


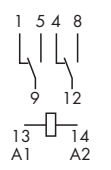
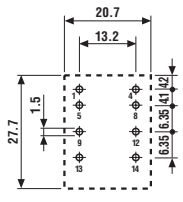
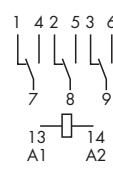
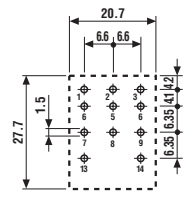
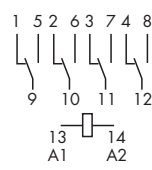
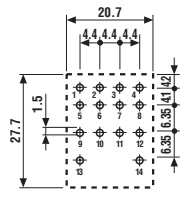





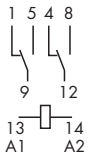
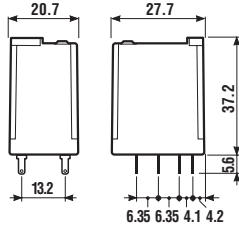
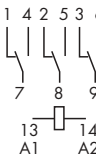
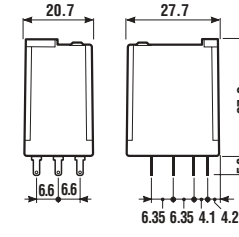
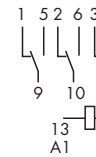
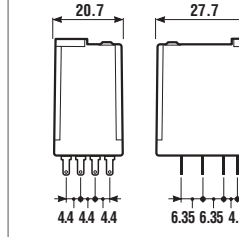


















- P.C.B. versions
- AC or DC coils
- RT III (wash tight) version available

	55.12	55.13	55.14
			
	- 2 pole, 10 A - P.C.B. mounting	- 3 pole, 10 A - P.C.B. mounting	- 4 pole, 7 A - P.C.B. mounting
	  Copper side view h = 35.8 mm	  Copper side view h = 35.8 mm	  Copper side view h = 35.8 mm
<b>Contact specifications</b>			
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 in AC1 VA	2,500	2,500	1,750
Rated load in AC15 (230 V AC) VA	500	500	350
Single phase motor rating (230 V AC) kW	0.37	0.37	0.125
Breaking capacity in 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
<b>Coil specifications</b>			
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>		(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>
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>
<b>Technical data</b>			
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>
Electrical life at rated load AC1 cycles	200 · 10 <sup>3</sup>		150 · 10 <sup>3</sup>
Operate/release time ms	9/3		9/3
Insulation according to EN 61810-1 ed. 2	3.6 kV/2		2.5 kV/2
Insulation between coil and contacts (1.2/50 μs) kV	3.6		3.6
Dielectric strength between open contacts V AC	1,000		1,000
Ambient temperature range °C	-40...+85		-40...+85
Environmental protection	RT I		RT I

**Approvals:** (according to type)


- Plug-in versions
- AC or DC coils
- Lockable test button and mechanical flag indicator as standard on 2 and 4 CO (DPDT and 4PDT) relays types
- Sockets and accessories: see 94, 99 and 86 series

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	55.32	55.33	55.34
			
	- 2 pole, 10 A - Plug-in for use with 94 series sockets	- 3 pole, 10 A - Plug-in for use with 94 series sockets	- 4 pole, 7 A - Plug-in for use with 94 series sockets
	 	 	 
<b>Contact specifications</b>			
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 in AC1	VA 2,500	VA 2,500	VA 1,750
Rated load in 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 in DC1: 30/110/220 V	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
<b>Coil specifications</b>			
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
Operating range	AC	(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>
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>
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>
<b>Technical data</b>			
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>
Electrical life at rated load AC1	cycles	200 · 10 <sup>3</sup>	150 · 10 <sup>3</sup>
Operate/release time	ms	9/3	9/3
Insulation according to EN 61810-1 ed. 2		3.6 kV/2	3.6 kV/2
Insulation between coil and contacts (1.2/50 μs)	kV	3.6	3.6
Dielectric strength between open contacts	V AC	1,000	1,000
Ambient temperature range	°C	-40...+85	-40...+85
Environmental protection		RT I	RT I
<b>Approvals:</b> (according to type)		                 	

