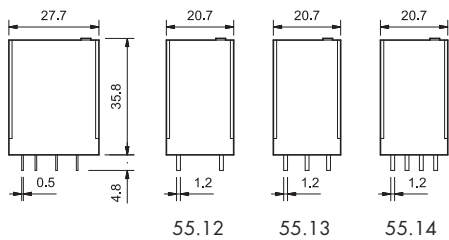


## Features

Printed circuit mount, general purpose  
2, 3 & 4 Pole relays

- 55.12 - 2 Pole 10 A
- 55.13 - 3 Pole 10 A
- 55.14 - 4 Pole 7 A

- AC coils & DC coils
- Cadmium Free contacts (preferred version)
- Contact material options
- RT III (wash tight) option available



FOR UL HORSEPOWER AND PILOT DUTY RATINGS  
SEE "General technical information" page V

### Contact specification

Contact configuration	2 CO (DPDT)	3 CO (3PDT)	4 CO (4PDT)
Rated current/Maximum peak current	A 10/20	A 10/20	A 7/15
Rated voltage/Maximum switching voltage V AC	250/400	250/400	250/250
Rated load AC1	VA 2,500	VA 2,500	VA 1,750
Rated load AC15 (230 V AC)	VA 500	VA 500	VA 350
Single phase motor rating (230 V AC)	kW 0.37	kW 0.37	kW 0.125
Breaking capacity DC1: 30/110/220V	A 10/0.25/0.12	A 10/0.25/0.12	A 7/0.25/0.12
Minimum switching load	mW (V/mA) 300 (5/5)	mW (V/mA) 300 (5/5)	mW (V/mA) 300 (5/5)
Standard contact material	AgNi	AgNi	AgNi

### Coil specification

Nominal voltage (U <sub>N</sub> )	V AC (50/60 Hz)	6 - 12 - 24 - 48 - 60 - 110 - 120 - 230 - 240		
	V DC	6 - 12 - 24 - 48 - 60 - 110 - 125 - 220		
Rated power AC/DC	VA (50 Hz)/W	1.5/1	1.5/1	1.5/1
Operating range	AC	(0.8...1.1)U <sub>N</sub>	(0.8...1.1)U <sub>N</sub>	(0.8...1.1)U <sub>N</sub>
	DC	(0.8...1.1)U <sub>N</sub>	(0.8...1.1)U <sub>N</sub>	(0.8...1.1)U <sub>N</sub>
Holding voltage	AC/DC	0.8 U <sub>N</sub> /0.5 U <sub>N</sub>	0.8 U <sub>N</sub> /0.5 U <sub>N</sub>	0.8 U <sub>N</sub> /0.5 U <sub>N</sub>
Must drop-out voltage	AC/DC	0.2 U <sub>N</sub> /0.1 U <sub>N</sub>	0.2 U <sub>N</sub> /0.1 U <sub>N</sub>	0.2 U <sub>N</sub> /0.1 U <sub>N</sub>

### Technical data

Mechanical life AC/DC	cycles	20 · 10 <sup>6</sup> /50 · 10 <sup>6</sup>	20 · 10 <sup>6</sup> /50 · 10 <sup>6</sup>	20 · 10 <sup>6</sup> /50 · 10 <sup>6</sup>
Electrical life at rated load AC1	cycles	200 · 10 <sup>3</sup>	200 · 10 <sup>3</sup>	150 · 10 <sup>3</sup>
Operate/release time	ms	9/3	9/3	9/3
Insulation between coil and contacts (1.2/50 μs)	kV	4	4	4
Dielectric strength between open contacts	V AC	1,000	1,000	1,000
Ambient temperature range	°C	-40...+85	-40...+85	-40...+85
Environmental protection		RT I	RT I	RT I

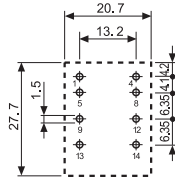
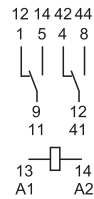
### Approvals (according to type)



