

1.3 Industrial Relays – MRC



Application	Types	Pins	Contacts	AC ratings	DC ratings	Socket
C2 Series						
General purpose	C2-A2x			10 A / 250 V	0.5 A / 110 V	S2
Low switching load	C2-T2x			6 A / 250 V	6 A / 30 V	S2
DC load switching	C2-G2x		1.7mm 	10 A / 250 V	1.2 A / 110 V	S2
C3 Series						
General purpose	C3-A3x			10 A / 250 V	0.5 A / 110 V	S3
Low switching load	C3-T3x			6 A / 250 V	6 A / 30 V	S3
DC load switching	C3-G3x		1.7mm 	10 A / 250 V	1.2 A / 110 V	S3
DC load switching with magnetic blow out	C3-M1x		>3mm 	10 A / 250 V	10 A / 220 V	S3
DC load switching double make	C3-X1x		>3mm 	10 A / 250V	7 A / 110 V	S3
Latching relay	C3-R2x			10 A / 250 V	0.5 A / 110 V	S3
Sensitive Coil 250mW ... 300mW	C3-S1x			6 A / 250 V	6 A / 30 V	S3
Sensitive Coil 500mW ... 800mW	C3-E2x			6 A / 250	6 A / 30 V	S3
Sensitive Coil 500mW ... 800mW	C3-N3x			6 A / 250	6 A / 30 V	S3
Railway application	R3-N3x			6 A / 250	6 A / 30 V	S3
C4 Series						
General purpose	C4-A4x			10 A / 250 V	0.5 A / 110 V	S4
DC load switching double make	C4-X2x		2x >3mm 	10 A / 250 V	7 A / 110 V	S4
Latching relay	C4-R3x			10 A / 250 V	0.5 A / 110 V	S4
C5 Series						
Power relay	C5-A2x			16 A / 400 V	0.5 A / 110 V	S5
Power relay	C5-A3x			16 A / 400 V	0.5 A / 110 V	S5
DC load switching	C5-G3x		1.7mm 	16 A / 400 V	1.2 A / 110 V	S5
DC load switching double make	C5-X1x		>3mm 	16 A / 400 V	7 A / 110 V	S5
DC load switching with magnetic blow out	C5-M1x		>3mm 	16 A / 400 V	10 A / 220 V	S5
DC load switching with magnetic blow out	C5-M2x		>3mm 	16 A / 250 V	7 A / 110 V	S5
Latching relay	C5-R2x			10 A / 400 V	10 A / 30 V	S5

Type	C2-A2x/ ... V Standard relay, 2 change-over contacts		
Maximum contact load	10 A/250 V AC-1	0,5 A/110 V DC-1	
	10 A/30 V DC-1	0,2 A/220 V DC-1	
Recommended minimum contact load	10 mA/10 V Code 0, 9 5 mA/5 V Code 8		

Contacts			
Material	Standard	Code 0	AgNi
	Optional	Code 8	AgNi + 10 μ Au
	Optional	Code 9	AgNi + 0,2 μ Au
Max. switching current	10 A		
Max. peak inrush current (20 ms.)	30 A		
Max. switching voltage	250 V		
Max. AC load (Fig 1 1)	2,5 kVA		
Max. DC load	See Fig 2		

Coils			
Coil resistance	see table; tolerance ± 10 %		
Pull-in voltage	≤ 0,8 x U _N		
Pull-in voltage	≥ 0,1 x U _N		
Nominal power	2,2 VA (AC)/1,3 W (DC)		

Table						
	VAC	Ω	mA	VDC	Ω	mA
	24	67	92	24	443	54
	48	296	46	48	1K8	27
	115	1K7	19	110	9K2	12
	230	7K1	9,5	220	36K1	6

Insulation	Volt rms, 1 min
Open contact	1000 V
Between adjacent poles	2,5 kV
Between contacts and coil	2,5 kV
Insulation resistance at 500 V	≥ 1 GΩ
Insulation, IEC 61810-1	2,5 kV/3

Specifications	
Ambient temperature operation/storage	-40 (no ice)...60 °C /-40 ... 80 °C
Pick-up time + bounce time	16 ms/≤ 3 ms
Release time + bounce time	8 ms/≤ 1 ms
Mechanical life ops	AC: 10 Mill./DC: 20 Mill.
DC voltage endurance at rated load	≥ 100000 ops. switching cycles
Operating frequency at nominal load	≤ 1200/ops/h
Protection degree	IP40
Weight	90 g

Standard types			
VAC 50 Hz/60 Hz: 24, 48, 115 (120), 230 (240)	C2-A20/AC ... V	C2-A28/AC ... V	C2-A29AC ... V
LED	C2-A20X/AC ... V	C2-A28X/AC ... V	C2-A29X/AC ... V
RC Suppressor	C2-A20R/AC ... V	C2-A28R/AC ... V	C2-A29R/AC ... V
VDC 24, 48, 110, 220	C2-A20/DC ... V	C2-A28/DC ... V	C2-A29/DC ... V
LED	C2-A20X/DC ... V	C2-A28X/DC ... V	C2-A29X/DC ... V
Free wheeling diode	C2-A20DX/DC ... V	C2-A28DX/DC ... V	C2-A29DX/DC ... V
Polarity and free wheeling diode	C2-A20FX/DC ... V	C2-A28FX/DC ... V	C2-A29FX/DC ... V
AC/DC bridge rectifier 24 V, 48 V, 60 V	C2-A20BX/UC ... V	C2-A28BX/UC ... V	C2-A29BX/UC ... V

"..." Enter the voltage for full type designation

Accessories	
Socket:	S2-B, S2-S, S2-L, S2-P, S2-P0
Optional accessories (blanking plug):	SO-NP, SO-OP



Connection diagram

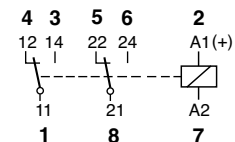


Fig. 1 AC voltage endurance

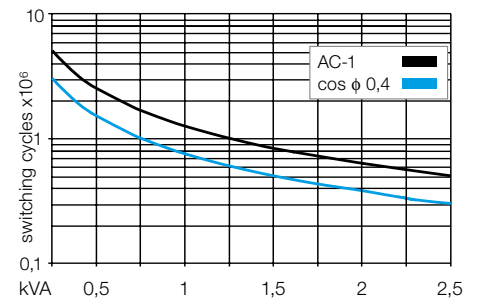
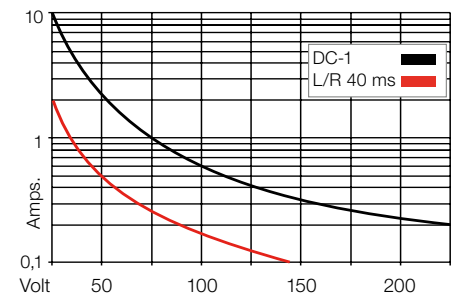
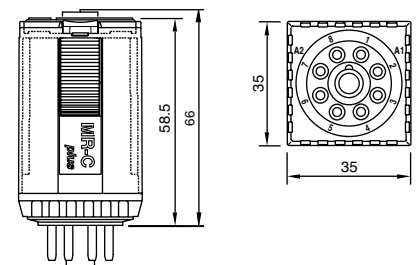


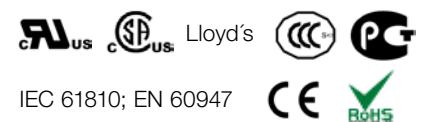
Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



Type	C2-T2x/ ... V Standard relay for low level 2 Change-over contacts			
Maximum contact load	6 A/250 V	AC-1	6 A/30 V	DC-1
Recommended minimum contact load	5 mA/5 V	Code 1		
	1 mA/5 V	Code 2		

Contacts			
Material	Standard	Code 1	AgNi + 0,2 μ Au
	Optional	Code 2	AgNi + 10 μ Au
Rated current	6 A		
Switch-on current max. (20 ms)	15 A		
Switching voltage max.	250 V		
AC load (Fig 1)	1,2 kVA		
DC load	see Fig. 2		

Coil			
Coil resistance	see table; tolerance ± 10 %		
Pick-up voltage	≤ 0,8 × U _N		
Release voltage	≥ 0,1 × U _N		
Nominal power	2,2 VA (AC)/1,3 W (DC)		

Coil table					
VAC	Ω	mA	VDC	Ω	mA
24	67	92	24	443	54
48	296	46	48	1K8	27
115	1K7	19	110	9K2	12
230	7K1	9,5	220	36K1	6

Insulation		Volt rms, 1 min
Contact open	1000 V	
Contact/contact	2,5 kV	
Contact/coil	2,5 kV	
Insulation resistance at 500 V	≥ 1 GΩ	
Insulation, IEC 61810-1	2,5 kV/3	

Specifications	
Ambient temperature operation/storage	-40 (no ice)...60 °C /-40 ... 80 °C
Pick-up time/bounce time	16 ms/≤ 3 ms
Release time/bounce time	8 ms/≤ 1 ms
Mechanical life ops	AC: 10 Mill./DC: 20 Mill.
DC voltage endurance at rated load	≥ 100000 switching cycles
Switching frequency at rated load	≤ 1200/ops/h
Protection class	IP40
Weight	90 g

Standard types		
VAC 50 Hz/60 Hz: 24, 48, 115 (120), 230 (240)	C2-T21/AC ... V	C2-T22/AC ... V
LED	C2-T21X/AC ... V	C2-T22X/AC ... V
RC Suppressor	C2-T21R/AC ... V	C2-T22R/AC ... V
VDC 24, 48, 110, 220	C2-T21/DC ... V	C2-T22/DC ... V
LED	C2-T21X/DC ... V	C2-T22X/DC ... V
Free wheeling diode	C2-T21DX/DC ... V	C2-T22DX/DC ... V
Polarity and free wheeling diode	C2-T21FX/DC ... V	C2-T22FX/DC ... V
AC/DC bridge rectifier 24 V, 48 V, 60 V	C2-T21BX/UC ... V	C2-T22BX/UC ... V