## ORDERING INFORMATION

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

55.349.012.0040

**Series** 55

**Type** 3 = Plug-in

**No. of poles** 4 = 4 pole, 7 A

**Coil version** 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)

**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 not polarized)  
 7 = Lockable test button + double LED (DC not polarized)  
 74 = Lockable test button + double LED (DC not polarized) + mechanical indicator  
 8 = LED + diode (positive to pin A1/13, DC standard polarity)  
 9 = Lockable test button + LED + diode (positive to pin A1/13, DC standard polarity)  
 94 = Lockable test button + LED + diode (positive to pin A1/13, DC standard polarity) + mechanical indicator

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

Only combinations in the same row are possible

Preferred versions

	coil version	A	B	C	D
55.32/34	AC/DC	0	0	4	0
55.12/13/14	AC/DC	0	0	0	0
55.33	AC/DC	0	0	0	0

All versions

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

## POSSIBLE OPTIONS

AC

Option = 0030  
0050  
0054

DC - Not polarized

Option = 0060  
0070  
0074

DC - Standard polarity

Option = 0080  
0090  
0094

Option = 0006  
REAR FLANGE MOUNT



### 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.

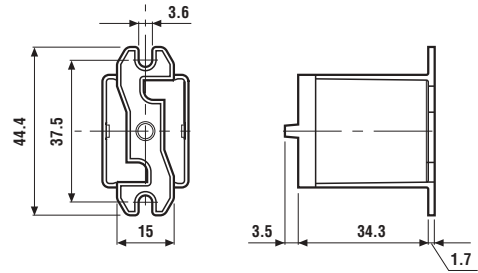
In both cases ensure that the test button actuation is swift and decisive.

## ACCESSORIES



Adaptor with top mount flange for 55.32, 55.33, 55.34

055.05



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## TECHNICAL DATA

### INSULATION

Insulation according to EN 61810-1 ed. 2	insulation rated voltage	V	400 (2-3 pole)	250 (4 pole)	
	rated impulse withstand voltage	kV	3.6 (2-3 pole)	2.5 (4 pole)	
	pollution degree		2		
	overvoltage category		III		
				<b>2 CO (DPDT)</b>	<b>3 CO (3PDT)</b>
Dielectric strength between adjacent contact	V AC	2,000	2,000	1,550	

### CONDUCTED DISTURBANCE IMMUNITY

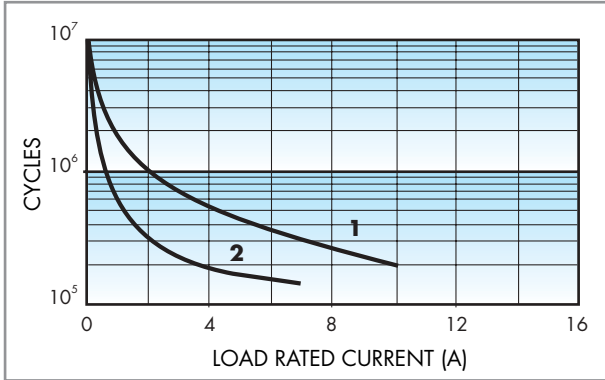
Burst (5...50)ns, 5 kHz, on A1 - A2	EN 61000-4-4	level 4 (4 kV)
Surge (1.2/50 μs) on A1 - A2 (differential mode)	EN 61000-4-5	level 4 (4 kV)

### OTHER DATA

Bounce time: NO/NC	ms	1/4			
Vibration resistance (10...55)Hz, max. ± 1 mm: NO/NC	g/g	6/6			
Power lost to the environment		<b>2 CO (DPDT)</b>	<b>3 CO (3PDT)</b>	<b>4 CO (4PDT)</b>	
	without contact current	W	1	1	1
	with rated current	W	3	4	3
Recommended distance between relays mounted on P.C.B.s	mm	≥ 5			