## 55.12



- 2 pole, 10 A
- PCB mount

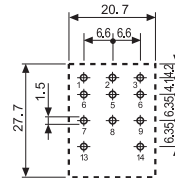
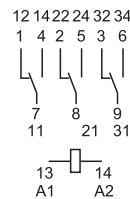


Copper side view

## 55.13



- 3 pole, 10 A
- PCB mount

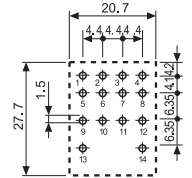
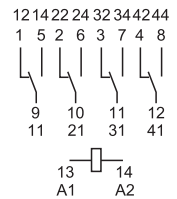


Copper side view

## 55.14



- 4 pole, 7 A
- PCB mount



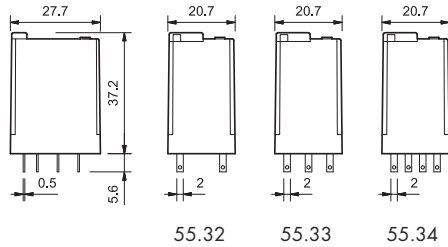
Copper side view

## Features

Plug-in mount, general purpose  
2, 3 & 4 Pole relays

- 55.32 - 2 Pole 10 A
- 55.33 - 3 Pole 10 A
- 55.34 - 4 Pole 7 A

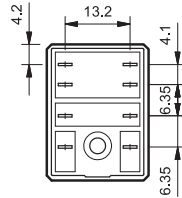
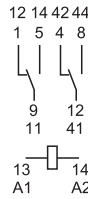
- Lockable test button and mechanical flag indicator as standard on 2 & 4 pole types
- AC coils & DC coils
- UL Listing (certain relay/socket combinations)
- Cadmium Free contacts (preferred version)
- Contact material options
- 94 series sockets
- Coil EMC suppression
- Timer accessories 86 series



55.32



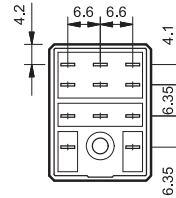
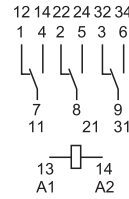
- 2 pole, 10 A
- Plug-in 94 series sockets



55.33



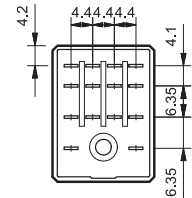
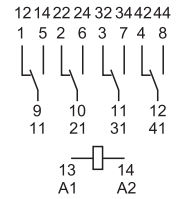
- 3 pole, 10 A
- Plug-in 94 series sockets



55.34



- 4 pole, 7 A
- Plug-in 94 series sockets



FOR UL HORSEPOWER AND PILOT DUTY RATINGS  
SEE "General technical information" page V