"..." Enter the voltage for full type designation

Accessories	
Socket:	S2-B, S2-S, S2-L, S2-P, S2-P0
Optional accessories (blanking plug):	SO-NP, SO-OP



Connection diagram

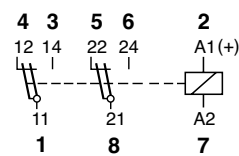


Fig. 1 AC voltage endurance

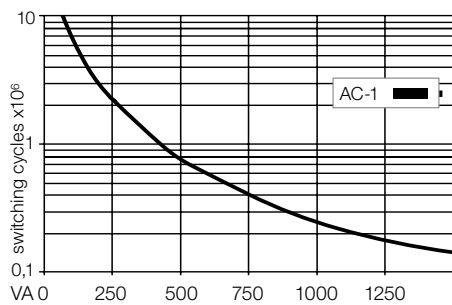
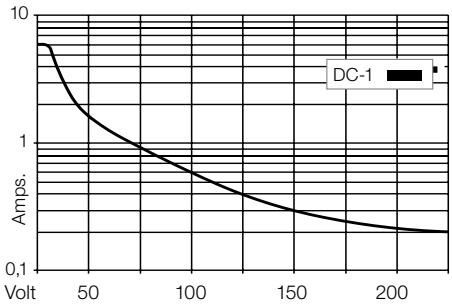
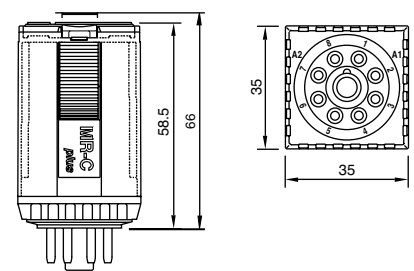


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



IEC 61810; EN 60947

Type	C2-G2x/ ... V Standard relays, DC application 2 open contacts		
Maximum contact load	10 A/250 V AC-1 10 A/30 V DC-1		1,2 A/110 V DC-1 0,4 A/220 V DC-1

Contacts			
Material	Standard	Code 0	AgNi
Rated current			10 A
Switch-on current max. (20 ms)			30 A
Switching voltage max.			250 V
AC load (Fig 1)			2,5 kVA
DC load			see Fig. 2

Coil	
Coil resistance	see table; tolerance $\pm 10\%$
Pick-up voltage	$\leq 0,8 \times U_N$
Release voltage	$\geq 0,1 \times U_N$
Nominal power	2,4 VA (AC)/1,6 W (DC)

Coil table	VAC	Ω	mA	VDC	Ω	mA
	24	65	100	24	360	66
	48	286	50	48	1K4	34
	115	1K7	21	110	7K6	15
	230	6K8	10	220	30K3	7,5

Insulation	Volt rms, 1 min
Contact open	2000 V
Contact/contact	2,5 kV
Contact/coil	2,5 kV
Insulation resistance at 500 V	$\geq 1 \text{ G}\Omega$
Insulation, EN 61810-1	2,5 kV/3

Specifications	
Ambient temperature operation/storage	-40 (no ice)...60 °C /-40 ... 80 °C
Pick-up time/bounce time	20 ms/ $\leq 3 \text{ ms}$
Release time/bounce time	8 ms/ $\leq 1 \text{ ms}$
Mechanical life ops	AC: 10 Mill./DC: 20 Mill.
DC voltage endurance at rated load	≥ 100000 switching cycles
Switching frequency at rated load	≤ 1200 /ops/h
Protection class	IP40
Weight	90 g

- Standard types**
VAC 50 Hz/60 Hz: 24, 48, 115 (120), 230 (240)
LED
RC Suppressor
- VDC 24, 48, 110, 220**
LED
Free wheeling diode
Polarity and free wheeling diode
- AC/DC bridge rectifier 24 V, 48 V, 60 V**

- C2-G20/AC ... V**
C2-G20X/AC ... V
C2-G20R/AC ... V
- C2-G20/DC ... V**
C2-G20X/DC ... V
C2-G20DX/DC ... V
C2-G20FX/DC ... V
- C2-G20BX/UC ... V**

"..." Enter the voltage for full type designation

Accessories	
Socket:	S2-B, S2-S, S2-L, S2-P, S2-P0
Optional accessories (blanking plug):	SO-NP, SO-OP



Connection diagram

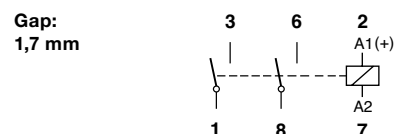


Fig. 1 AC voltage endurance

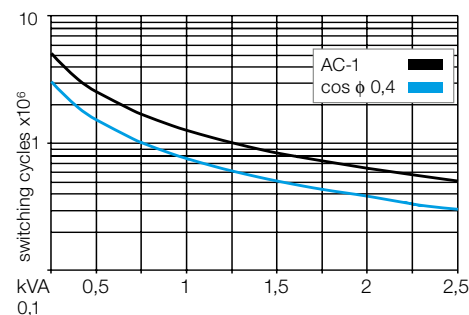
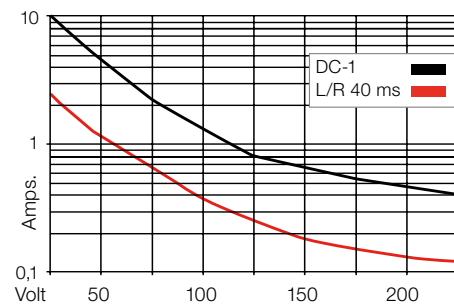
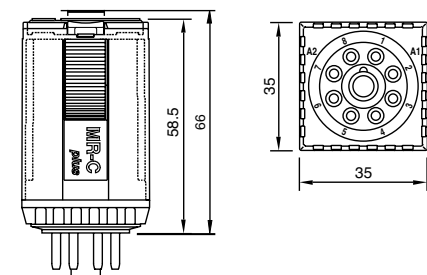


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



IEC 61810; EN 60947

C20-A20

8-pin standard relay, 2-pole, plug-in according to IEC 60067

Type	C20-A20/ ... V Standard relays 2 change-over contacts
Maximum contact load	10 A/250 V AC-1 0,5 A/110 V DC-1 10 A/30 V DC-1
Recommended minimum contact load	10 mA/10 V

Contacts	
Material	AgNi
Rated current	10 A
Switch-on-current max. (20 ms.)	30 A
Max. switching voltage	250 V
Max. AC load (Fig 1)	2,5 kVA
Max. DC load	See Fig 2

Coils	
Coil resistance	see table; tolerance $\pm 10\%$
Pick-up voltage	$\leq 0,8 \times U_N$
Release voltage	$\geq 0,1 \times U_N$
Nominal power	2,2 VA (AC)/1,3 W (DC)

Table																															
	<table border="1"> <thead> <tr> <th>VAC</th> <th>Ω</th> <th>mA</th> <th>VDC</th> <th>Ω</th> <th>mA</th> </tr> </thead> <tbody> <tr> <td>24</td> <td>67</td> <td>92</td> <td>12</td> <td>115</td> <td>104</td> </tr> <tr> <td>115</td> <td>1K7</td> <td>19</td> <td>24</td> <td>480</td> <td>50</td> </tr> <tr> <td>230</td> <td>7K1</td> <td>9,5</td> <td>48</td> <td>1K8</td> <td>26</td> </tr> <tr> <td></td> <td></td> <td></td> <td>110</td> <td>9K</td> <td>12</td> </tr> </tbody> </table>	VAC	Ω	mA	VDC	Ω	mA	24	67	92	12	115	104	115	1K7	19	24	480	50	230	7K1	9,5	48	1K8	26				110	9K	12
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115	1K7	19	24	480	50																										
230	7K1	9,5	48	1K8	26																										
			110	9K	12																										

Insulation	Volt rms, 1 min
Contact open	1000 V
Contact/contact	2,5 kV
Contact/coil	2,5 kV
Insulation resistance at 500 V	$\geq 1 \text{ G}\Omega$
Insulation, IEC 61810-1	2,5 kV/3

Specifications	
Ambient temperature operation/storage	-40...70 °C DC (55 °C AC) / -40 ... 80 °C
Pick-up time bounce time typ.	8 ms/3 ms
Release time bounce time typ.	18 ms/1 ms
Mechanical life ops	AC: 10 Mill./DC: 20 Mill.
DC voltage endurance at rated load	≥ 100000 ops. switching cycles
Operating frequency at nominal load	≤ 1200 /ops/h
Protection degree	IP40
Weight	79 g

Standard types	
VAC 50 Hz: 24, 115, 230	C20-A20/AC ... V
VAC 60 Hz: 120	C20-A20/AC ... V 60 Hz
LED	C20-A20X/AC ... V
VDC 12, 24, 36, 48, 110	C20-A20/DC ... V
LED	C20-A20X/DC ... V
Free wheeling diode	C20-A20DX/DC ... V
Polarity and free wheeling diode	C20-A20FX/DC ... V
AC/DC bridge rectifier 24 V	C20-A20BX/UC ... V

"..." Enter the voltage for full type designation

Accessories	
Socket:	S20-B
Blanking plug:	PB30-BK
Button without lockable function:	PB30-OR
Retaining clip, plastic:	S30-CM