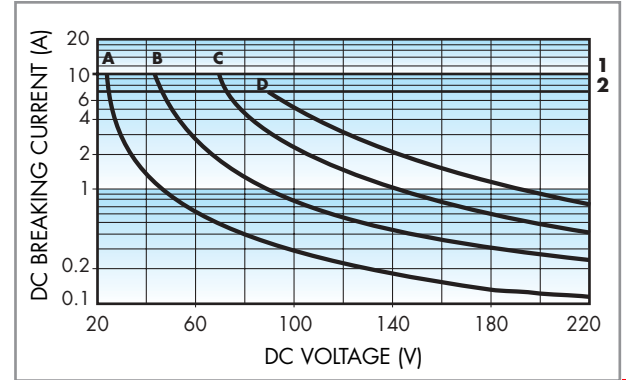
## CONTACT SPECIFICATIONS

### F 55



Electrical life vs AC1 load.  
**1** - 2 - 3 CO (DPDT - 3PDT) relay type (10 A)  
**2** - 4 CO (4PDT) relay type (7 A)

### H 55



Breaking capacity for DC1 load.  
**1** - 2 - 3 CO (DPDT - 3PDT) type  
**2** - 4 CO (4PDT) type  
**A** - Load applied to 1 contact  
**B** - Load applied to 2 contacts in series  
**C** - Load applied to 3 contacts in series  
**D** - Load applied to 4 contacts in series

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- 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

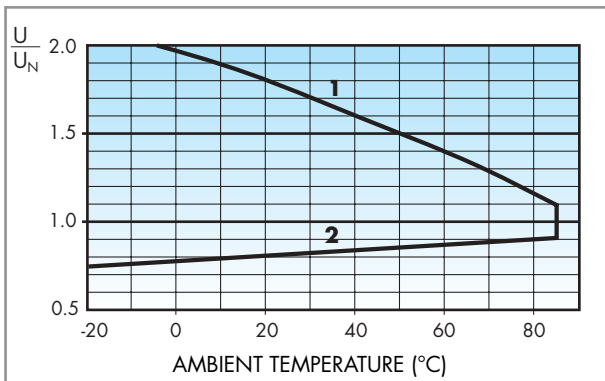
### DC VERSION DATA

Nominal voltage $U_N$ V	Coil code	Operating range		Resistance R $\Omega$	Rated coil consumption I at $U_N$ mA
		$U_{min}$ V	$U_{max}$ V		
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	137.5	17,300	7.2
220	9.220	176	242	54,000	4

### AC VERSION DATA

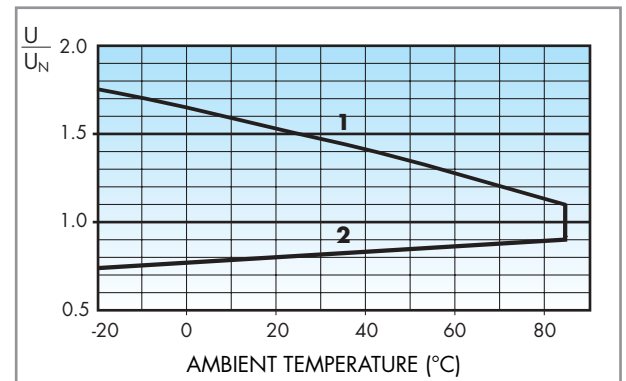
Nominal voltage $U_N$ V	Coil code	Operating range		Resistance R $\Omega$	Rated coil consumption I at $U_N$ (50Hz) mA
		$U_{min}$ V	$U_{max}$ V		
6	8.006	4.8	6.6	12	200
12	8.012	9.6	13.2	50	97
24	8.024	19.2	26.4	190	53
48	8.048	38.4	52.8	770	25
60	8.060	48	66	1,200	21
110	8.110	88	121	4,000	12.5
120	8.120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



Operating range (DC type) vs ambient temperature.  
**1** - Max coil voltage permitted.  
**2** - Min pick-up voltage with coil at ambient temperature.

### R 55 AC



Operating range (AC type) vs ambient temperature.  
**1** - Max coil voltage permitted.  
**2** - Min pick-up voltage with coil at ambient temperature.