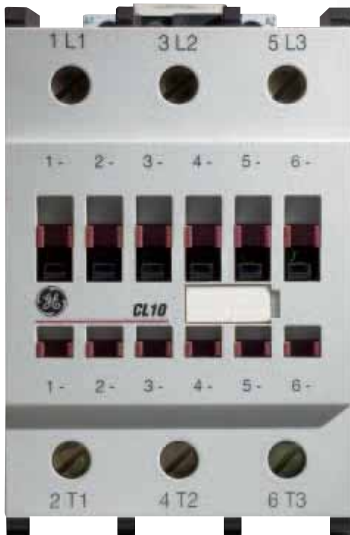


Control and Automation

For industrial applications

Everything is under control



GE imagination at work

A

Auxiliary contactors and Plug-in relays

Series PRC - Plug-in relays



Miniature plug-in relays
Standard 8-11 pin plug-in relays

● A.2

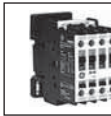
Series M - Auxiliary minicontactors



lth = 16A

● A.16

Series RL - Auxiliary contactors



lth = 20A

● A.22

B

Motor protection devices

Series SFK -

Motor protection circuit breaker



Thermal and magnetic protection of AC and DC motors
Setting ranges from 0.1 to 25A

● B.2

Surion - Manual motor starter



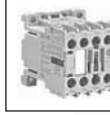
Thermal and magnetic protection - Magnetic protection
Setting ranges from 0.1 to 63A

● B.8

C

Contactors and Thermal overload relays

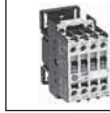
Series M - Minicontactors



3 and 4P (4NO, 2NO+2NC, 4NC) 6,9 and 12A (AC-3) 20A (AC-1)
Control circuit AC and DC

● C.2

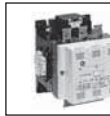
Series CL - Contactors



3 and 4P (4NO, 2NO+2NC) 9 to 105A (AC-3) 25 to 140A (AC-1) AC, DC and with electronic module

● C.10

Series CK - Contactors



3 and 4P (4NO) 150 to 825A (AC-3) 200 to 1250A (AC-1) AC, DC and with electronic module

● C.18

Series MTO - Thermal overload relays



For minicontactors series M from 0.11 to 14A

● C.60

Series RT - Thermal overload relays

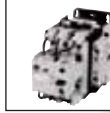


For contactors series CL and CK from 0.16 to 850A Class 10A, 10, 20, 30

● C.62

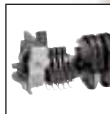
Series CSC -

Contactors for capacitors switching



● C.74

Series 390.R - Clapper contactors

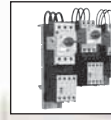


● C.80

D

Motorstarters

Coordination



Link modules for mechanical and electrical connection of the manual motor starter and the M/CL contactor ranges

● D.2

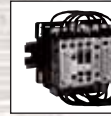
Direct-on-line starters



Series M: 6 to 12A (AC-3)
Series CL: 9 to 105A (AC-3)
Series CK: 150 to 825A (AC-3)

● D.18

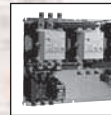
Reversing starters



Series M: 6 to 12A (AC-3)
Series CL: 9 to 105A (AC-3)
Series CK: 150 to 825A (AC-3)

● D.20

Star-delta starters



Series CL
Series CK

● D.22

ASTAT S - Soft starter



Small soft starter with integral by-pass

● D.66

ASTAT SD - Soft starter



Soft starter for 3ph AC motors up to 850 kW

● D.72

ASTATplus - Soft starter



Solid state soft starter for 3ph AC motors up to 850 kW

● D.78

E

Control and signalling units

Series P9 - Panel mounting -
Units Ø 22 mm



● E.10

Series P9 - Base mounting



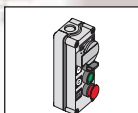
● E.25

Series P9 - Push-button stations



● E.28

Series P9 - Equipped boxes



● E.31

Series P9 - Common accessories



● E.34

Series 077 - Units Ø 30 mm



● E.48

Series NLT - Light towers



● E.76

Series 101 - Palm push-buttons



● E.82

Series IP - Foot switches



● E.84

Safety foot switches



● E.86

Series 105 - Signalling devices



● E.87

F

Electronic relays

Series DM - Single voltage relays



22.5mm module
Direct supply voltage
With transformer

● F.3

Series NMV - Multivoltage relays



22.5mm module
Direct supply voltage (24-
240V AC/DC)
With transformer

● F.4

Series D - Single voltage relays



45mm module
Direct supply voltage
With transformer

● F.6

Liquid level detectors



45 mm module
With transformer
DIN mounting

● F.7

Earth leakage relays



45 mm module
Direct supply voltage
With transformer

● F.8

Protection relays



45 mm module
Direct supply voltage
With transformer

● F.9

Detection relays



Direct supply voltage
With transformer

● F.10

Control and protection relays



● F.11

G

Limit switches

Series IS and IM



Metal and Thermoplastic
EN 50041
Positive opening

● G.2

Series IUG and IUC



Thermoplastic EN 50047
Positive opening

● G.4

Series IZ



Thermoplastic miniature

● G.6

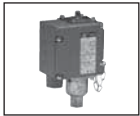
Series 114FCT



Three pole limit switches
Thermoplastic
Positive opening

● G.8

Series 115 - Pressure switches



Bellows type
Piston type

● G.16

Safety switches



● G.22

Pull rope switches



● G.26

H

Speed drive units

VAT20



Single-phase or three-phase
digital inverters for control-
ling the speed of three-
phase induction AC motors
from 0.2 to 2.2 kW

● H.2

VAT200



From 0.4 to 2.2kW at 200V,
single phase power supply
From 0.4 to 7.5kW at 200V,
three phase power supply
From 0.75 to 11kW at 400V,
three phase power supply

● H.8

VAT2000



Three phase variable speed
drives for AC motors 220-
240V or 380-480V power
source
0.4 to 315kW in constant
torque and up to 370kW in
variable torque applications

● H.14

AV300i - Adjustable frequency flux vector drive



● H.38

I

Main switches

Series ML - standard programme



Main switches and Emer-
gency-stop switches for
machinery

● I.4

Series ML - enclosed switches



● I.7

Everything is

Series PRC - Plug-in relays

- A.3 Order codes
- A.7 Technical data
- A.14 Dimensions

Series M - Auxiliary minicontactors

- A.17 Order codes
- A.26 Technical data
- A.31 Terminal numbering
- A.40 Dimensions

Plug-in relays and Auxiliary contactors

Series RL - Auxiliary contactors

- A.23 Order codes
- A.34 Technical data
- A.36 Terminal numbering
- A.42 Dimensions

Motor protection devices

Contactors and Thermal overload relays

Motorstarters

Control and signalling units

Electronic relays

Limit switches

Speed drive units

Main switches

Numerical index

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under control





Plug-in auxiliary relays

- AC or DC coils
- Lockable test button with mechanical flag indicator
- Sockets with rear 35mm rail (EN 50022) mounting.