Connection diagram

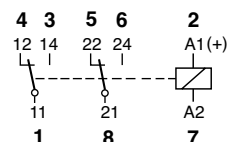


Fig. 1 AC voltage endurance

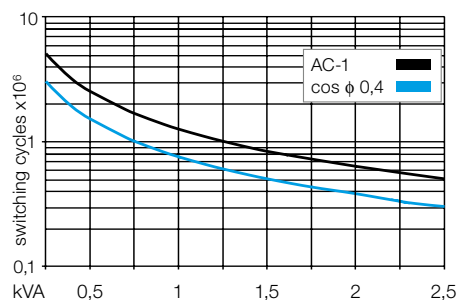
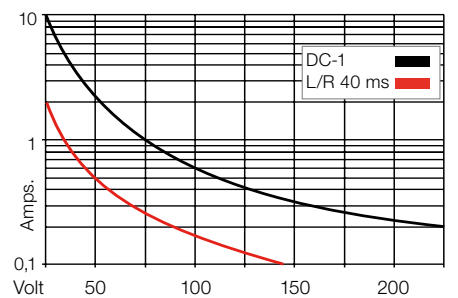
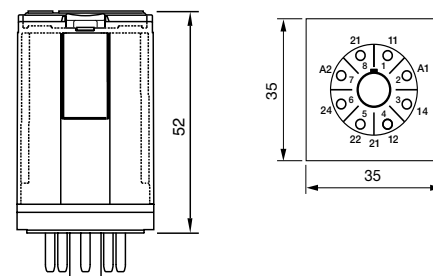


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



IEC 61810; EN 60947

Type	C3-A3x/ ... V Standard relays, 3 change-over contacts		
Maximum contact load	10 A/250	AC-1	0,5 A/110 V DC-1
Recommended minimum contact load	10 mA/30	DC-1	0,2 A/220 V DC-1
	10 mA/10 V	Code 0, 9	
	5 mA/5 V	Code 8	

Contacts			
Material	Standard	Code 0	AgNi
	Optional	Code 8	AgNi + 10 μ Au
	Optional	Code 9	AgNi + 0,2 μ Au
Rated current	10 A		
Switch-on current max. (20 ms)	30 A		
Switching voltage max.	250 V		
AC load (Fig 1)	2,5 kVA		
DC load	see Fig. 2		

Coil	
Coil resistance	see table; tolerance ± 10 %
Pick-up voltage	≤ 0,8 × U _N
Release voltage	≥ 0,1 × U _N
Nominal power	2,2 VA (AC)/1,3 W (DC)

Coil table					
VAC	Ω	mA	VDC	mA	
24	67	92	24	443	54
48	296	46	48	1K8	27
115	1K7	19	110	9K2	12
230	7K1	9,5	220	36K1	6

Insulation	
	Volt rms, 1 min
Contact open	1000 V
Contact/contact	2,5 kV
Contact/coil	2,5 kV
Insulation resistance at 500 V	≥ 1 GΩ
Insulation, IEC 61810-1	2,5 kV/3

Specifications	
Ambient temperature operation/storage	-40 (no ice)...60 °C /-40 ... 80 °C
Pick-up time/bounce time	16 ms/≤ 3 ms
Release time/bounce time	8 ms/≤ 1 ms
Mechanical life ops	AC: 10 Mill./DC: 20 Mill.
DC voltage endurance at rated load	≥ 100000 switching cycles
Switching frequency at rated load	≤ 1200/ops/h
Protection class	IP40
Weight	90 g

Standard types			
VAC 50 Hz/60 Hz: 24, 48, 115 (120), 230 (240)	C3-A30/AC ... V	C3-A38/AC ... V	C3-A39/AC ... V
LED	C3-A30X/AC ... V	C3-A38X/AC ... V	C3-A39X/AC ... V
RC Suppressor	C3-A30R/AC ... V	C3-A38R/AC...V	C3-A39R/AC...V
VDC 24, 48, 110, 220	C3-A30/DC ... V	C3-A38/DC ... V	C3-A39/DC ... V
LED	C3-A30X/DC ... V	C3-A38X/DC ... V	C3-A39X/DC ... V
Free wheeling diode	C3-A30DX/DC ... V	C3-A38DX/DC ... V	C3-A39DX/DC ... V
Polarity and free wheeling diode	C3-A30FX/DC ... V	C3-A38FX/DC ... V	C3-A39FX/DC ... V
AC/DC bridge rectifier 24 V, 48 V, 60 V	C3-A30BX/UC ... V	C3-A38BX/UC ... V	C3-A39BX/UC ... V

"..." Enter the voltage for full type designation

Accessories	
Socket:	S3-B, S3-S, S3-L, S3-P, S3-P0
Optional accessories (blanking plug):	SO-NP, SO-OP



Connection diagram

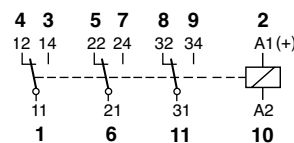


Fig. 1 AC voltage endurance

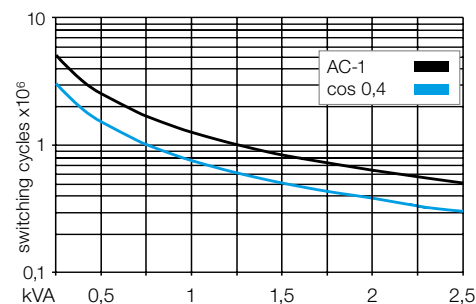
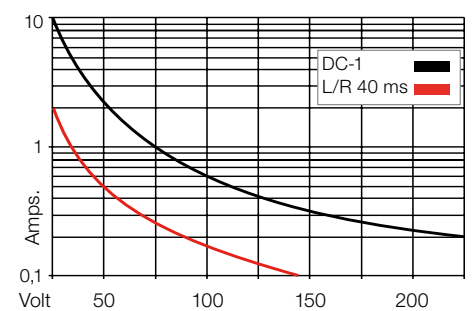
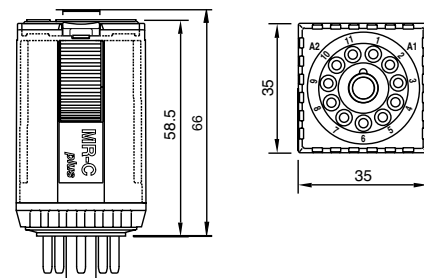


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



Type	C3-T3x/ ... V Standard relays for low level 3 change-over twin contacts			
Maximum contact load	6 A/250 V	AC-1	6 A/30 V	DC-1
Recommended minimum contact load	5 mA/5 V	Code 1		
	1 mA/5 V	Code 2		

Contacts			
Material	Standard	Code 1	AgNi + 0,2 μ Au
	Optional	Code 2	AgNi + 10 μ Au
Rated current	6 A		
Switch-on current max. (20 ms)	15 A		
Switching voltage max.	250 V		
AC load (Fig 1)	1,2 kVA		
DC load	see Fig. 2		

Coil			
Coil resistance	see table; tolerance ± 10 %		
Pick-up voltage	≤ 0,8 × U _N		
Release voltage	≥ 0,1 × U _N		
Nominal power	2,2 VA (AC)/1,3 W (DC)		

Coil table					
VAC	Ω	mA	VDC	Ω	mA
24	67	92	24	443	54
48	296	46	48	1K8	27
115	1K7	19	110	9K2	12
230	7K1	9,5	220	36K1	6

Insulation		Volt rms, 1 min
Contact open	1000 V	
Contact/contact	2,5 kV	
Contact/coil	2,5 kV	
Insulation resistance at 500 V	≥1 GΩ	
Insulation, EN 61810-1	2,5 kV/3	

Specifications	
Ambient temperature operation/storage	-40 (no ice)...60 °C /-40 ... 80 °C
Pick-up time/bounce time	16 ms/≤ 3 ms
Release time/bounce time	8 ms/≤ 1 ms
Mechanical life ops	AC: 10 Mill./DC: 20 Mill.
DC voltage endurance at rated load	≥100000 switching cycles
Switching frequency at rated load	≤ 1200/ops/h
Protection class	IP40
Weight	90 g

Standard types		
VAC 50 Hz/60 Hz: 24, 48, 115 (120), 230 (240)	C3-T31/AC ... V	C3-T32/AC ... V
LED	C3-T31X/AC ... V	C3-T32X/AC ... V
RC Suppressor	C3-T31R/AC ... V	C3-T32R/AC ... V
VDC 24, 48, 110, 220	C3-T31/DC ... V	C3-T32/DC ... V
LED	C3-T31X/DC ... V	C3-T32X/DC ... V
Free wheeling diode	C3-T31DX/DC ... V	C3-T32DX/DC ... V
Polarity and free wheeling diode	C3-T31FX/DC ... V	C3-T32FX/DC ... V
AC/DC bridge rectifier 24 V, 48 V, 60 V	C3-T31BX/UC ... V	C3-T32BX/UC ... V

"..." Enter the voltage for full type designation

Accessories	
Socket:	S3-B, S3-S, S3-L, S3-P, S3-P0
Optional accessories (blanking plug):	SO-NP, SO-OP



Connection diagram

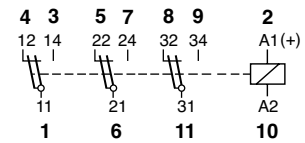


Fig. 1 AC voltage endurance

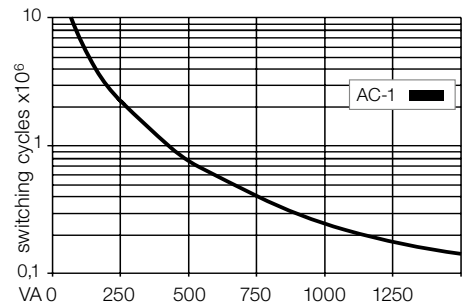
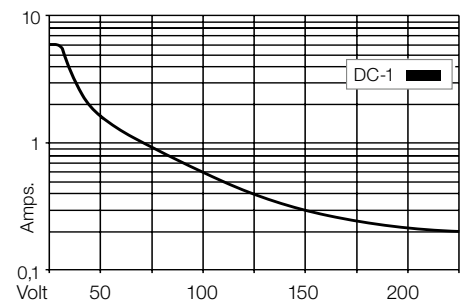
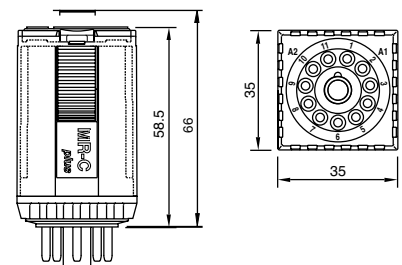