Contact specification		55.32	55.33	55.34
Contact configuration		2 CO (DPDT)	3 CO (3PDT)	4 CO (4PDT)
Rated current/Maximum peak current	A	10/20	10/20	7/15
Rated voltage/Maximum switching voltage V AC		250/400	250/400	250/250
Rated load AC1	VA	2,500	2,500	1,750
Rated load AC15 (230 V AC)	VA	500	500	350
Single phase motor rating (230 V AC)	kW	0.37	0.37	0.125
Breaking capacity DC1: 30/110/220 V	A	10/0.25/0.12	10/0.25/0.12	7/0.25/0.12
Minimum switching load	mW (V/mA)	300 (5/5)	300 (5/5)	300 (5/5)
Standard contact material		AgNi	AgNi	AgNi
Coil specification		55.32	55.33	55.34
Nominal voltage (U <sub>N</sub> )	V AC (50/60 Hz)	6 - 12 - 24 - 48 - 60 - 110 - 120 - 230 - 240		
	V DC	6 - 12 - 24 - 48 - 60 - 110 - 125 - 220		
Rated power AC/DC	VA (50 Hz)/W	1.5/1	1.5/1	1.5/1
Operating range	AC	(0.8...1.1)U <sub>N</sub>	(0.8...1.1)U <sub>N</sub>	(0.8...1.1)U <sub>N</sub>
	DC	(0.8...1.1)U <sub>N</sub>	(0.8...1.1)U <sub>N</sub>	(0.8...1.1)U <sub>N</sub>
Holding voltage	AC/DC	0.8 U <sub>N</sub> /0.5 U <sub>N</sub>	0.8 U <sub>N</sub> /0.5 U <sub>N</sub>	0.8 U <sub>N</sub> /0.5 U <sub>N</sub>
Must drop-out voltage	AC/DC	0.2 U <sub>N</sub> /0.1 U <sub>N</sub>	0.2 U <sub>N</sub> /0.1 U <sub>N</sub>	0.2 U <sub>N</sub> /0.1 U <sub>N</sub>
Technical data		55.32	55.33	55.34
Mechanical life AC/DC	cycles	20 · 10 <sup>6</sup> /50 · 10 <sup>6</sup>	20 · 10 <sup>6</sup> /50 · 10 <sup>6</sup>	20 · 10 <sup>6</sup> /50 · 10 <sup>6</sup>
Electrical life at rated load AC1	cycles	200 · 10 <sup>3</sup>	200 · 10 <sup>3</sup>	150 · 10 <sup>3</sup>
Operate/release time	ms	9/3	9/3	9/3
Insulation between coil and contacts (1.2/50 μs)	kV	4	4	4
Dielectric strength between open contacts	V AC	1,000	1,000	1,000
Ambient temperature range	°C	-40...+85	-40...+85	-40...+85
Environmental protection		RT I	RT I	RT I

Approvals (according to type)



## Ordering information

Example: 55 series plug-in relay, 4 CO (4PDT), 12 V DC coil, lockable test button and mechanical indicator.

<b>5</b>	<b>5</b>	<b>.</b>	<b>3</b>	<b>.</b>	<b>4</b>	<b>.</b>	<b>9</b>	<b>.</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>.</b>	<b>0</b>	<b>A</b>	<b>0</b>	<b>B</b>	<b>0</b>	<b>C</b>	<b>4</b>	<b>D</b>	<b>0</b>
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**Series** ————

**Type** ————

1 = PCB  
3 = Plug-in

**No. of poles** ————

2 = 2 pole, 10 A  
3 = 3 pole, 10 A  
4 = 4 pole, 7 A

**Coil version** ————

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

**Coil voltage** ————

See coil specifications

**A: Contact material**  
0 = Standard AgNi  
2 = AgCdO  
5 = AgNi + Au (5 µm)

**B: Contact circuit**  
0 = CO (nPDT)

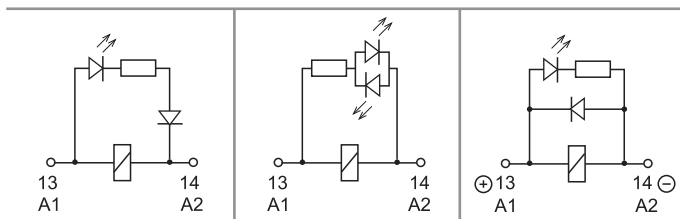
**D: Special versions**  
0 = Standard  
1 = Wash tight (RT III)  
for 55.12, 55.13 and 55.14 only

**C: Options**  
0 = None  
1 = Lockable test button  
2 = Mechanical indicator  
3 = LED (AC)  
4 = Lockable test button+mechanical indicator  
5 = Lockable test button + LED (AC)  
54 = Lockable test button + LED (AC)  
+ mechanical indicator  
6\* = Double LED (DC non-polarized)  
7\* = Lockable test button + double LED  
(DC non-polarized)  
74\* = Lockable test button + double LED  
(DC non-polarized)  
+ mechanical indicator  
8\* = LED + diode  
(DC, polarity positive to pin A1/13)  
9\* = Lockable test button + LED + diode (DC,  
polarity positive to pin A1/13)  
94\* = Lockable test button + LED + diode (DC,  
polarity positive to pin A1/13)  
+ mechanical indicator  
\* Option not available for the 220 V DC version.