Miniature relays

Types	Poles	AC ratings
PRC4M2...	2 CO	12A/250V
PRC4M3...	3 CO	10A/250V
PRC4M4...	4 CO	6A/250V

Sockets

Types
PRCG-ES15/2N
PRCG-ES15/3N
PRCG-ES15/4N

Standard 8-11 pin relays

Types	Poles	AC ratings
PRC2P2...	2 CO	10A/250V
PRC3P3...	3 CO	10A/250V

Sockets

Types
PRZ8
PRZ11

Interface relay module

Types	Poles	AC ratings
PRC1S1...	1 CO	6A/250V
For use with PLC systems		
PRC1T1...	1 CO	16A/250V
PRC1T2...	2 CO	8A/250V

Sockets

Types
-
PRCGZT80
PRCGZT80

Approvals

According to types:

Plug-in relays	Sockets
CE	CE
CSA	CSA
cUR	cUR
VDE	

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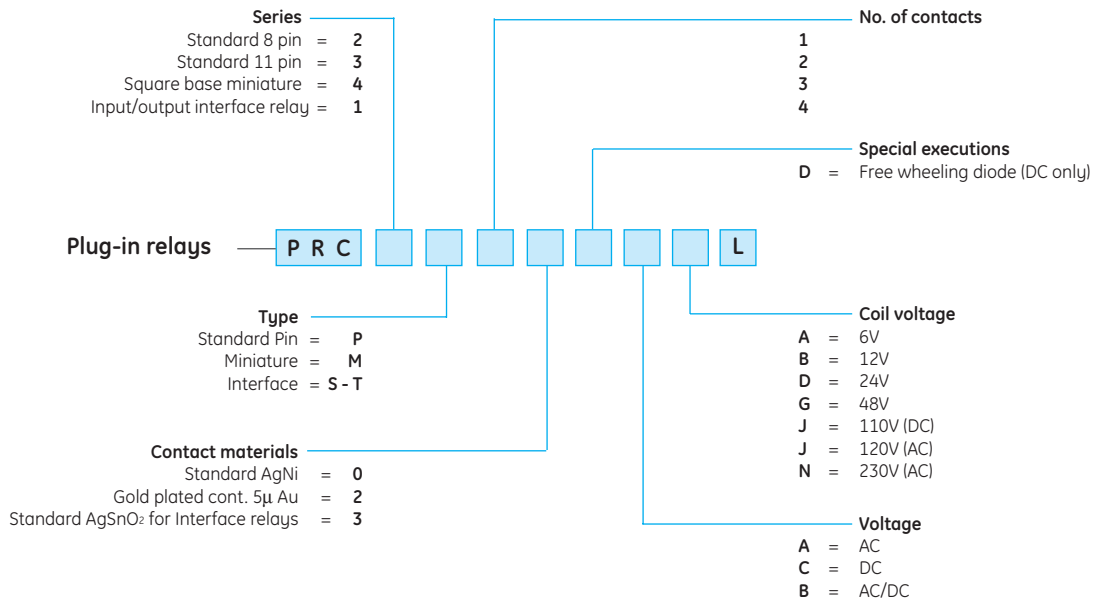
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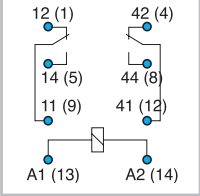
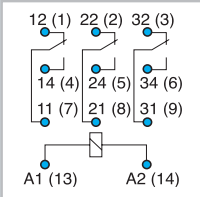
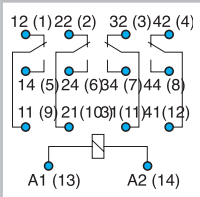
Catalogue number structure




- Order codes ● pg. A.3
- Modules for sockets ● pg. A.6
- Technical characteristics ● pg. A.7
- Dimensions ● pg. A.14



Miniature plug-in relays

	Ratings	Contacts Standard material	Voltage		With LED		Pack			
					Cat. no. ⁽²⁾	Ref. no.				
 <p>2 changeover contacts</p>	12A/250V	0 AgNi	AC	12V	PRC4M20ABL	220710	10			
				24V	PRC4M20ADL	220711	10			
				48V	PRC4M20AGL	220712	10			
				120V	PRC4M20AJL	220715	10			
				230V	PRC4M20ANL	220717	10			
			DC	12V	PRC4M20CBL	220713	10			
				24V	PRC4M20CDL	220714	10			
				48V	PRC4M20CGL	220716	10			
				110V	PRC4M20CJL	220718	10			
				DC Diode	12V	PRC4M20DCBL	220754	10		
			24V		PRC4M20DCDL	220755	10			
			48V		PRC4M20DCGL	220756	10			
			110V		PRC4M20DCJL	220757	10			
										
			<p>3 changeover contacts</p>	10A/250V	0 AgNi	AC	12V	PRC4M30ABL	221051	10
24V	PRC4M30ADL	221052					10			
48V	PRC4M30AGL	221053					10			
120V	PRC4M30AJL	221056					10			
230V	PRC4M30ANL	221058					10			
DC	12V	PRC4M30CBL				221054	10			
	24V	PRC4M30CDL				221055	10			
	48V	PRC4M30CGL				221057	10			
	110V	PRC4M30CJL				221059	10			
	DC Diode	12V				PRC4M30DCBL	221074	10		
24V		PRC4M30DCDL				221075	10			
48V		PRC4M30DCGL				221076	10			
110V		PRC4M30DCJL				221077	10			
										
<p>4 changeover contacts</p>	6A/250V	0 AgNi				AC	12V	PRC4M40ABL	221809	10
			24V	PRC4M40ADL	221810		10			
			48V	PRC4M40AGL	221811		10			
			120V	PRC4M40AJL	221814		10			
			230V	PRC4M40ANL	221816		10			
			DC	12V	PRC4M40CBL	221812	10			
				24V	PRC4M40CDL	221813	10			
				48V	PRC4M40CGL	221815	10			
				110V	PRC4M40CJL	221817	10			
				DC Diode	12V	PRC4M40DCBL	221851	10		
			24V		PRC4M40DCDL	221852	10			
			48V		PRC4M40DCGL	221853	10			
			110V		PRC4M40DCJL	221854	10			
										