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



IEC 61810; EN 60947

Type	C3-G3x/ ... V Standard relays, DC application 3 open contacts		
Maximum contact load	10 A 250 V AC-1 10 A 30 V DC-1		1,2 A/110 V DC-1 0,4 A/220 V DC-1
Contacts			
Material	Standard	Code 0	AgNi
Rated current			10 A
Switch-on current max. (20 ms)			30 A
Switching voltage max.			250 V
AC load (Fig 1)			2,5 kVA
DC load			see Fig. 2

Coil	
Coil resistance	see table; tolerance $\pm 10\%$
Pick-up voltage	$\leq 0,8 \times U_N$
Release voltage	$\geq 0,1 \times U_N$
Nominal power	2,4 VA (AC)/1,6 W (DC)

Coil table																															
	<table border="1"> <thead> <tr> <th>VAC</th> <th>Ω</th> <th>mA</th> <th>VDC</th> <th>Ω</th> <th>mA</th> </tr> </thead> <tbody> <tr> <td>24</td> <td>65</td> <td>100</td> <td>24</td> <td>360</td> <td>66</td> </tr> <tr> <td>48</td> <td>286</td> <td>50</td> <td>48</td> <td>1K4</td> <td>34</td> </tr> <tr> <td>115</td> <td>1K7</td> <td>21</td> <td>110</td> <td>7K6</td> <td>15</td> </tr> <tr> <td>230</td> <td>6K8</td> <td>10</td> <td>220</td> <td>30K3</td> <td>7,5</td> </tr> </tbody> </table>	VAC	Ω	mA	VDC	Ω	mA	24	65	100	24	360	66	48	286	50	48	1K4	34	115	1K7	21	110	7K6	15	230	6K8	10	220	30K3	7,5
VAC	Ω	mA	VDC	Ω	mA																										
24	65	100	24	360	66																										
48	286	50	48	1K4	34																										
115	1K7	21	110	7K6	15																										
230	6K8	10	220	30K3	7,5																										

Insulation	Volt rms, 1 min
Contact open	2000 V
Contact/contact	2,5 kV
Contact/coil	2,5 kV
Insulation resistance at 500 V	$\geq 1 \text{ G}\Omega$
Insulation, IEC 61810-1	2,5 kV/3

Specifications	
Ambient temperature operation/storage	-40 (no ice)...60 °C / -40 ... 80 °C
Pick-up time/bounce time	20 ms/ ≤ 3 ms
Release time/bounce time	8 ms/ ≤ 1 ms
Mechanical life ops	AC: 10 Mill./DC: 20 Mill.
DC voltage endurance at rated load	≥ 100000 switching cycles
Switching frequency at rated load	≤ 1200 /ops/ h
Protection class	IP40
Weight	90 g

Standard types	
VAC 50 Hz/60 Hz: 24, 48, 115 (120), 230 (240)	C3-G30/AC ... V C3-G30X/AC ... V C3-G30R/AC ... V
LED	
RC Suppressor	
VDC 24, 48, 110, 220	C3-G30/DC ... V C3-G30X/DC ... V C3-G30DX/DC... V C3-G30FX/DC ... V
LED	
Free wheeling diode	
Polarity and free wheeling diode	
AC/DC bridge rectifier 24 V, 48 V, 60 V	C3-G30BX/UC ... V

"..." Enter the voltage for full type designation

Accessories	
Socket:	S3-B, S3-S, S3-L, S3-P, S3-P0
Optional accessories (blanking plug):	SO-NP, SO-OP



Connection diagram

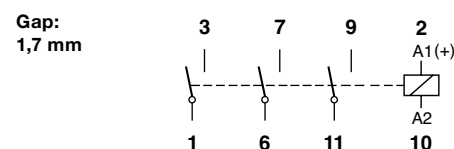


Fig. 1 AC voltage endurance

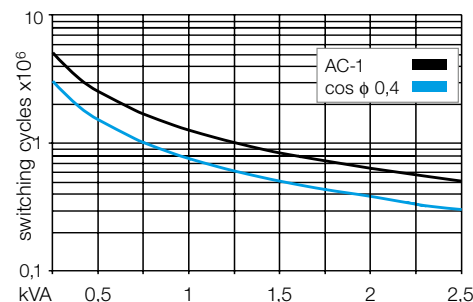
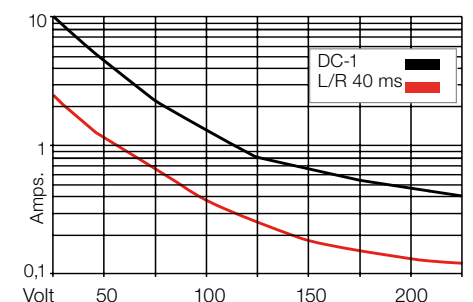
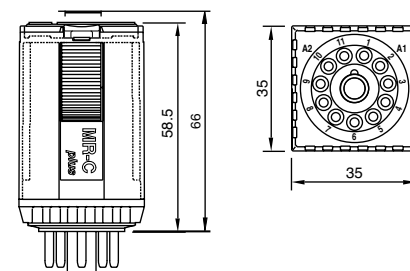


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



IEC 61810; EN 60947

Type	C3-M1x/ ... V Power relays, DC, application 1 pole, magnetic blow out
-------------	------------------------------------------------------------------------------------

Maximum contact load	10 A 250 V AC-1 10 A 220 V DC-1 3,6 A 110 V L/R 40ms 2 A 220 V L/R 40ms
-----------------------------	------------------------------------------------------------------------------------------------

Contacts			
Material	Standard	Code 0	AgNi
Rated current			10 A
Switch-on current max. (20 ms)			30 A
Switching voltage max.			250 V
AC load (Fig 1)			2,5 kVA
DC load			see Fig. 2

Coil	
Coil resistance	see table; tolerance ± 10 %
Pick-up voltage	≤ 0,8 x U _N
Release voltage	≥ 0,1 x U _N
Nominal power	2,4 VA (AC) / 1,3 W (DC)

Coil table																															
	<table border="1"> <thead> <tr> <th>VAC</th> <th>Ω</th> <th>mA</th> <th>VDC</th> <th>Ω</th> <th>mA</th> </tr> </thead> <tbody> <tr> <td>24</td> <td>65</td> <td>100</td> <td>24</td> <td>443</td> <td>54</td> </tr> <tr> <td>48</td> <td>286</td> <td>50</td> <td>48</td> <td>1K7</td> <td>27</td> </tr> <tr> <td>115</td> <td>1K7</td> <td>21</td> <td>110</td> <td>9K2</td> <td>12</td> </tr> <tr> <td>230</td> <td>6K8</td> <td>10</td> <td>220</td> <td>36K1</td> <td>6</td> </tr> </tbody> </table>	VAC	Ω	mA	VDC	Ω	mA	24	65	100	24	443	54	48	286	50	48	1K7	27	115	1K7	21	110	9K2	12	230	6K8	10	220	36K1	6
VAC	Ω	mA	VDC	Ω	mA																										
24	65	100	24	443	54																										
48	286	50	48	1K7	27																										
115	1K7	21	110	9K2	12																										
230	6K8	10	220	36K1	6																										

Insulation	Volt rms, 1 min
Contact open	2500 V
Contact/contact	2,5 kV
Contact/coil	2,5 kV
Insulation resistance at 500 V	≥ 1 GΩ
Insulation, IEC 61810-1:	2,5 KV / 3

Specifications	
Ambient temperature operation/storage	-40 (no ice)...60 °C / -40 ... 80 °C
Nominal coil power	2,4 VA (AC), 1,3 W (DC)
Pick-up time/bounce time	20 ms/≤ 3 ms
Release time/bounce time	10 ms/≤ 1 ms
Isolation: EN 60947, pollution rate 3, Gr C	250 V
Dielectric strength, Contact/Coil	2,5 KV

Standard types	
VAC 50 Hz/60 Hz: 24, 48, 115 (120), 230 (240)	C3-M10/AC ... V
LED	C3-M10X/AC ... V
RC Suppressor	C3-M10R/AC ... V
VDC 24, 48, 110, 220	C3-M10/DC ... V
LED	C3-M10X/DC ... V
Free wheeling diode	C3-M10DX/DC ... V
Polarity and free wheeling diode	C3-M10FX/DC ... V
AC/DC bridge rectifier 24 V, 48 V, 60 V	C3-M10BX/UC ... V

"..." Enter the voltage for full type designation

Accessories	
Socket:	S3-B, S3-S, S3-L, S3-P, S3-P0
Optional accessories (blanking plug):	SO-NP, SO-OP



Connection diagram

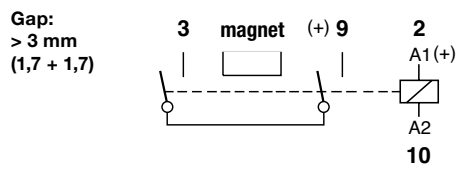


Fig. 1 AC voltage endurance

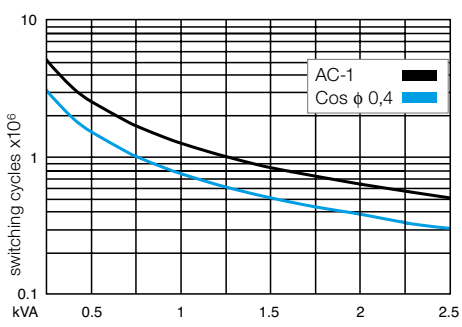
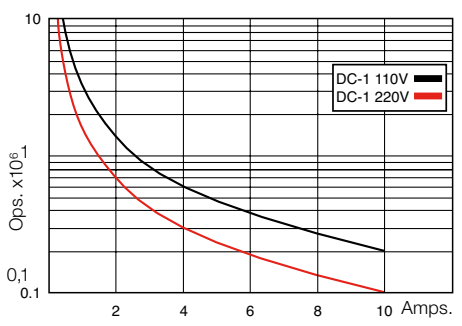
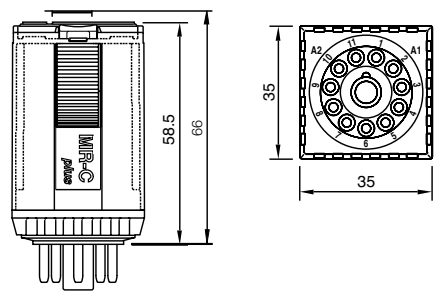