**Selecting features and options: only combinations in the same row are possible.**  
Preferred selections for best availability are shown in **bold**.

Type	Coil version	A	B	C	D
55.32/34	AC-DC	0 - 2 - 5	0	0	0
	AC	<b>0</b> - 2 - 5	<b>0</b>	2 - 3 - <b>4</b> - 5	<b>0</b>
	AC	0 - 2 - 5	0	54	/
	DC	<b>0</b> - 2 - 5	<b>0</b>	2 - <b>4</b> - 6 - 7 - 8 - 9	<b>0</b>
	DC	0 - 2 - 5	0	74 - 94	/
55.33	AC-DC	<b>0</b> - 2 - 5	<b>0</b>	<b>0</b>	<b>0</b>
	AC	0 - 2 - 5	0	1 - 3 - 5	0
	DC	0 - 2 - 5	0	1 - 6 - 7 - 8 - 9	0
55.12/13/14	AC-DC	<b>0</b> - 2 - 5	<b>0</b>	<b>0</b>	<b>0</b> - 1

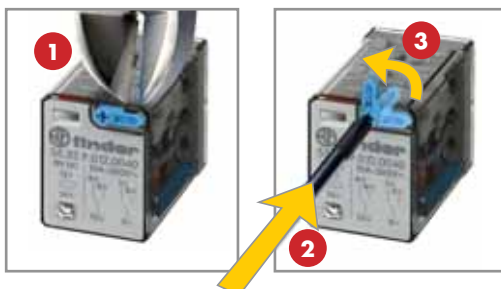
### Descriptions: options and special versions



**C: Option 3, 5, 54**  
LED (AC)

**C: Option 6, 7, 74**  
Double LED  
(DC non-polarized)

**C: Option 8, 9, 94**  
LED + diode (DC, polarity  
positive to pin A1/13)



### Lockable test button and mechanical flag indicator (0010, 0040, 0050, 0054, 0070, 0074, 0090, 0094)

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.

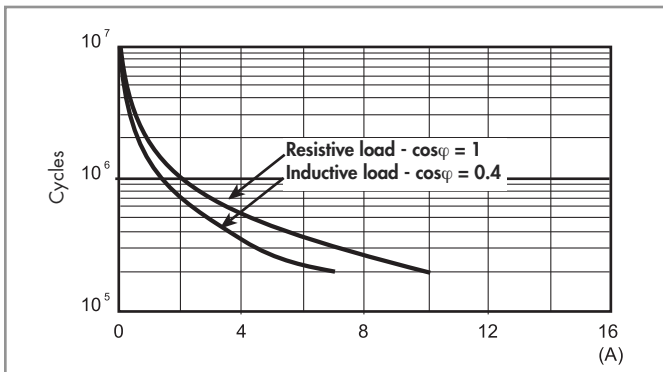
**Case 2**) The plastic pip is broken-off (using an appropriate cutting tool). In this case, (in addition to the above function), when the test button is pushed and rotated, the contacts are latched in the operating state, and remain so until the test button is rotated back to its former position. In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