Sockets

				Cat. no.	Ref. no.	Pack
 <p>For PRC4M2... 2 changeover contacts</p>	Screw terminals Two levels	Socket		PRCG-ES15/2N	220912	10
		Fixing clip	Metal	PRCG1052	220914	10
		Retainer/Extractor	Black plastic	PRCMS35	220915	10
		Identification plate		PRCTR1	220916	10
<p>For PRC4M3... 3 changeover contacts</p>	Screw terminals Two levels	Socket		PRCG-ES15/3N	221442	10
		Fixing clip	Metal	PRCG1052	220914	10
		Retainer/Extractor	Black plastic	PRCMS35	220915	10
		Identification plate		PRCTR1	220916	10
<p>For PRC4M4... 4 changeover contacts</p>	Screw terminals Two levels	Socket		PRCG-ES15/4N	221934	10
		Fixing clip	Metal	PRCG1052	220914	10
		Retainer/Extractor	Black plastic	PRCMS35	220915	10
		Identification plate		PRCTR1	220916	10

Order codes

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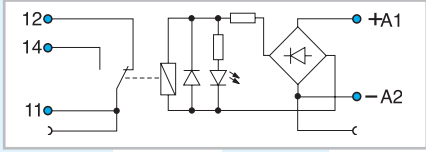
Standard 8-11 pin plug-in relays

	Ratings	Contacts Standard material	Voltage		With LED		
					Cat. no. ^[2]	Ref. no.	Pack
 <p>Standard 8 pin</p>	2 changeover contacts 10A/250V	0 AgNi	AC	12V	PRC2P20ABL	220019	10
				24V	PRC2P20ADL	220020	10
				48V	PRC2P20AGL	220021	10
				120V	PRC2P20AJL	220024	10
				230V	PRC2P20ANL	220026	10
				DC	12V	PRC2P20CBL	220022
			24V		PRC2P20CDL	220023	10
			48V		PRC2P20CGL	220025	10
			DC diode	110V	PRC2P20CJL	220027	10
				12V	PRC2P20CDL	220041	10
				24V	PRC2P20CDL	220042	10
				48V	PRC2P20DCGL	220043	10
				110V	PRC2P20DCJL	220044	10
			 <p>Standard 11 pin</p>	3 changeover contacts 10A/250V	0 AgNi	AC	12V
24V	PRC3P30ADL	220311					10
48V	PRC3P30AGL	220312					10
120V	PRC3P30AJL	220315					10
230V	PRC3P30ANL	220317					10
DC	12V	PRC3P30CBL					220313
	24V	PRC3P30CDL				220314	10
	48V	PRC3P30CGL				220316	10
DC diode	110V	PRC3P30CJL				220318	10
	12V	PRC3P30DCBL				220335	10
	24V	PRC3P30DCDL				220336	10
	48V	PRC3P30DCGL				220337	10
	110V	PRC3P30DCJL				220338	10


Sockets

				Cat. no.	Ref. no.	Pack
 <p>For PRC2P20... Standard 8 pin</p>	Screw terminals One level	Socket		PRCZ8	220216	10
		Fixing clip		PRCPZ11	220218	10
	Solder terminal	Socket		PRCG8	220217	10
		Fixing clip		PRCR159	220219	10
<p>For PRC3P30... Standard 11 pin</p>	Screw terminals One level	Socket		PRCZ11	220647	10
		Fixing clip		PRCPZ11	220218	10
	Solder terminal	Socket		PRCG11	220648	10
		Fixing clip		PRCR159	220219	10

Interface relay




	Ratings AC1	Ratings DC1	Contacts material	Voltage		With LED								
						Cat. no.	Ref. no.	Pack						
 <p>1 single pole</p> <p>1 changeover contact</p>	6A/250V	-	3 AgSnO2	AC/DC	230V									
						PRC1S13BNL	222013	10						
						AC	230V	PRC1S13ANL	222012	10				
						DC	12V	PRC1S13CBL	222007	10				
							24V	PRC1S13CDL	222008	10				
						AC/DC	24V	PRC1S13BDL	222004	10				
						Identification label		PRCTR1S	222043	10				
						20-way jumper link		PRCW20	222039	10				
														

Interface relay for PLC systems

	Ratings AC1	Ratings DC1	Contacts material	Voltage		With LED						
						Cat. no.	Ref. no.	Pack				
 <p>1 changeover contact</p> <p>2 changeover contacts</p>	16A/250V	16A/24V	0 AgNi	AC	24V	PRC1T10ADL	221868	10				
					120V	PRC1T10AJL	221869	10				
					230V	PRC1T10ANL	221870	10				
					DC	12V	PRC1T10CBL	221860	10			
						24V	PRC1T10CDL	221861	10			
						110V	PRC1T10CJL	221862	10			
					8A/250V	8A/24V	0 AgNi	AC	24V	PRC1T20ADL	221883	10
									120V	PRC1T20AJL	221884	10
									230V	PRC1T20ANL	221885	10
									DC	12V	PRC1T20CBL	221875
	24V	PRC1T20CDL	221876	10								
	110V	PRC1T20CJL	221877	10								

Complete set of relay, socket, module (diode+Led for DC-Varistor + Led for AC) and retaining clip + marking plate. 16mm width

Spare parts

				Voltage		Cat. no.	Ref. no.	Pack	
 <p>Miniature P.C.B. relays. 16A 1 changeover contact</p>				AC	24V	PRCT1AD	221896	20	
					120V	PRCT1AJ	221897	20	
					230V	PRCT1AN	221898	20	
					DC	12V	PRCT1CB	221890	20
						24V	PRCT1CD	221891	20
						110V	PRCT1CJ	221892	20
 <p>Miniature P.C.B. relays. 8A 2 changeover contacts</p>				AC	24V	PRCT2AD	221913	20	
					120V	PRCT2AJ	221914	20	
					230V	PRCT2AN	221915	20	
					DC	12V	PRCT2CB	221905	20
						24V	PRCT2CD	221906	20
						110V	PRCT2CJ	221907	20
 <p>Socket for miniature P.C.B. relays</p>	Three level screws					PRCGZT80	221918	10	
					Retainer/Retractor	PRCMS16	221920	10	
					Plate	PRCTR	221921	10	

NOTE: If more than 12A are applied to the relay contact, twin wiring is required. See the connection diagram of the relay



Order codes

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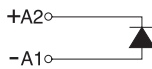
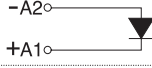
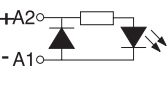
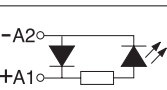

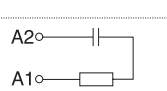

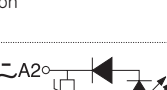
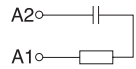
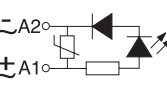