Fig. 2 DC voltage endurance



Dimensions [mm]



Technical approvals, conformities



IEC 61810; EN 60947

C3-X1x

11-pin power relay, 1-pole, double make, according to IEC 67-I-18a

Type	C3-X1x/ ... V Power relays for DC application 1 pole, NO, double make		
Maximum contact load	10 A/250 V AC-1	7 A/110 V DC-1	
	10 A/30 V DC-1	1,2 A/220 V DC-1	
Contacts			
Material	Standard	Code 0	AgNi
Rated current			10 A
Switch-on current max. (20 ms)			30 A
Switching voltage max.			250 V
AC load (Fig 1)			2,5 kVA
DC load			see Fig. 2

Coil	
Coil resistance	see table; tolerance $\pm 10\%$
Pick-up voltage	$\leq 0,8 \times U_N$
Release voltage	$\geq 0,1 \times U_N$
Nominal power	2,4 VA (AC)/1,3 W (DC)

Coil table																															
	<table border="1"> <thead> <tr> <th>VAC</th> <th>Ω</th> <th>mA</th> <th>VDC</th> <th>Ω</th> <th>mA</th> </tr> </thead> <tbody> <tr> <td>24</td> <td>65</td> <td>100</td> <td>24</td> <td>443</td> <td>54</td> </tr> <tr> <td>48</td> <td>286</td> <td>50</td> <td>48</td> <td>1K7</td> <td>27</td> </tr> <tr> <td>115</td> <td>1K7</td> <td>21</td> <td>110</td> <td>9K2</td> <td>12</td> </tr> <tr> <td>230</td> <td>6K8</td> <td>10</td> <td>220</td> <td>36K1</td> <td>6</td> </tr> </tbody> </table>	VAC	Ω	mA	VDC	Ω	mA	24	65	100	24	443	54	48	286	50	48	1K7	27	115	1K7	21	110	9K2	12	230	6K8	10	220	36K1	6
VAC	Ω	mA	VDC	Ω	mA																										
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48	286	50	48	1K7	27																										
115	1K7	21	110	9K2	12																										
230	6K8	10	220	36K1	6																										

Insulation	Volt rms, 1 min
Contact open	2500 V
Contact/contact	2,5 kV
Contact/coil	2,5 kV
Insulation resistance at 500 V	$\geq 1 \text{ G}\Omega$
Insulation, IEC 61810-1	2,5 kV/3

Specifications	
Ambient temperature operation/storage	-40 (no ice)...60 °C /-40 ... 80 °C
Pick-up time/bounce time	20 ms/ ≤ 3 ms
Release time/bounce time	10 ms/ ≤ 1 ms
Mechanical life ops	AC: 10 Mill./DC: 20 Mill.
DC voltage endurance at rated load	≥ 100000 switching cycles
Switching frequency at rated load	≤ 1200 /ops/h
Protection class	IP40
Weight	90 g

Standard types
VAC 50 Hz/60 Hz: 24, 48, 115 (120), 230 (240)

LED
RC Suppressor

VDC 24, 48, 110, 220
LED

Free wheeling diode
Polarity and free wheeling diode

AC/DC bridge rectifier 24 V, 48 V, 60 V

C3-X10/AC ... V
C3-X10X/AC ... V
C3-X10R/AC ... V

C3-X10/DC ... V
C3-X10X/DC ... V
C3-X10DX/DC ... V
C3-X10FX/DC ... V

C3-X10BX/UC ... V

"..." Enter the voltage for full type designation

Accessories

Socket: **S3-B, S3-S, S3-L, S3-P, S3-PO**
Optional accessories (blanking plug): **SO-NP, SO-OP**



Connection diagram

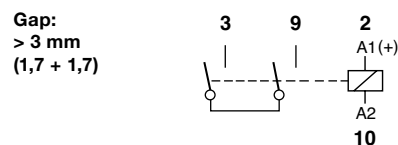


Fig. 1 AC voltage endurance

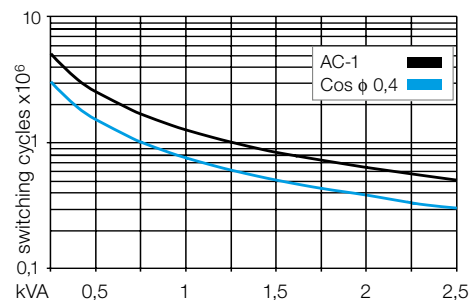
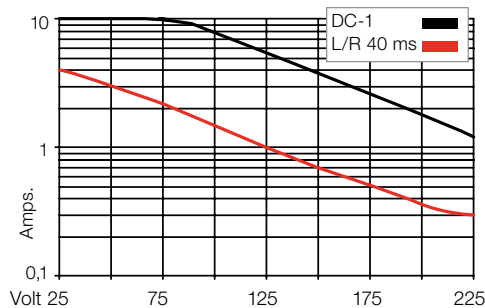
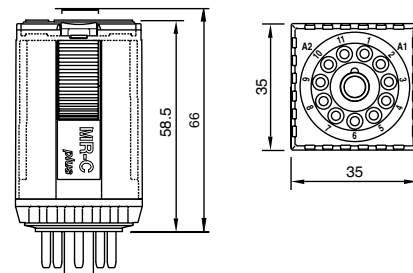


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



IEC 61810; EN 60947

C3-R2x

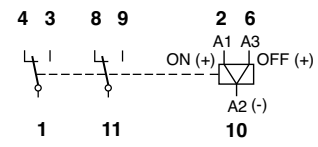
11-pin remanence relays, 2-pole, according to IEC 67-I-18a

Type	C3-R2x/ ... V Remanence plug-in relays, 2 change-over contacts			
Maximum contact load	10 A/250 V AC-1	0,5 A/110 V DC-1		
	10 A/30 V DC-1	0,2 A/220 V DC-1		
Recommended minimum contact load	10 mA/10 V Code 0, 9 5 mA/5 V Code 8			



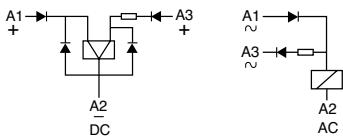
Contacts			
Material	Standard	Code 0	AgNi
	Optional	Code 8	AgNi + 10 μ Au
	Optional	Code 9	AgNi + 0,2 μ Au
Rated current	10 A		
Switch-on current max. (20 ms)	30 A		
Switching voltage max.	250 V		
AC load (Fig 1)	2,5 kVA		
DC load	see Fig. 2		

Connection diagram



Coil	
Coil resistance	see table; tolerance ± 10 %
ON pulse power	1,5 VA/W
OFF pulse power	0,5 VA/W
Pull-in ON/OFF	≤ 0,8 x U _N

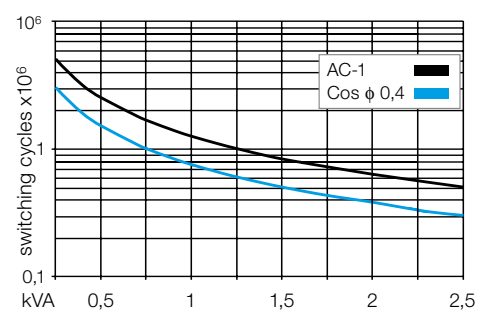
Internal Diagram:



Coil table

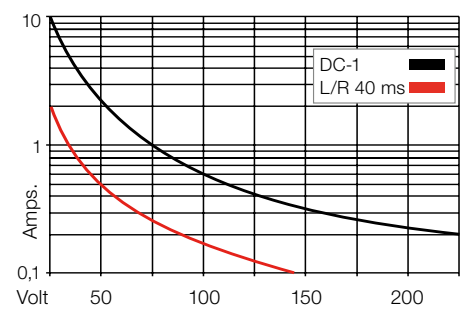
VAC	mA ON	mA OFF	VDC	mA ON	mA OFF
24	75	12	12	125	41
48	38	6	24	63	21
115	16	2,5	48	31	10
230	8	1,3	110	14	4,5

Fig. 1 AC voltage endurance



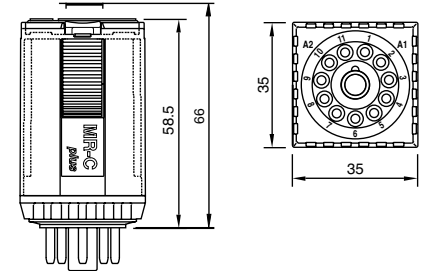
Insulation	
Contact open	1000 V
Contact/contact	2,5 kV
Contact/coil	2,5 kV
Insulation resistance at 500 V	≥ 1 GΩ
Insulation, IEC 61810-1	2,5 kV/3

Fig. 2 DC load limit curve



Specifications	
Ambient temperature operation/storage	-40 (no ice)...60 °C / -40 ... 80 °C
Minimum pulse length for ON/OFF	50 ms
Mechanical life ops	10 Mill.
DC voltage endurance at rated load	≥ 100000 switching cycles
Switching frequency at rated load	≤ 1200/ops/h
Protection class	IP40
Weight	95 g

Dimensions [mm]



Standard types			
VAC 50 Hz/60 Hz: 24, 48, 115 (120), 230 (240)	C3-R20/AC ... V	C3-R28/AC ... V	C3-R29/AC ... V
VDC 12, 24, 48, 110	C3-R20/DC ... V	C3-R28/DC ... V	C3-R29/DC ... V

"..." Enter the voltage for full type designation

Accessories	
Socket:	S3-B, S3-S, S3-L, S3-P, S3-P0
Optional accessories (blanking plug):	SO-NP, SO-OP