## Technical data

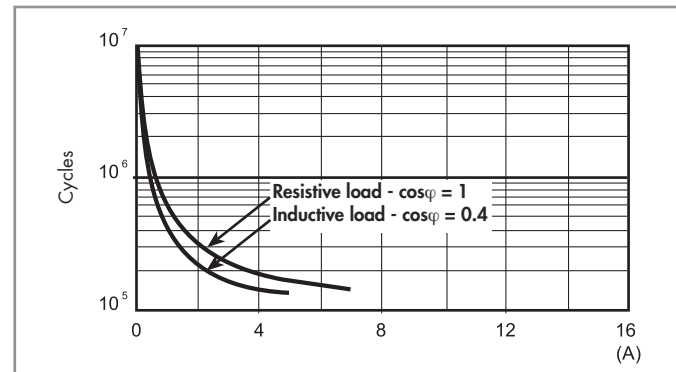
Insulation according to EN 61810-1		2 pole - 3 pole		4 pole	
Nominal voltage of supply system	V AC	230/400		230	
Rated insulation voltage	V AC	400		250	
Pollution degree		2		2	
<b>Insulation between coil and contact set</b>					
Type of Insulation		Basic		Basic	
Overvoltage category		III		III	
Rated impulse voltage	kV (1.2/50 $\mu$ s)	4		4	
Dielectric strength	V AC	2,000		2,000	
<b>Insulation between adjacent contacts</b>					
Type of insulation		Basic		Basic	
Overvoltage category		III		II	
Rated impulse voltage	kV (1.2/50 $\mu$ s)	4		2.5	
Dielectric strength	V AC	2,000		1,550	
<b>Insulation between open contacts</b>					
Type of disconnection		Micro-disconnection		Micro-disconnection	
Dielectric strength	V AC/kV (1.2/50 $\mu$ s)	1,000/1.5		1,000/1.5	
<b>Conducted disturbance immunity</b>					
Burst (5...50)ns, 5 kHz, on A1 - A2		EN 61000-4-4		level 4 (4 kV)	
Surge (1.2/50 $\mu$ s) on A1 - A2 (differential mode)		EN 61000-4-5		level 4 (4 kV)	
<b>Other data</b>					
Bounce time: NO/NC	ms	1/4			
Vibration resistance (5...55)Hz: NO/NC	g	15/15			
Shock resistance	g	16			
Power lost to the environment	without contact current	W	1		
	with rated current	W	3 (2 pole)	4 (3 pole)	3 (4 pole)
Recommended distance between relays mounted on PCB	mm	$\geq 5$			

## Contact specification

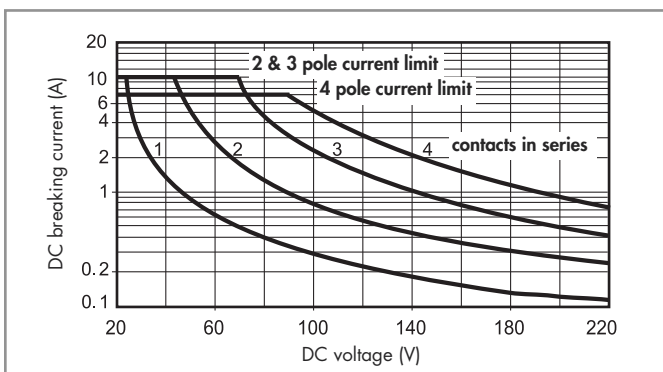
**F 55 - Electrical life (AC) v contact current**  
2 and 3 pole relays



**F 55 - Electrical life (AC) v contact current**  
4 pole relay



**H 55 - Maximum DC1 breaking capacity**



- 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

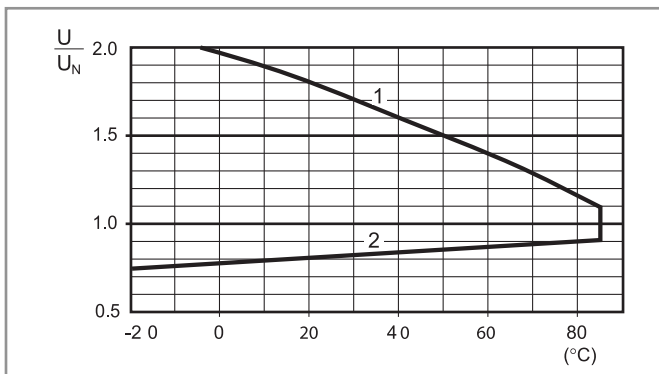
### DC coil data

Nominal voltage $U_N$ V	Coil code	Operating range		Resistance	Rated coil consumption $I$ at $U_N$ mA
		$U_{min}$ V	$U_{max}$ V	$R$ $\Omega$	
6	9.006	4.8	6.6	40	150
12	9.012	9.6	13.2	140	86
24	9.024	19.2	26.4	600	40
48	9.048	38.4	52.8	2,400	20
60	9.060	48	66	4,000	15
110	9.110	88	121	12,500	8.8
125	9.125	100	138	17,300	7.2
220	9.220	176	242	54,000	4