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Modules for sockets

				Color Led	Cat. no.	Ref. no.	Pack
	Diode	Protection against polarity inversion					
	For use with sockets: PRCG-ES15/2N PRCG-ES15/3N PRCG-ES15/4N		6 / 230V DC		PRCM21P	222100	10
			6 / 230V DC		PRCM21N	222101	10
	Diode and Led	Protection against polarity inversion Coil energizing indication					
	For use with sockets: PRCG-ES15/2N PRCG-ES15/3N PRCG-ES15/4N PRCGZT80		6 / 24V DC	Red	PRCM31R	222102	10
			24 / 60V DC	Green	PRCM31G	222104	10
			110 / 230V DC	Red	PRCM32R	222103	10
				Green	PRCM32G	222105	10
			6 / 24V DC	Red	PRCM33R	222109	10
			24 / 60V DC	Green	PRCM33G	222106	10
			110 / 230V DC	Red	PRCM41R	222110	10
				Green	PRCM41G	222107	10
			6 / 24V DC	Red	PRCM42R	222111	10
			24 / 60V DC	Green	PRCM42G	222124	10
			110 / 230V DC	Red	PRCM43R	222112	10
				Green	PRCM43G	222125	10
	RC group	Arc suppression circuit					
	For use with sockets: PRCG-ES15/2N PRCG-ES15/3N PRCG-ES15/4N		6 / 24V AC 24 / 60V AC 110 / 240V AC		PRCM51 PRCM52 PRCM53	222113 222114 222115	10 10 10
	Led and varistor	No protection against polarity inversion Coil energizing indication AC/DC voltage allowed					
	For use with sockets: PRCG-ES15/2N PRCG-ES15/3N PRCG-ES15/4N PRCGZT80		6 / 24V AC 110 / 230V AC	Red Green Green	PRCM91R PRCM91G PRCM93G	222116 222126 222120	10 10 10
	Varistor group	No indication Protection against overvoltage					
	For use with sockets: PRCG-ES15/2N PRCG-ES15/3N PRCG-ES15/4N		24V AC 230V AC		PRCM71 PRCM73	222121 222122	10 10

Technical data

Sockets for miniature plug-in relays

		PRCG-ES15/2N	PRCG-ES15/3N	PRCG-ES15/4N
		Screw terminals Two levels	Screw terminals Two levels	Screw terminals Two levels
<i>Specifications</i>				
Nominal load	(A)	12 (300V)	10 (300V)	10 (300V)
Dielectric strength				
Adjacent screws	(kV)	3	3	3
Screws - rail	(kV)	3	3	3
Terminals Type				
		Screw M4, Pozidriv	Screw M4, Pozidriv	Screw M3, Pozidriv
Max. torque	(Nm)	0,7	0,7	0,7
Protection category		IP20	IP20	IP20
Capacity Solid wire	(mm ²)	2x2.5	2x2.5	2x2.5
Flexible wire		22-14 AWG	22-14 AWG	22-14 AWG
Ambient temperature	(°C)	-40 ... +70	-40 ... +70	-40 ... +70

Sockets for 8-11 pin standard plug-in relays

		PRCZ8	PRCG08	PRCZ11	PRCG11
		Screw terminals One level	8 pin Solder terminal socket	Screw terminals One level	11 pin Solder terminal socket
<i>Specifications</i>					
Nominal load	(A)	10 (250V)	10 (250V)	10 (250V)	10 (250V)
Dielectric strength					
Adjacent screws	(kV)	2.5	2.5	2.5	2.5
Screws - rail	(kV)	3		3	
Terminals Type					
		Screw M3, Pozidriv	Hard brass tin-plated terminals	Screw M3, Pozidriv	Hard brass tin-plated terminals
Max. torque	(Nm)	0,7		0,7	
Protection category		IP20		IP20	
Capacity Solid wire	(mm ²)	2x2.5		2x2.5	
Flexible wire		22-14 AWG		22-14 AWG	
Ambient temperature	(°C)	-40 ... +70		-40 ... +70	

Sockets for miniature P.C.B. relays

		PRCGZ80
		Screw terminals Two levels
<i>Specifications</i>		
Nominal load	(A)	12 (300V)
Dielectric strength		
Adjacent screws	(kV)	3
Screws - rail	(kV)	3
Terminals Type		
		Screw M4, Pozidriv
Max. torque	(Nm)	0,7
Protection category		IP20
Capacity Solid wire	(mm ²)	2x2.5
Flexible wire		22-14 AWG
Ambient temperature	(°C)	-40 ... +70

Miniature plug-in relays

		PRC4M20...	PRC4M30...	PRC4M40...
		2 pole	3 pole	4 pole
Contacts				
Number of contacts		2 changeover	3 changeover	4 changeover
Standard material		AgNi	AgNi	AgNi
Optional material		AgNi/Au 5μ	AgNi/Au 5μ	AgNi/Au 5μ
Voltage				
Max switching voltage AC/DC (poll. 3)		250V	250V	250V
Max switching voltage AC (poll. 2)		400V	400V	400V
Min switching voltage AC/DC		5V	5V	5V
Current				
Rated load	AC1 (A)	12 (250V AC)	10 (250V AC)	6 (250V AC)
	AC15 (A)	4 (250V AC)	4 (250V AC)	2,5 (250V AC)
	DC1 (A)	12 (24V DC)	10 (24V DC)	6 (24V DC)
Min. switching current	(mA)	5	5	5
Max. inrush current	(A)	24	20	12
Rated current	(A)	12	10	6
Max. breaking capacity	(VA)	3000	2500	1500
Resistance	(mΩ)	≤100 (100mA, 24V)	≤100 (100mA, 24V)	≤100 (100mA, 24V)
Max. operating frequency				
At rated load	cycles/hour	1200	1200	1200
No load	cycles/hour	18000	18000	18000
Coil				
Rated voltage	AC 50/60Hz (V)	6 ... 240	6 ... 240	6 ... 240
	DC (V)	5 ... 220	5 ... 220	5 ... 220
Must release	AC	≥0.2 Un	≥0.2 Un	≥0.2 Un
time voltage	DC	≥0.1 Un	≥0.1 Un	≥0.1 Un
Operating range of supply voltage		Table 1, 2	Table 1, 2	Table 1, 2
Rated power consumption	AC 50Hz (VA)	1.5	1.6	1.6
	60Hz (VA)	1.3	1.3	1.3
	DC (W)	0.9	0.9	0.9
	AC/DC (W)	-	-	-
Insulation				
Insulation category		C250	C250	B250
Insulation rated voltage	(VAC)	250	250	250
Dielectric strength	Coil-Contact (VAC)	2500	2500	2500
	Contact-Contact(VAC)	1500	1500	1500
	Pole-Pole (VAC)	2500	2500	2000
Contact coil distance	Clearance (mm)	≥ 2.5	≥ 2.5	≥ 1.6
	Creepage (mm)	≥ 4	≥ 4	≥ 3.2
General data				
Operating time (typical value)	AC (ms)	10	10	10
	DC (ms)	13	13	13
Release time (typical value)	AC (ms)	8	8	8
	DC (ms)	3	3	3
Electrical life	Resistive	≥ 10 ⁵ (12A, 250V AC)	≥ 10 ⁵ (10A, 250V AC)	≥ 10 ⁵ (6A, 250V AC)
	Cos φ	See curves	See curves	See curves
Mechanical life	(cycles)	≥ 10 ⁷	≥ 10 ⁷	≥ x10 ⁷
Ambient temperature	Storage (°C)	-40 ... +85	-40 ... +85	-40 ... +85
	Operating AC (°C)	-40 ... +55	-40 ... +55	-40 ... +55
	DC (°C)	-40 ... +70	-40 ... +70	-40 ... +70
Cover protection category		IP40	IP40	IP40
Shock resistance	(g)	10	10	10
Vibration resistance	(g)	5 (for 10..150Hz)	5 (for 10..150Hz)	5 (for 10..150Hz)