Technical approvals, conformities



IEC 61810; EN 60947



Type	C3-S1x/ DC... V Sensitive relays, 250 mW, 1 change-over contacts
-------------	-------------------------------------------------------------------------------

Operating range	0,8 ... 2,5 x Un
Maximum contact load	6 A/250 V AC-1 6 A/30 V DC-1
Recommended minimum contact load	10 mA/10 V Code 4 5 mA/5 V Code 8

Contacts			
Material	Standard, Code 4	AgNi + 0,2 μ Au	
	Optional, Code 8	AgNi + 10 μ Au	
Rated current		6 A	
Switch-on current max. (20 ms)		15 A	
Switching voltage max.		250 V	
AC load (Fig 1)		1,5 kVA	
DC load		see Fig. 2	

Coil	
Coil resistance	see table; tolerance ± 10 %
Pick-up voltage	≤ 0,8 x U _N
Release voltage	≥ 0,1 x U _N
Nominal power	250 mW

Coil table																
	<table border="1"> <thead> <tr> <th>VDC</th> <th>Ω</th> <th>mA</th> </tr> </thead> <tbody> <tr> <td>6</td> <td>140</td> <td>43</td> </tr> <tr> <td>12</td> <td>536</td> <td>22</td> </tr> <tr> <td>24</td> <td>2164</td> <td>11</td> </tr> <tr> <td>48</td> <td>8651</td> <td>5,5</td> </tr> </tbody> </table>	VDC	Ω	mA	6	140	43	12	536	22	24	2164	11	48	8651	5,5
VDC	Ω	mA														
6	140	43														
12	536	22														
24	2164	11														
48	8651	5,5														

Insulation	Volt rms, 1 min
Contact open	1000 V
Contact/contact	2,5 kV
Contact/coil	2,5 kV
Insulation resistance at 500 V	≥ 1 GΩ
Insulation, IEC 61810-1	2,5 kV/3

Specifications	
Ambient temperature operation/storage	-40 (no ice)...60 °C / -40 ... 80 °C
Pick-up time/bounce time	18 ms/≤ 3 ms
Release time/bounce time	10 ms/≤ 1 ms
Mechanical life ops	DC: 20 Mill.
DC voltage endurance at rated load	≥ 100000 switching cycles
Switching frequency at rated load	≤ 1200/ops/h
Protection class	IP40
Weight	73 g

Standard types		
VDC 12, 24, 48	C3-S14/DC ... V	C3-S18/DC ... V
Free wheeling diode	C3-S14D/DC ... V	C3-S18D/DC ... V
Polarity and free wheeling diode	C3-S14F/DC ... V	C3-S18F/DC ... V

Connection of diodes to the coil will increase the release time.
LED available upon request.

"..." Enter the voltage for full type designation

Accessories	
Socket:	S3-B, S3-S, S3-L, S3-P, S3-P0
Optional accessories (blanking plug):	SO-NP, SO-OP

Connection diagram

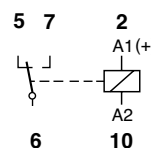


Fig. 1 AC voltage endurance

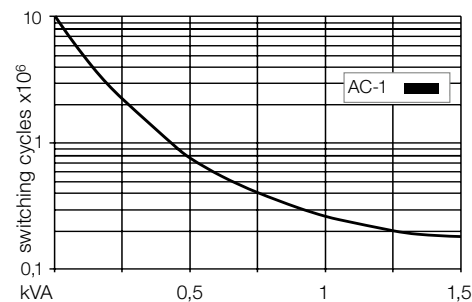
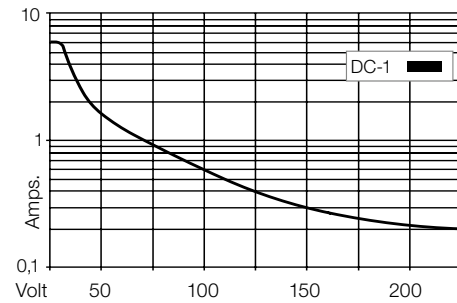
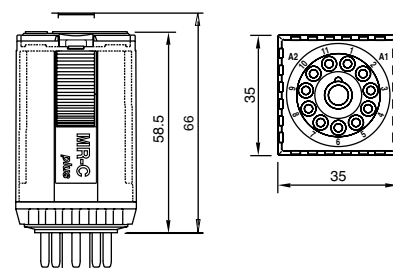


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



IEC 61810; EN 60947

Type	C3-E2x/ DC... V Sensitive relays, 500 mW, 2 change-over contacts			
Operating range	0,8 ... 1,7 x Un			
Maximum contact load	6 A/250 V	AC-1	6 A/30 V	DC-1
Recommended minimum contact load	10 mA/10 V	Code 4		
	5 mA/5 V	Code 8		

Contacts				
Material	Standard,	Code 4	AgNi + 0,2 μ Au	
	Optional,	Code 8	AgNi + 10 μ Au	
Rated current	6 A			
Switch-on current max. (20 ms)	15 A			
Switching voltage max.	250 V			
AC load (Fig 1)	1,5 kVA			
DC load	see Fig. 2			

Coil	
Coil resistance	see table; tolerance ± 10 %
Pick-up voltage	≤ 0,8 x U _N
Release voltage	≥ 0,1 x U _N
Nominal power	500 mW

Coil table																
	<table border="1"> <thead> <tr> <th>VDC</th> <th>Ω</th> <th>mA</th> </tr> </thead> <tbody> <tr> <td>24</td> <td>1K1</td> <td>21</td> </tr> <tr> <td>48</td> <td>4K6</td> <td>10</td> </tr> <tr> <td>60</td> <td>7K2</td> <td>8,3</td> </tr> <tr> <td>110</td> <td>24K2</td> <td>4,5</td> </tr> </tbody> </table>	VDC	Ω	mA	24	1K1	21	48	4K6	10	60	7K2	8,3	110	24K2	4,5
VDC	Ω	mA														
24	1K1	21														
48	4K6	10														
60	7K2	8,3														
110	24K2	4,5														

Insulation	Volt rms, 1 min
Contact open	1000 V
Contact/contact	2,5 kV
Contact/coil	2,5 kV
Insulation resistance at 500 V	≥1 GΩ
Insulation, IEC 61810-1	2,5 kV/3

Specifications	
Ambient temperature operation/storage	-40 (no ice)...60 °C / -40 ... 80 °C
Pick-up time/bounce time	18 ms/≤ 3 ms
Release time/bounce time	10 ms/≤ 1 ms
Mechanical life ops	DC: 20 Mill.
DC voltage endurance at rated load	≥100000 switching cycles
Switching frequency at rated load	≤ 1200/ops/h
Protection class	IP40
Weight	90 g

Standard types		
VDC 24, 48, 60, 110	C3-E24/DC ... V	C3-E28/DC ... V
Free wheeling diode	C3-E24D/DC ... V	C3-E28D/DC ... V
Polarity and free wheeling diode	C3-E24F/DC ... V	C3-E28F/DC ... V

**Connection of diodes to the coil will increase the release time.
LED available upon request.**

"..." Enter the voltage for full type designation

Accessories	
Socket:	S3-B, S3-S, S3-L, S3-P, S3-P0
Optional accessories (blanking plug):	SO-NP, SO-OP



Connection diagram

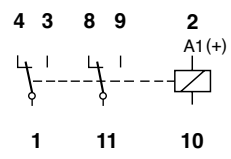


Fig. 1 AC voltage endurance

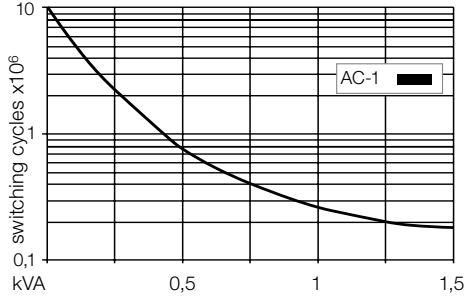
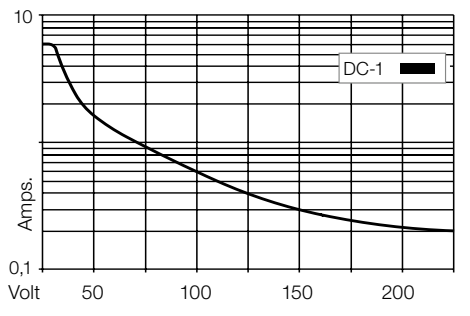
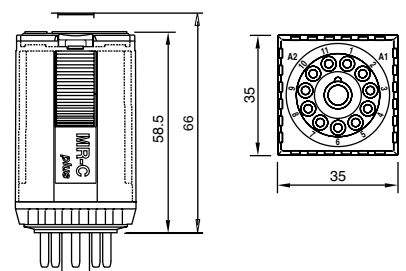


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



IEC 61810; EN 60947

Type	C3-N3x/DC ... V Sensitive relays, 800 mW 3 change-over contacts			
Operating range	0,8 ... 1,4 x Un			
Maximum contact load	6 A/250 V	AC-1	6 A/30 V	DC-1
Recommended minimum contact load	10 mA/10 V	Code 4		
	5 mA/ 5 V	Code 8		

Contacts				
Material	Standard	Code 4	AgNi + 0,2 μ Au	
	Optional	Code 8	AgNi + 10 μ Au	
Rated current	6 A			
Switch-on current max. (20 ms)	15 A			
Switching voltage max.	250 V			
AC load (Fig 1)	1,5 kVA			
DC load	see Fig. 2			

Coil	
Coil resistance	see table; tolerance ± 10 %
Pick-up voltage	≤ 0,8 x U _N
Release voltage	≥ 0,1 x U _N
Nominal power	800 mW

Coil table																
	<table border="1"> <thead> <tr> <th>VDC</th> <th>Ω</th> <th>mA</th> </tr> </thead> <tbody> <tr> <td>24</td> <td>720</td> <td>33</td> </tr> <tr> <td>48</td> <td>2K8</td> <td>17</td> </tr> <tr> <td>60</td> <td>4K5</td> <td>13</td> </tr> <tr> <td>110</td> <td>15K</td> <td>7</td> </tr> </tbody> </table>	VDC	Ω	mA	24	720	33	48	2K8	17	60	4K5	13	110	15K	7
VDC	Ω	mA														
24	720	33														
48	2K8	17														
60	4K5	13														
110	15K	7														

Insulation	Volt rms, 1 min
Contact open	1000 V
Contact/contact	2,5 kV
Contact/coil	2,5 kV
Insulation resistance at 500 V	≥ 1 GΩ
Insulation, IEC 61810-5	2,5 kV/3

Specifications	
Ambient temperature operation/storage	-40 (no ice)...60 °C /-40 ... 80 °C
Pick-up time/bounce time	18 ms/≤ 3 ms
Release time/bounce time	10 ms/≤ 1 ms
Mechanical life ops	DC: 20 Mill.
DC voltage endurance at rated load	≥ 100000 switching cycles
Switching frequency at rated load	≤ 1200/ops/h
Protection class	IP40
Weight	90 g

Standard types	
VDC 24, 48, 60, 110	
Free wheeling diode	
Polarity and free wheeling diode	

- | | |
|-------------------------|-------------------------|
| C3-N34/DC ... V | C3-N38/DC ... V |
| C3-N34D/DC ... V | C3-N38D/DC ... V |
| C3-N34F/DC ... V | C3-N38F/DC ... V |

Connection of diodes to the coil will increase the release time.
LED available upon request.

