV/3	4 kV/3	4 kV/3	
Insulation between coil and contacts (1.2/50µs) kV	4	4	4	
Dielectric strenght between open contacts V AC	1,000	1,000	1,000	
Ambient temperature range °C	-40...+70	-40...+70	-40...+70	
Protection category	IP 50	IP 50	IP 50	
Approvals: (according to type)				

* for 400 V applications, requirements for pollution degree 2 are met.

- Plug-in or P.C.B. versions
- AC or DC coils
- Lockable test button and mechanical flag indicator as standard on 2 CO relay type
- Sockets and accessories: see 96, and 99 series

	56.42	56.42 - 0300	56.44	
	- 2 pole - PCB mounting	- 2 NO (1.5 mm gap) - PCB mounting	- 4 pole - PCB mounting	
	h = 37.7 mm	h = 36.3 mm	h = 35.2 mm	
Contact specifications				
Contact configuration	2 CO (DPDT)	2 NO (DPST - NO) 1.5 mm	4 CO (4PDT)	
Rated current/Maximum peak current	A 12/20	A 12/20	A 12/20	
Rated voltage/Maximum switching voltage	V AC 250/400*	V AC 250/400*	V AC 250/400*	
Rated load in AC1	VA 3,000	VA 3,000	VA 3,000	
Rated load in AC15 (230 VAC)	VA 500	VA 500	VA 500	
Single phase motor rating (230 VAC)	kW/HP 0.55/0.7	kW/HP 0.55/0.7	kW/HP 0.55/0.7	
Breaking capacity in DC1: 30/110/220V	A 12/0.25/0.12	A 12/0.6/0.3	A 12/0.25/0.12	
Minimum switching load	mW (V/mA) 500 (10/5)	mW (V/mA) 500 (10/5)	mW (V/mA) 500 (10/5)	
Standard contact material	AgNi	AgNi	AgNi	
Coil specifications				
Nominal voltage (U _N)	V AC (50/60 Hz)	6 - 12 - 24 - 48 - 60 - 110 - 120 - 230 - 240		
	V DC	6 - 12 - 24 - 48 - 60 - 110	6 - 12 - 24 - 48 - 60 - 110	
Rated power AC/DC	VA (50 Hz)/W	1.5/1	1.5/—	2/1.3
Operating range	AC (50 Hz)	(0.8...1.1)U _N	(0.8...1.1)U _N	(0.8...1.1)U _N
	DC	(0.85...1.1)U _N	—	(0.85...1.1)U _N
Holding voltage	AC/DC	0.8 U _N /0.6 U _N	0.8 U _N /—	0.8 U _N /0.6 U _N
Must drop-out voltage	AC/DC	0.2 U _N /0.1 U _N	0.2 U _N /0.1 U _N	0.2 U _N /0.1 U _N
Technical data				
Mechanical life AC/DC	cycles	20 · 10 ⁶ /50 · 10 ⁶	20 · 10 ⁶ /—	20 · 10 ⁶ /50 · 10 ⁶
Electrical life at rated load AC1	cycles	200 · 10 ³	200 · 10 ³	150 · 10 ³
Operate/release time (bounce included)	ms	10/15	20/—	15/15
Insulation according to EN 61810-5		4 kV/3	4 kV/3	4 kV/3
Insulation between coil and contacts (1.2/50µs)	kV	4	4	4
Dielectric strenght between open contacts	V AC	1,000	1,000	1,000
Ambient temperature range	°C	-40...+70	-40...+70	-40...+70
Protection category		IP 50	IP 50	IP 50
Approvals: (according to type)				

* for 400 V applications, requirements for pollution degree 2 are met.

ORDERING INFORMATION

Example: a 56 series plug-in relay with 2 CO (DPDT) contacts, coil rated 12 V DC with a lockable test button and mechanical indicator.

5 6 . 3 2 . 9 . 0 1 2 . 0 0 4 0

A B C D

Series

Type

3 = Plug-in
4 = P.C.B.