### AC coil data

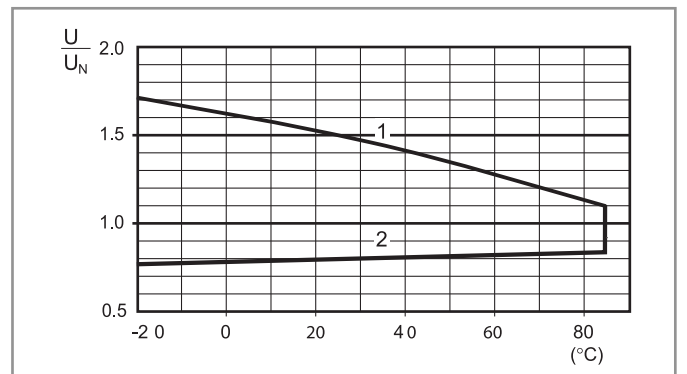
Nominal voltage $U_N$ V	Coil code	Operating range		Resistance	Rated coil consumption $I$ at $U_N$ (50Hz) mA
		$U_{min}$ V	$U_{max}$ V	$R$ $\Omega$	
6	8.006	4.8	6.6	12	200
12	8.012	9.6	13.2	50	97
24	8.024	19.2	26.4	190	53
48	8.048	38.4	52.8	770	25
60	8.060	48	66	1,200	21
110	8.110	88	121	4,000	12.5
120	8.120	96	132	4,700	12
230	8.230	184	253	17,000	6
240	8.240	192	264	19,100	5.3

### R 55 - DC coil operating range v ambient temperature



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

### R 55 - AC coil operating range v ambient temperature



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

## Accessories



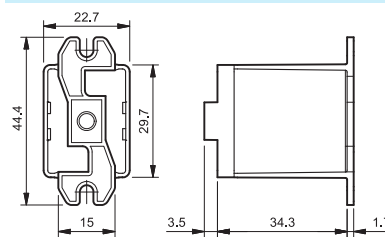
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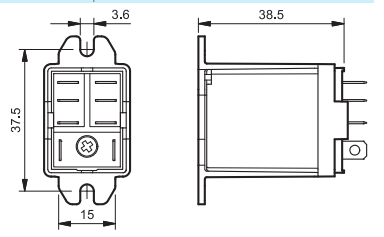
056.25 with relay

### Top flange mount adaptor for 55.32, 55.33, 55.34

056.25



056.25



056.25 with relay



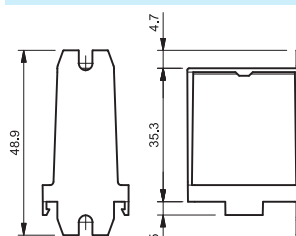
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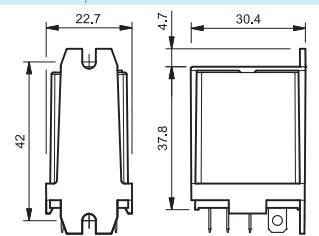
056.26 with relay

### Rear flange mount adaptor for 55.32, 55.33, 55.34

056.26



056.26



056.26 with relay



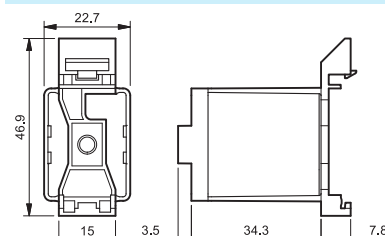
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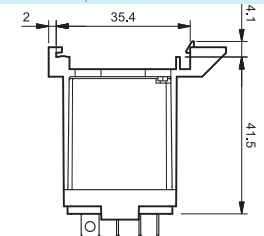
056.27 with relay

### Top 35 mm rail (EN 60715) adaptor for 55.32, 55.33, 55.34

056.27



056.27



056.27 with relay