"..." Enter the voltage for full type designation

Accessories	
Socket:	S3-B, S3-S, S3-L, S3-P, S3-P0
Optional accessories (blanking plug):	SO-NP, SO-OP



Connection diagram

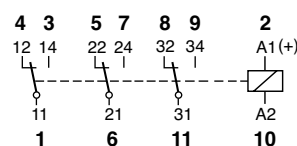


Fig. 1 AC voltage endurance

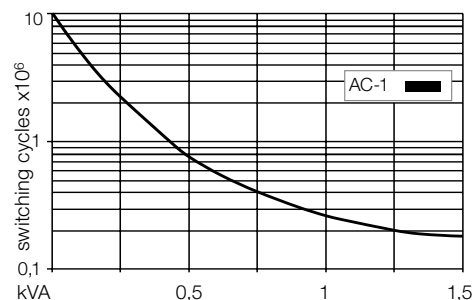
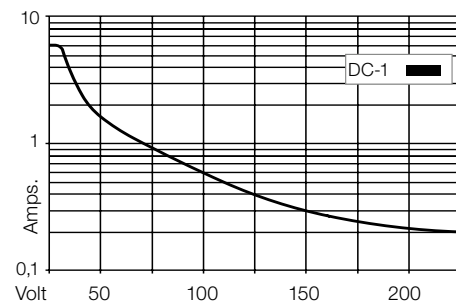
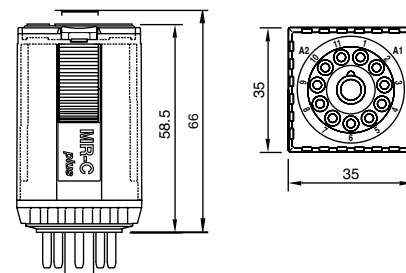


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



IEC 61810; EN 60947

R3-N3xD

11-pin, special relay, 3-pole, according to IEC 67-I-18a
Relay approval: EN 60077-1-2/99 - EN 61373/99 for Railway application

Type	R3-NxD/ ... V Relays for Railway application 3 change-over contacts special wide range voltage
-------------	----------------------------------------------------------------------------------------------------------------

Maximum contact load	6 A 250 V AC-1	6 A 30 V DC-1
Recommended minimum contact load	10 mA/10 V Code 0, 4 5 mA/5 V Code 8	

Contacts

Material	Standard	Code 0	AgNi
	Optional	Code 4	AgNi + 0,2µ Au
	Optional	Code 8	AgNi + 10µ Au
Rated current	6 A		
Switch-on current max. (20 ms)	15 A		
Switching voltage max.	250 V		
Max. AC load	see Fig. 1		
DC load	see Fig. 2		

Coil

Coil resistance	see table; tolerance ± 10 %
Operation range	0,7 U _N ... 1,25 U _N
Nominal power	1,1 W

Coil table

VDC	Ω	mA
24	525	46
48	2133	22
72	4844	15
110	12900	9

Insulation

Pollution grade	PD3
With pulse (1,2 / 50 µs)/Dielectric strenght (1Minute/V rms)	
Contact/coil	4 kV / 2220 V
Contact/contact	4 kV / 2220 V
Between contact and the same pole	1550 V / 850 V

Specifications

Ambient temperature operation/storage	-25 (no ice)...70 °C / -40 ... 80 °C
Number of mechanical operations	≥ 10 millions
Thermic class	B (130 °C)
Vibration : category / class	1 / B Body mounted 5 - 150 Hz (3 axes)
Shock	5 g (3 axes)
Pick-up time/bounce time	18 ms/≤ 3 ms
Release time/bounce time (D version)	35 ms/≤ 1 ms
Weight	95 g
Weight avg. Relay + Socket (S3-B)	150 g
Protection class	IP 40

Standard types

DC 24, 48, 72, 110

Free wheeling diode

LED

LED + free wheeling diode

R3-N30/DC ... V	R3-N34/DC ... V	R3-N38/DC ... V
R3-N30D/DC ... V	R3-N34D/DC ... V	R3-N38D/DC ... V
R3-N30X/DC ... V	R3-N34X/DC ... V	R3-N38X/DC ... V
R3-N30DX/DC ... V	R3-N34DX/DC ... V	R3-N38DX/DC ... V*

"..." Enter the voltage for full type designation

Accessories

Socket:	S3-B, S3-S, S3-L, S3-P, S3-P0
Optional accessories (blanking plug):	SO-NP, SO-OP



Connection diagram

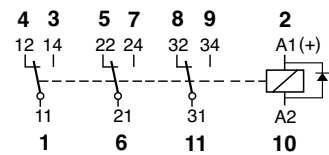


Fig. 1 AC voltage endurance

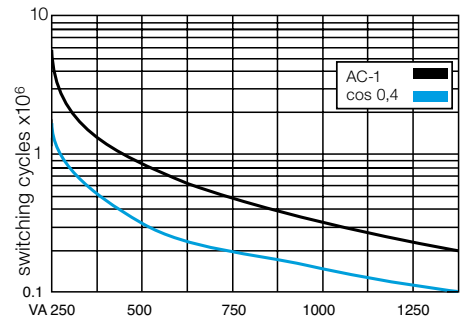
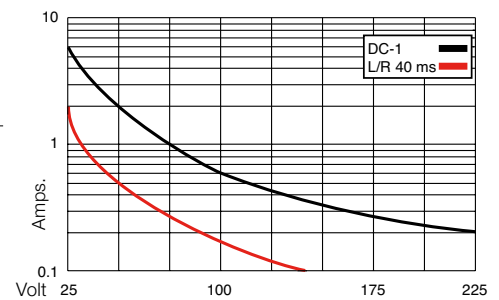
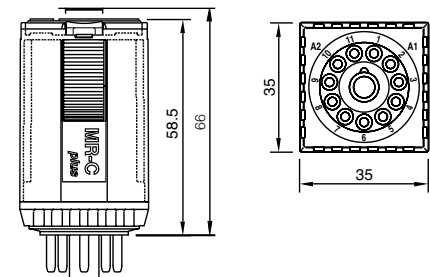


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



IEC 60077/EN60077-1-2/99; EN61373/99

C30-A30

11-pin standard relays, 3-pole, plug-in, according to IEC 60067

Type	C30-A30/ ... V Standard relays 3 change-over contacts		
Maximum contact load	10 A/250 V AC-1	0,5 A/110 V DC-1	
Recommended minimum contact load	10 A/30 V DC-1	0,2 A/220 V DC-1	

Contacts	
Material	AgNi
Rated current	10 A
Switch-on current max. (20 ms)	30 A
Switching voltage max.	250 V
AC load (Fig 1)	2,5 kVA
DC load	see Fig. 2

Coil	
Coil resistance	see table; tolerance $\pm 10\%$
Pick-up voltage	$\leq 0,8 \times U_N$
Release voltage	$\geq 0,1 \times U_N$
Nominal power	2,2 VA (AC)/1,3 W (DC)

Coil table					
VAC	Ω	mA	VDC	Ω	mA
24	67	92	12	115	104
115	1K7	19	24	480	50
230	7K1	9,5	48	1K8	26
			110	9K	12

Insulation	
	Volt rms, 1 min
Contact open	1000 V
Contact/contact	2,5 kV
Contact/coil	2,5 kV
Insulation resistance at 500 V	$\geq 1 \text{ G}\Omega$
Insulation, IEC 61810-1	2,5 kV/3

Specifications	
Ambient temperature operation/storage	-40...70 °C DC (55 °C AC)/-40 ... 80 °C
Pick-up time/bounce time typ.	8 ms/3 ms
Release time/bounce time typ.	18 ms/1 ms
Mechanical life ops	AC: 10 Mill./DC: 20 Mill.
DC voltage endurance at rated load	≥ 100000 switching cycles
Switching frequency at rated load	≤ 1200 /ops/h
Protection class	IP40
Weight	82 g

Standard types	
VAC 50 Hz: 24, 115, 230	C30-A30/AC ... V
VAC 60 Hz: 120	C30-A30/AC ... V 60 Hz
LED	C30-A30X/AC ... V
VDC 12, 24, 36, 48, 110	C30-A30/DC ... V
LED	C30-A30X/DC ... V
Free wheeling diode	C30-A30DX/DC ... V
Polarity and free wheeling diode	C30-A30FX/DC ... V
AC/DC bridge rectifier 24 V	C30-A30BX/UC ... V

"..." Enter the voltage for full type designation

Accessories	
Socket:	S30-B
Blanking plug:	PB30-BK
Button without lockable function:	PB30-OR
Retaining clip, plastic:	S30-CM