No. of poles

2 = 2 CO (DPDT), 12 A
4 = 4 CO (4PDT), 12 A

Coil version

8 = AC (50/60 Hz)
9 = DC

Coil voltage

see coil specifications

A: Contact material

0 = Standard
2 = AgCdO
4 = AgSnO₂

B: Contact circuit

0 = Standard
3 = NO

D: Special applications

0 = Standard
5 = Top flange mount
6 = Rear flange mount
7 = Top 35mm rail (EN 50022) mount (4 CO)
8 = Rear 35mm rail (EN 50022) mount (4 CO)

C: Options

0 = Standard
1 = Test button
2 = Mechanical indicator
3 = LED (AC only)
4 = Lockable test button + mechanical indicator
5 = Lockable test button + LED (AC only)
54 = Lockable test button + LED (AC only) + mechanical indicator
6 = LED (AC only) + diode (polarity positive to pin A2/14 DC, non standard)
7 = Lockable test button + LED + diode (polarity positive to pin A2/14 DC, non standard)
74 = Lockable test button + LED + diode (polarity positive to pin A2/14 DC, non standard) + mechanical indicator
8 = LED + diode (polarity positive to pin 7, DC)
9 = Lockable test button + LED (polarity positive to pin 7, DC)
94 = Lockable test button + LED + mechanical indicator (polarity positive to pin 7, DC)

Only combinations in the same row are possible

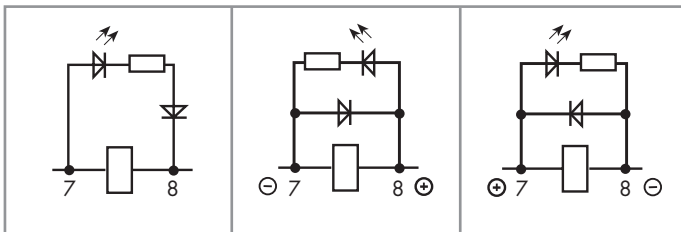
Preferred versions

	coil version	A	B	C	D
56.32	AC/DC	0	0	4	0
56.34	AC/DC	0	0	0	0
56.42	AC/DC	0	0	0	0
56.44	AC/DC	0	0	0	0

All versions

	coil version	A	B	C	D
56.32	AC/DC	0 - 2 - 4	0	0	0 - 5 - 6
	AC	0 - 2 - 4	0	2 - 3 - 4 - 5	0 - 6
	AC	0 - 2 - 4	0	54	/
	AC	0 - 2 - 4	3	0 - 3 - 5	0 - 6
	DC	0 - 2 - 4	0	2 - 4 - 6 - 7 - 8 - 9	0 - 6
	DC	0 - 2 - 4	0	74 - 94	/
56.34	AC/DC	0 - 2 - 4	0	0 - 1	0 - 5 - 6 - 7 - 8
56.42	AC/DC	0 - 2 - 4	0	0	0
	AC	0 - 2 - 4	3	0	0
56.44	AC/DC	0 - 2 - 4	0	0	0

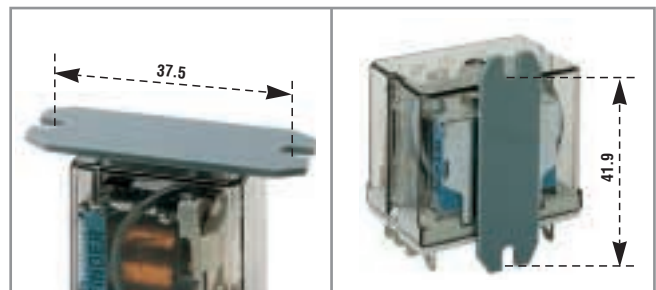
POSSIBLE OPTIONS



Option = 0030
0050

Option = 0060
0070
0074

Option = 0080
0090
0094



Option = 0005
TOP MOUNT FLANGE

Option = 0006
REAR MOUNT FLANGE



LOCKABLE TEST BUTTON AND MECHANICAL FLAG INDICATOR (0040)

The dual-purpose Finder test button can be used in two ways:

Case 1) The plastic pip (located directly above the test button) remains intact. In this case, when the test button is pushed, the contacts operate. When the test button is released the contacts return to their former state.

Case 2) The plastic pip is broken-off (using an appropriate cutting tool). In this case, (in addition to the above function), when the test button is pushed and rotated, the contacts are latched in the operating state, and remain so until the test button is rotated back to its former position.

In both cases ensure that the test button actuation is swift and decisive.