Table 1. Coil data DC version

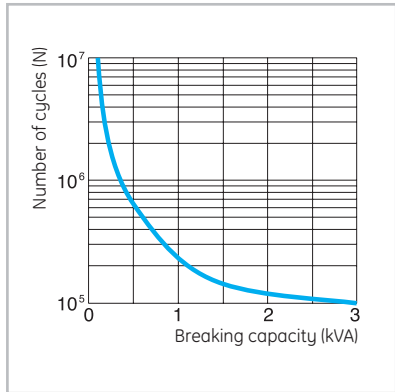
Rated voltage V DC	Coil resistance Ω	Coil operating range V DC	
		Min. (at 20°C)	Max. (at 55°C)
12	160	9.6	13.2
24	640	19.2	26.4
48	2600	38.4	52.8
110	13600	88	121
220	54000	176	242

Table 2. Coil data AC 50/60Hz version

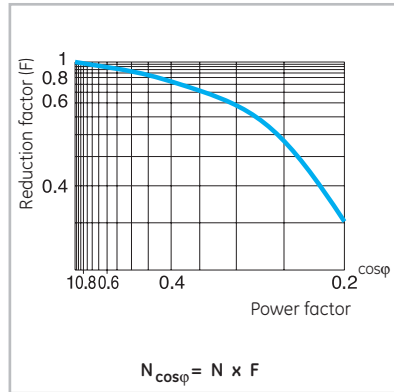
Rated voltage V AC	Coil resistance Ω	Coil operating range V AC	
		Min. (at 20°C)	Max. (at 55°C)
12	39	9.6	13.2
24	158	19.2	26.4
48	640	38.4	52.8
120	3770	88	121
230	16100	184	253