TECHNICAL DATA

INSULATION

INSULATION according to EN 61810-5	insulation rated voltage	V	250
	rated impulse withstand voltage	kV	4
	pollution degree		3
	overvoltage category		III

IMMUNITY

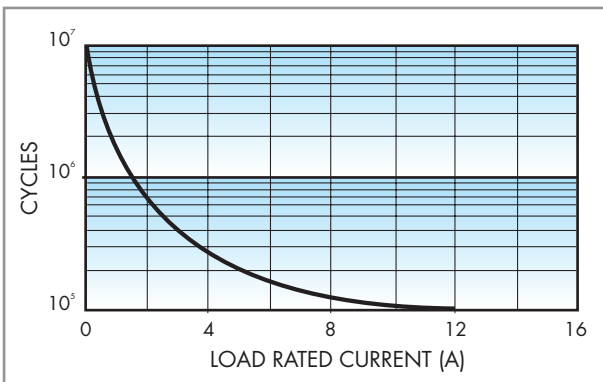
CONDUCTED DISTURBANCE IMMUNITY	BURST (according to EN 61000-4-4) level 4 (4 kV)
	SURGE (according to EN 61000-4-5) level 4 (4 kV)

OTHER DATA

VIBRATION RESISTANCE (10...55Hz): NO/NC	g/g	8/8	
POWER LOST IN THE ENVIRONMENT	2 CO (DPDT)/2 NO (DPST-NO)	4 CO (4PDT)	
	without contact current W	1	1.3
	with rated current W	3.8	6.9
RECOMMENDED DISTANCE between RELAY mounted on P.C.B.s	mm	≥5	

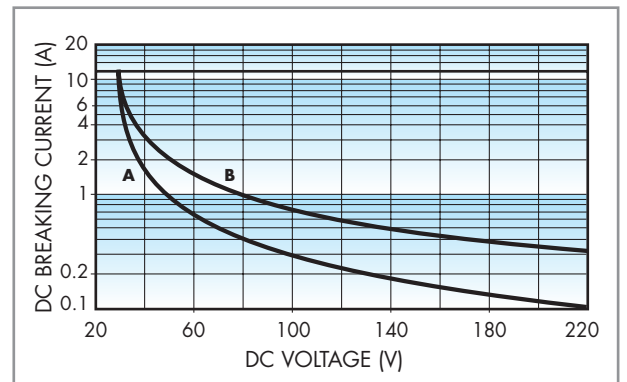
CONTACT SPECIFICATIONS

F 56



Electrical life vs AC1 load.

H 56



Breaking capacity for DC1 load.

Load applied to 1 contact.

A = NO types

B = other types

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

- In case of DC13 loads the connection of a diode in parallel with the load will permit the same electrical life as for a DC1 load.

Note: the release time of load will be increase.

COIL SPECIFICATIONS

AC VERSION DATA (2 CO - DPDT, 2 NO - DPST-NO)

Nominal voltage U_N V	Coil code	Operating range		Resistance R Ω	Rated coil absorption I at U_N (50Hz) mA
		U_{min} V	U_{max} V		
6	8.006	4.8	6.6	12	230
12	8.012	9.6	13.2	50	117
24	8.024	19.2	26.4	190	58.3
48	8.048	38.4	52.8	770	29.2
60	8.060	48	66	1,200	23.3
110	8.110	88	121	3,940	12.7
120	8.120	96	132	4,700	10.8
230	8.230	184	253	17,000	6.1
240	8.240	192	264	19,100	5.8

DC VERSION DATA (2 CO - DPDT)

Nominal voltage U_N V	Coil code	Operating range		Resistance R Ω	Rated coil absorption I at U_N mA
		U_{min} V	U_{max} V		
6	9.006	5.1	6.6	44	150
12	9.012	10.2	13.2	140	86
24	9.024	20.4	26.4	600	40
48	9.048	40.8	52.8	2,400	20
60	9.060	51	66	4,000	15
110	9.110	93.5	121	12,500	8.8

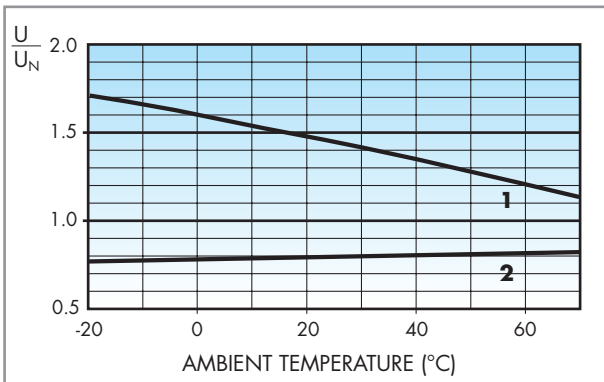
AC VERSION DATA (4 CO - 4PDT)