Miniature 2 pole plug-in relays

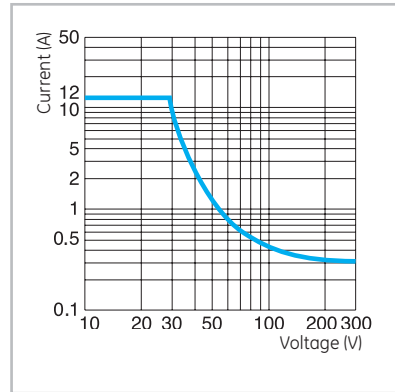
Electrical life at AC resistive load



Electrical life reduction factor at AC inductive load

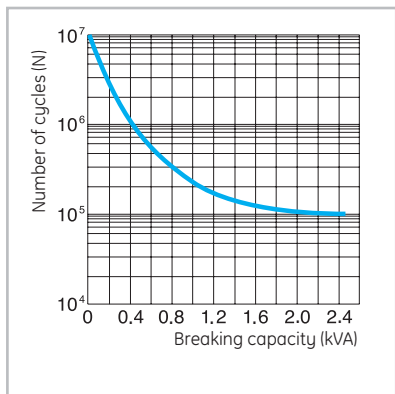


Max. DC resistive load breaking capacity

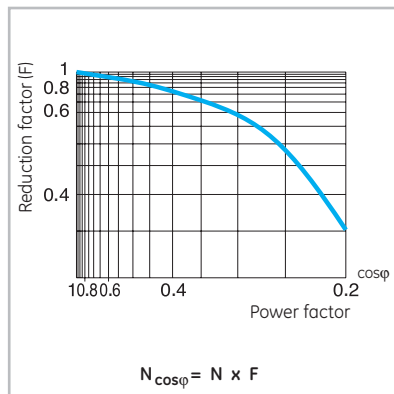


Miniature 3 pole plug-in relays

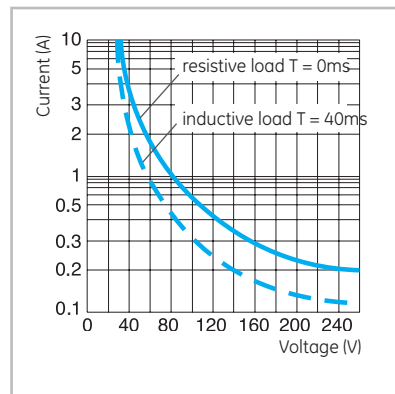
Electrical life at AC resistive load



Electrical life reduction factor at AC inductive load

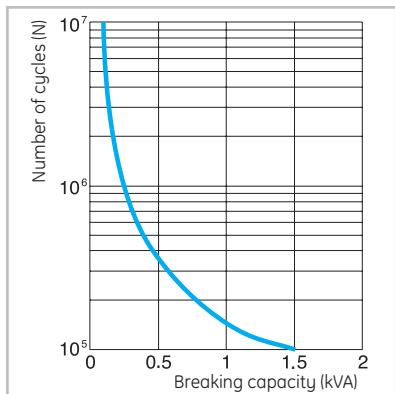


Max. DC load breaking capacity

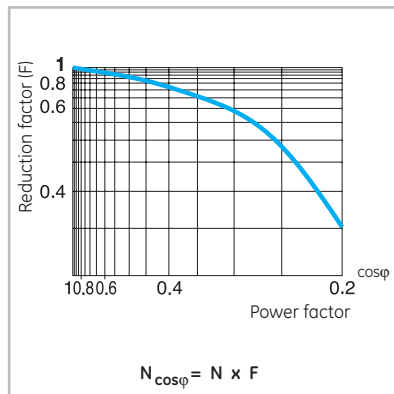


Miniature 4 pole plug-in relays

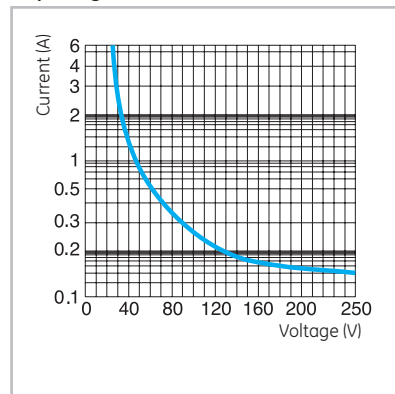
Electrical life at AC resistive load



Electrical life reduction factor at AC inductive load



Max. DC resistive load breaking capacity



Interface plug-in relays

PRC1S13...			
Contacts			
Number of contacts	1 changeover		
Standard material	AgSnO ₂		
Optional material			
Voltage			
Max switching voltage	AC/DC (poll. 3)	AC 250V / DC 150V	
	AC (poll. 2)	AC 400V / DC 300V	
Min switching voltage AC/DC	12V		
Current			
Rated load	AC1	(A)	6 (250V AC)
	AC15	(A)	
	DC1	(A)	6 (24V DC)
Min. switching current	(mA)	10	
Max. inrush current (A)	15		
Rated current	(A)	6	
Max. breaking capacity	(VA)	1500V	
Resistance	(mΩ)	≤100 (100mA, 24V)	
Max. operating frequency			
At rated load	360 cycles/hour		
No load	72000 cycles/hour		
Coil			
Rated voltage	AC/DC	(V)	24, 230
	AC 50/60Hz	(V)	230
	DC (V)		12, 24
Must release time voltage	AC	≥0,2 Un	
	DC	≥0,1 Un	
Operating range of supply voltage	See Table 1		
Rated power consumption	AC 50Hz	(VA)	0.6...1.9
	60Hz	(VA)	-
	DC (W)		0.33
	AC/DC	(W)	0.48 (at 24V), 1.8 (at 230V)
Insulation			
Insulation category	C250		
Insulation rated voltage	(VAC)	400	
Dielectric strength	Coil-Contact	(VAC)	4000
	Contact-Contact	(VAC)	1000
	Pole-Pole	(VAC)	-
Contact coil distance	Clearance	mm	≥ 8
	Creepage	mm	≥ 8
General			
Operating time (typical value)	AC	(ms)	8
	DC	(ms)	6
Release time (typical value)	AC	(ms)	15
	DC	(ms)	8
Electrical life	Resistive		
	Cos φ		
Mechanical life (cycles)			
Ambient temperature	Storage	(°C)	20x10 ⁶
	Operating	AC	(°C) -40 ... +70
		DC	(°C) -20 ... +55
Cover protection category	-20 ... +55		
Shock resistance	(g)	IP20	
Vibration resistance	(g)	10	
		0.062" DA (10 ... 55Hz)	

Table 1. Interface relay

Rated voltage V		Coil operating range V DC	
		Min.	Max.
12	DC	9	17
24	DC	17	30
24	AC/DC	18	30
230	AC	80	250
230	AC/DC	185	250

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Interface relay for PLC systems

PRC1T10...		
Contacts		
Number of contacts		1 changeover
Standard material		AgNi
Optional material		
Voltage		
Max. switching voltage	AC/DC	AC 400V / DC 300V
Min. switching voltage	AC/DC	5V
Current		
Rated load	AC1	(A) 16 (250V AC)
	DC1	(A) 16 (24V DC)
Min. switching current	(mA)	5
Max. inrush current (A)		30
Rated current	(A)	16
Max. breaking capacity	(VA)	4000
Min. breaking capacity	(W)	0,3
Resistance	(mΩ)	≤100 (at 1A, 24V)
Max. operating frequency		
At rated load		600 cycles/hour
No load		72000 cycles/hour
Coil		
Rated voltage	AC 50/60Hz	(V) 24, 120, 230
	DC	(V) 12, 24, 110
Must release time	AC	≥0.15 Un
voltage	DC	≥0.1 Un
Operating range of supply voltage		See Table 1, 2
Rated power	AC	(VA) 0.75
consumption	DC	(W) 0.4
Insulation		
Insulation category		C250
Insulation rated voltage	(VAC)	400
Dielectric strength	Coil-Contact	(VAC) 5000
	Contact-Contact	(VAC) 1000
	Pole-Pole	(VAC) -
Contact coil	Clearance	mm ≥ 10
distance	Creepage	mm ≥ 10
General		
Operating time	AC	(ms) 7
(typical value)	DC	(ms) 7
Release time	AC	(ms) 5
(typical value)	DC	(ms) 3
Electrical life	Resistive	(s) ≥ 0.7 × 10 ⁵ (at 16A, 250VAC)
	Cos φ	See curves
	L/R = 40ms	≥ 10 ⁵ (at 0.12A, 220VDC)
Mechanical life (cycles)		3 × 10 ⁷
Ambient	Storage	(°C) -40 ... +70
temperature	Operating	(°C) -40 ... +70
Cover protection category		IP40
Shock resistance	(g)	30
Vibration resistance	(g)	10 (for 10 ... 150Hz)

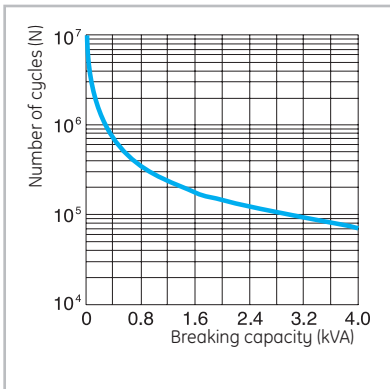
Table 1. Coil data DC version

Rated voltage V DC	Coil resistance (±10%) at 20°C Ω	Coil operating range V DC	
		U Min.	U Max.
12	360	8.4	30.6
24	1440	16.8	61.2
110	25200	77	280

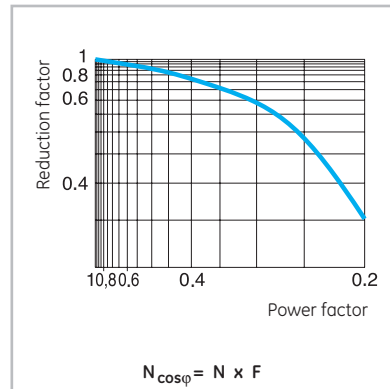
Table 2. Coil data AC 50/60Hz version

Rated voltage V AC	Coil resistance (±10%) at 20°C Ω	Coil operating range V AC	
		U Min.	U Max.
24	400	19.2	28.8
120	10200	96	144
230	38500	184	276

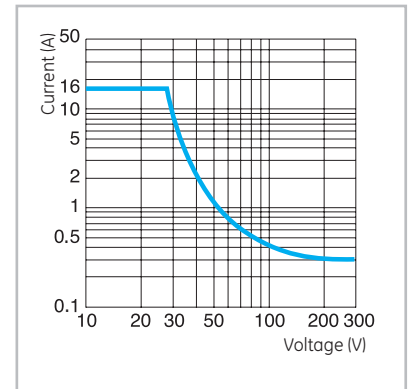
Electrical life at AC resistive load



Electrical life reduction factor at AC inductive load



Max. DC load breaking capacity



Interface relay for PLC systems

PRC1T20...