Nominal voltage U_N V	Coil code	Operating range		Resistance R Ω	Rated coil absorption I at U_N (50Hz) mA
		U_{min} V	U_{max} V		
6	8.006	4.8	6.6	6	290
12	8.012	9.6	13.2	23	150
24	8.024	19.2	26.4	80	75
48	8.048	38.4	52.8	380	36
60	8.060	48	66	600	26
110	8.110	88	121	1,900	16.5
120	8.120	96	132	2,600	13.4
230	8.230	184	253	8,000	7.2
240	8.240	192	264	10,500	6.9

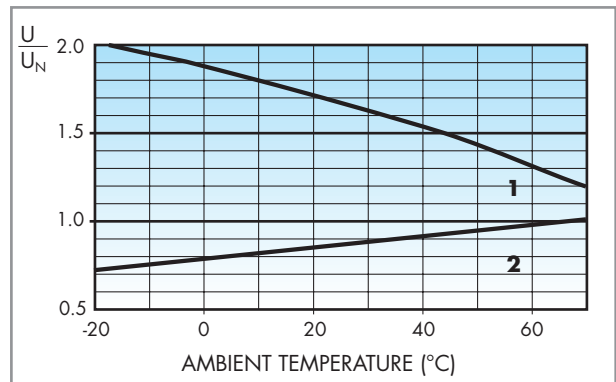
DC VERSION DATA (4 CO - 4PDT)

Nominal voltage U_N V	Coil code	Operating range		Resistance R Ω	Rated coil absorption I at U_N mA
		U_{min} V	U_{max} V		
6	9.006	5.1	6.6	33	180
12	9.012	10.2	13.2	123	92
24	9.024	20.4	26.4	500	46
48	9.048	40.8	52.8	1,800	25
60	9.060	51	66	3,000	20
110	9.110	93.5	121	10,500	10

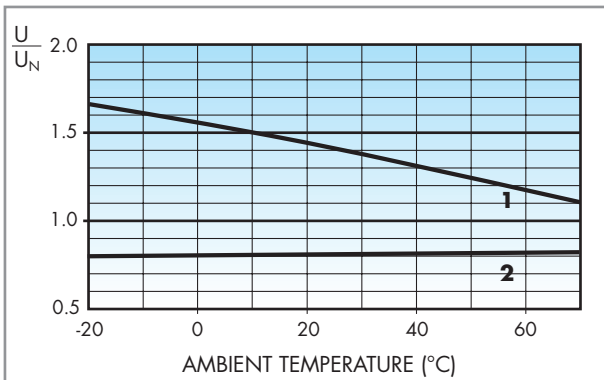
R 56 AC (2 CO - DPDT, 2 NO - DPST-NO)



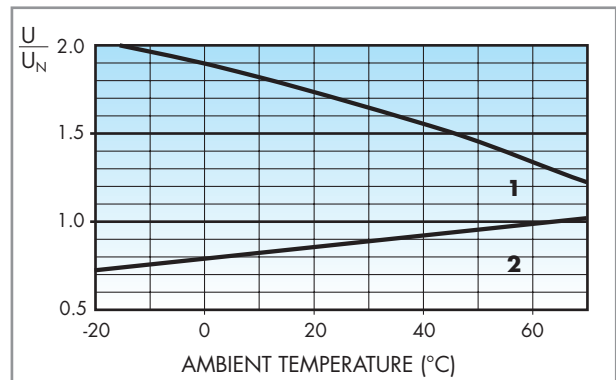
R 56 DC (2 CO - DPDT)



R 56 AC (4 CO - 4PDT)



R 56 DC (4 CO - 4PDT)



Operating range (AC type) vs ambient temperature.

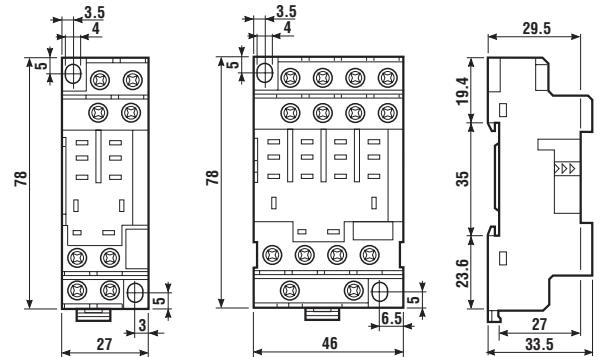
- 1 - Max coil voltage permitted
- 2 - Min pick-up voltage with coil at ambient temperature

Operating range (DC type) vs ambient temperature.