Contacts

Number of contacts	2 changeover
Standard material	AgNi

Optional material

Voltage

Max. switching voltage	AC/DC	AC 400V / DC 300V
Min. switching voltage	AC/DC	5V

Current

Rated load	AC1	(A)	8 (250V AC)
	DC1	(A)	8 (24V DC)
Min. switching current	(mA)	5	
Max. inrush current(A)	15		
Rated current	(A)	8	
Max. breaking capacity	(VA)	2000	
Min. breaking capacity	(W)	0,3	
Resistance	(mΩ)	≤100 (at 1A, 24V)	

Max. operating frequency

At rated load	600 cycles/hour
No load	72000 cycles/hour

Coil

Rated voltage	AC 50/60Hz	(V)	24, 230
	DC	(V)	12, 24
Must release time voltage	AC	≥0.15 Un	
	DC	≥0.1 Un	
Operating range of supply voltage	See Table 1, 2		
Rated power consumption	AC	(VA)	0.75
	DC	(W)	0.4

Insulation

Insulation category	C250		
Insulation rated voltage	(VAC)	400	
Dielectric strength	Coil-Contact	(VAC)	5000
	Contact-Contact	(VAC)	1000
	Pole-Pole	(VAC)	-
Contact coil distance	Clearance	mm	≥ 10
	Creepage	mm	≥ 10

General

Operating time (typical value)	AC	(ms)	7
	DC	(ms)	7
Release time (typical value)	AC	(ms)	5
	DC	(ms)	3
Electrical life	Resistive	(s)	≥ 0.7 × 10 ⁵ (at 8A, 250VAC)
	Cos φ	See curves	
	L/R = 40ms	≥ 10 ⁵ (at 0,12A, 220VDC)	
Mechanical life (cycles)	3×10 ⁷		
Ambient temperature	Storage	(°C)	-40 ... +70
	Operating	(°C)	-40 ... +70
Cover protection category	IP40		
Shock resistance	(g)	20	
Vibration resistance	(g)	10 (for 10 ... 150Hz)	

Technical data

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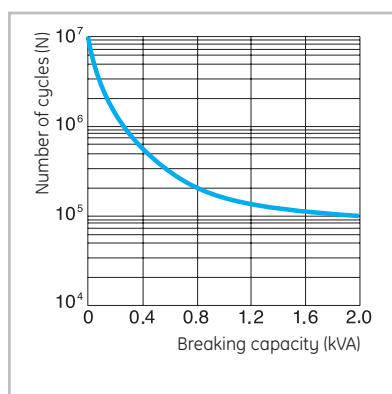
Table 1. Coil data DC version

Rated voltage V DC	Coil resistance (±10%) at 20°C Ω	Coil operating range V DC	
		U Min.	U Max.
12	360	8.4	30.6
24	1440	16.8	61.2
110	25200	77	280

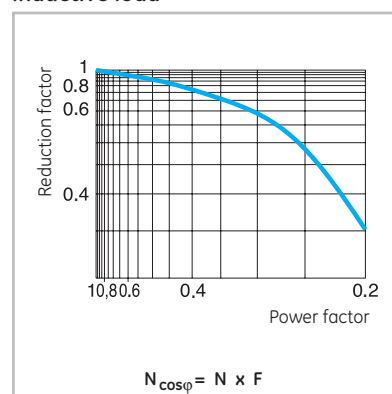
Table 2. Coil data AC 50/60Hz version

Rated voltage V AC	Coil resistance (±10%) at 20°C Ω	Coil operating range V AC	
		U Min.	U Max.
24	400	19.2	28.8
120	10200	96	144
230	38500	184	276

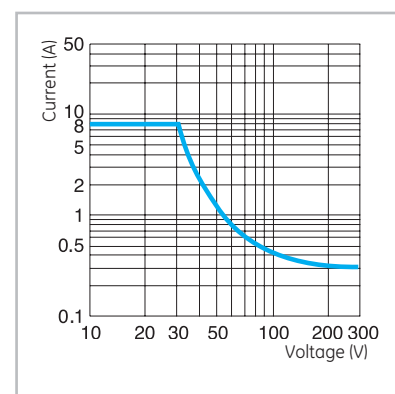
Electrical life at AC resistive load



Electrical life reduction factor at AC inductive load

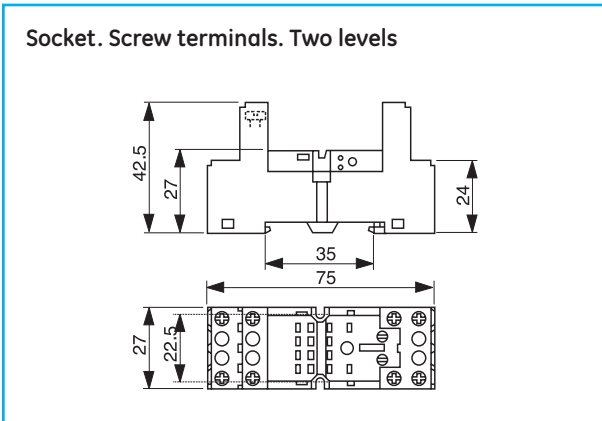
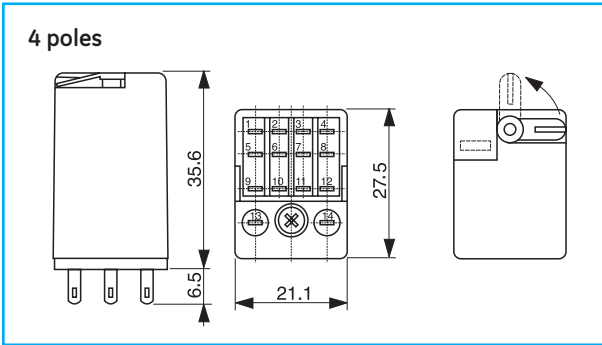
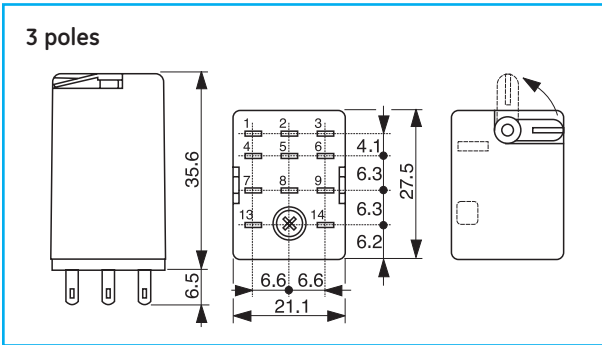
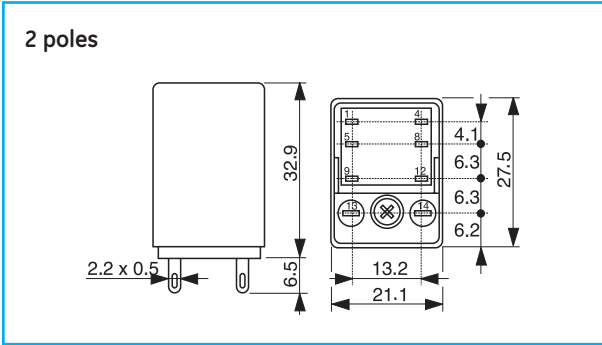


Max. DC load breaking capacity

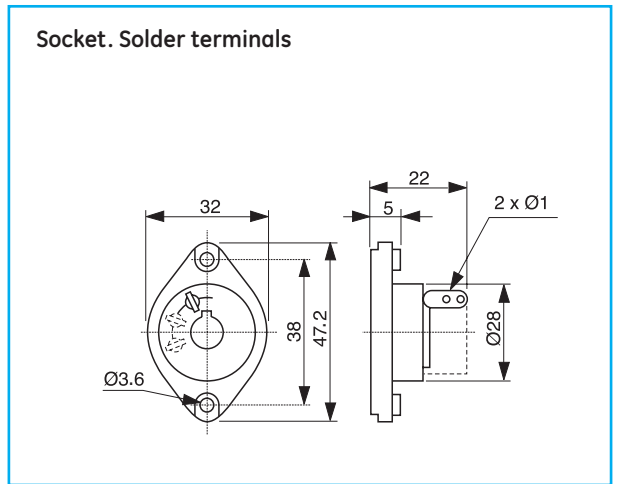
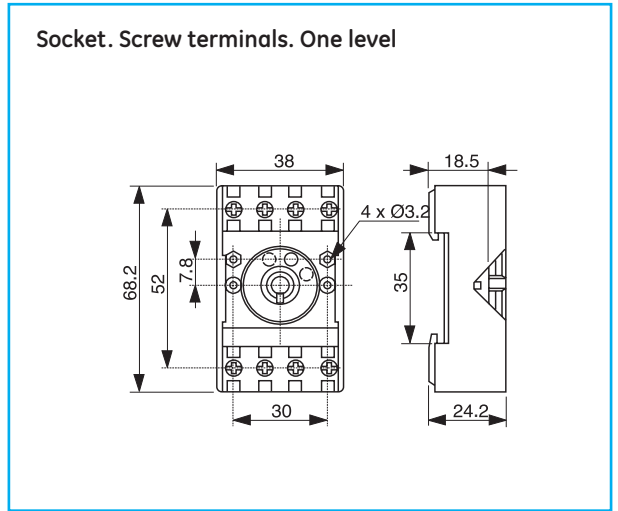
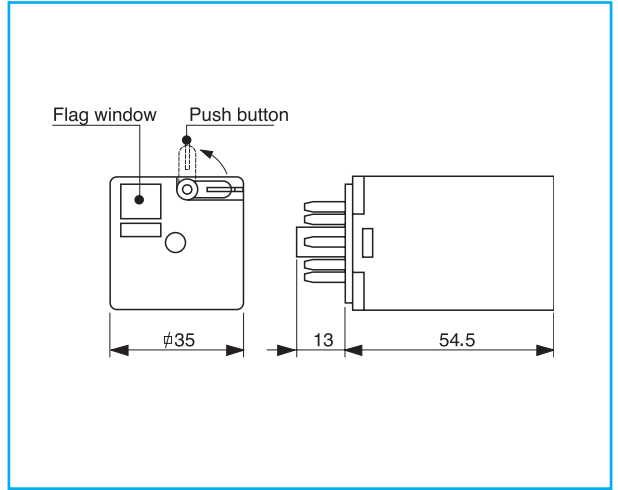


Dimensional drawings

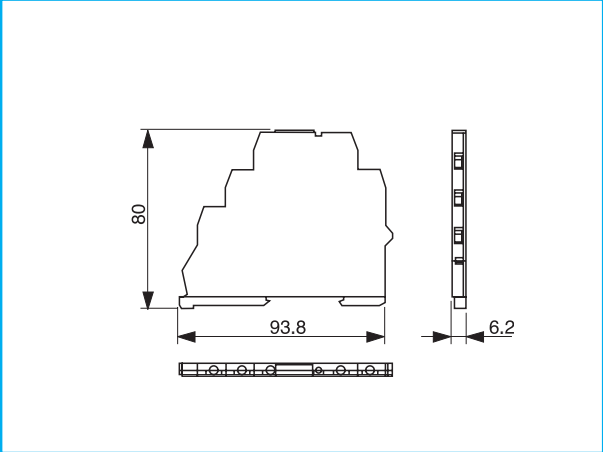
Miniature



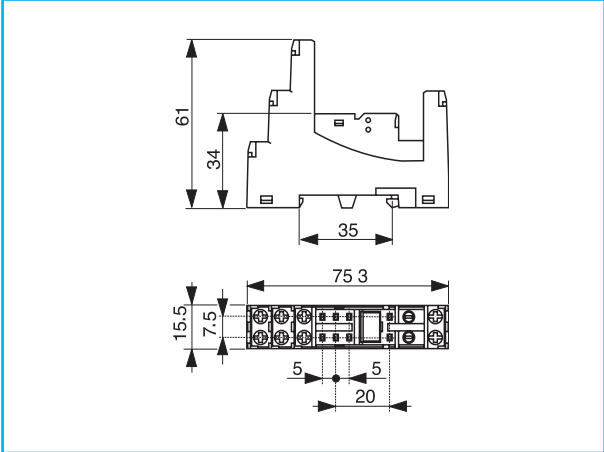
Standard 8-11 pin



Interface relay



Socket for miniature P.C.B. relays



Dimensions

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