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



Relay type		56.32	56.34
Screw terminal socket: panel or 35 mm rail (EN 50022) mount	BLUE	96.72	96.74
	BLACK*	96.72.0	96.74.0
Retaining clip (supplied with socket)		094.71	096.71
Modules		99.01	99.01

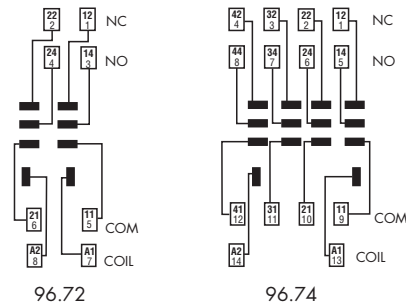


Approvals
(according to type):



- RATED VALUES: 12 A - 250 V
- DIELECTRIC STRENGTH: ≥ 2 kV AC
- PROTECTION CATEGORY: IP 20
- AMBIENT TEMPERATURE: (-40...+70)°C
- TORQUE: 0.8 Nm
- MAX WIRE SIZE:

	solid wire	flexible wire
mm ²	1x4 / 2x4	1x4 / 2x2.5
AWG	1x14 / 2x12	1x14 / 2x12



99 Series modules for 96.72 and 96.74 socket		BLUE	BLACK*
Diode	(6...220) V DC	99.01.3.000.00	99.01.3.000.00.0
Diode (inverted polarity)	(6...220) V DC	99.01.2.000.00	99.01.2.000.00.0
LED	(6...24) V DC/AC	99.01.0.024.59	99.01.0.024.59.0
LED	(28...60) V DC/AC	99.01.0.060.59	99.01.0.060.59.0
LED	(110...240) V DC/AC	99.01.0.230.59	99.01.0.230.59.0
LED + Diode	(6...24) V DC	99.01.9.024.99	99.01.9.024.99.0
LED + Diode	(28...60) V DC	99.01.9.060.99	99.01.9.060.99.0
LED + Diode	(110...220) V DC	99.01.9.220.99	99.01.9.220.99.0
LED + Diode (inverted polarity)	(6...24) V DC	99.01.9.024.79	99.01.9.024.79.0
LED + Diode (inverted polarity)	(28...60) V DC	99.01.9.060.79	99.01.9.060.79.0
LED + Diode (inverted polarity)	(110...220) V DC	99.01.9.220.79	99.01.9.220.79.0
LED + Varistor	(6...24) V DC/AC	99.01.0.024.98	99.01.0.024.98.0
LED + Varistor	(28...60) V DC/AC	99.01.0.060.98	99.01.0.060.98.0
LED + Varistor	(110...240) V DC/AC	99.01.0.230.98	99.01.0.230.98.0
RC circuit	(6...24) V DC/AC	99.01.0.024.09	99.01.0.024.09.0
RC circuit	(28...60) V DC/AC	99.01.0.060.09	99.01.0.060.09.0
RC circuit	(110...240) V DC/AC	99.01.0.230.09	99.01.0.230.09.0
No - remanence	(110...240) V AC	99.01.8.230.07	99.01.8.230.07.0

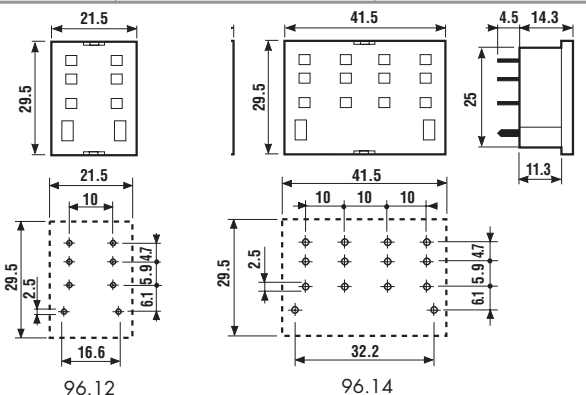


Relay type		56.32	56.34
P.C.B. socket	BLUE	96.12	96.14
	BLACK*	96.12.0	96.14.0
Retaining clip		094.51	094.51

Approvals
(according to type):



- RATED VALUES: 12 A - 250 V (10 A max for each contact circuit)
- DIELECTRIC STRENGTH: ≥ 2 kV AC
- AMBIENT TEMPERATURE: (-40...+70)°C



*Available on request