Connection diagram

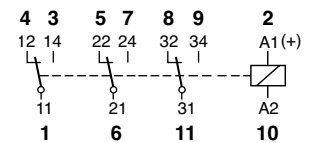


Fig. 1 AC voltage endurance

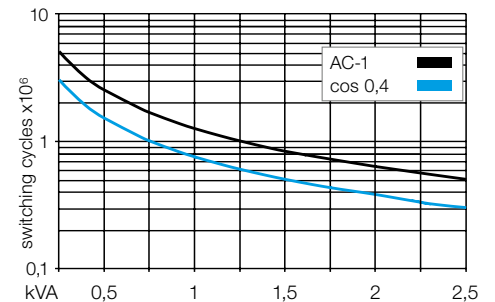
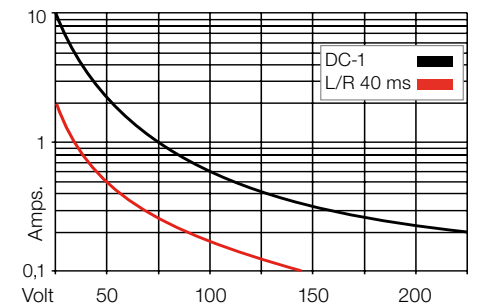
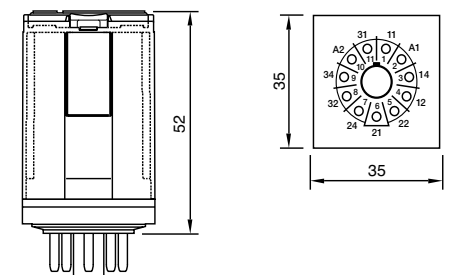


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



IEC 61810; EN 60947

C30-T30

11-pin standard relay, 3-pole, twin contact, plug-in according to IEC 60067

Type	C30-T30/ ... V Standard relays for low level 3 change-over twin contacts			
Maximum contact load	6 A/250 V	AC-1	6 A/30 V	DC-1
Recommended minimum contact load	5 mA/5 V			

Contacts	
Material	AgNi
Rated current	6 A
Switch-on current max. (20 ms)	15 A
Switching voltage max.	250 V
AC load (Fig 1)	1,2 kVA
DC load	see Fig. 2

Coil	
Coil resistance	see table; tolerance ± 10 %
Pick-up voltage	≤ 0,8 x U _N
Release voltage	≥ 0,1 x U _N
Nominal power	2,2 VA (AC)/1,3 W (DC)

Coil table	VAC	Ω	mA	VDC	Ω	mA
	24	67	92	12	115	104
	115	1K7	19	24	480	50
	230	7K1	9,5	48	1K8	26
				110	9K	12

Insulation	
Contact open	Volt rms, 1 min 1000 V
Contact/contact	2,5 kV
Contact/coil	2,5 kV
Insulation resistance at 500 V	≥ 1 GΩ
Insulation, EN 61810-1	2,5 kV/3

Specifications	
Ambient temperature operation/storage	-40...70 °C DC (55 °C AC)/-40 ... 80 °C
Pick-up time/bounce time typ.	8 ms/ 3 ms
Release time/bounce time typ.	18 ms/1 ms
Mechanical life ops	AC: 10 Mill./DC: 20 Mill.
DC voltage endurance at rated load	≥ 100000 switching cycles
Switching frequency at rated load	≤ 1200/ops/h
Protection class	IP40
Weight	82 g

Standard types	C30-T30/AC ... V
VAC 50 Hz: 24, 115, 230	C30-T30/AC ... V 60 Hz
VAC 60 Hz: 120	C30-T30X/AC ... V
LED	
VDC 12, 24, 36, 48, 110	C30-T30/DC ... V
LED	C30-T30X/DC ... V
Free wheeling diode	C30-T30DX/DC ... V
Polarity and free wheeling diode	C30-T30FX/DC ... V
AC/DC bridge rectifier 24 V	C30-T30BX/UC ... V

"..." Enter the voltage for full type designation

Accessories	
Socket:	S30-B
Blanking plug:	PB30-BK
Button without lockable function:	PB30-OR
Retaining clip, plastic:	S30-CM



Connection diagram

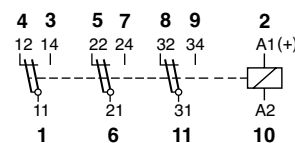


Fig. 1 AC voltage endurance

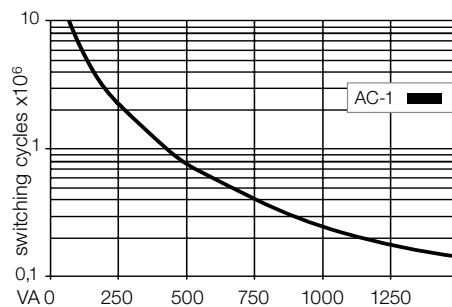
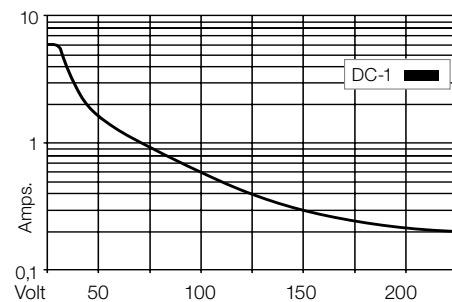
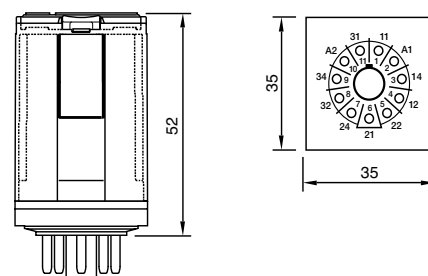


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



IEC 61810; EN 60947

C30-M10

11-pin power relay, 1-pole, magnetic blow out, according to IEC 60067

Type	C30-M10/ ... V Power relays for DC applications 1 pole, magnetic blow out
Maximum contact load	10 A/250 V AC-1 10 A/220 V DC-1
Contacts	
Material	AgNi
Rated current	10 A
Switch-on current max. (20 ms)	30 A
Switching voltage max.	250 V
AC load (Fig 1)	2,5 kVA
DC load	see Fig. 2

Coil	
Coil resistance	see table; tolerance $\pm 10\%$
Pick-up voltage	$\leq 0,8 \times U_N$
Release voltage	$\geq 0,1 \times U_N$
Nominal power	2,4 VA (AC) / 1,3 W (DC)

Coil table	
	VAC Ω mA VDC Ω mA
	24 65 100 24 480 50
	48 286 50 48 1K8 26
	115 1K7 21 110 9K 12
	230 6K8 10 220 29K 7,5

Insulation	Volt rms, 1 min
Contact open	2500 V
Contact/contact	2,5 kV
Contact/coil	2,5 kV
Insulation resistance at 500 V	$\geq 1 \text{ G}\Omega$
Insulation, IEC 61810-1:	2,5 KV / 3

Specifications	
Ambient temperature operation/storage	-40...70 °C DC (55 °C AC)/ -40 ... 80 °C
Pick-up time/bounce time typ.	8 ms/ 3 ms
Release time/bounce time typ.	18 ms/ 1 ms
DC voltage endurance at rated load	≥ 100000 switching cycles
Switching frequency at rated load	≤ 1200 /ops/h
Protection class	IP40
Weight	82 g

Standard types	
VAC 50 Hz: 24, 115, 230	C30-M10/AC ... V
VAC 60 Hz: 120	C30-M10/AC ... V 60 Hz
LED	C30-M10X/AC ... V

VDC 12, 24, 36, 48, 110, 220	C30-M10/DC ... V
LED	C30-M10X/DC ... V
Free wheeling diode	C30-M10DX/DC ... V
Polarity and free wheeling diode	C30-M10FX/DC ... V

AC/DC bridge rectifier 24 V	C30-M10BX/UC ... V
------------------------------------	---------------------------

"..." Enter the voltage for full type designation

Accessories	
Socket:	S30-B
Blanking plug:	PB30-BK
Button without lockable function:	PB30-OR
Retaining clip, plastic:	S30-CM



Connection diagram

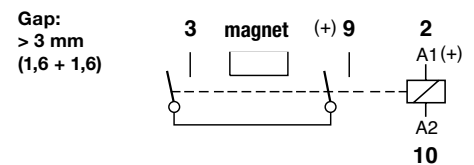


Fig. 1 AC voltage endurance

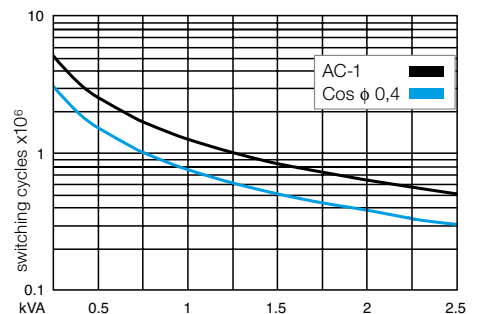
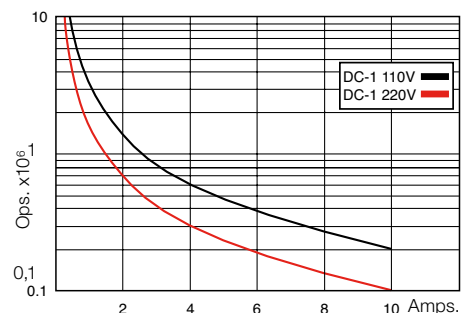
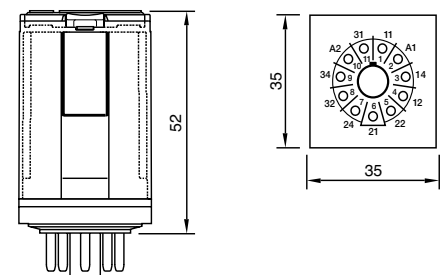


Fig. 2 DC voltage endurance



Dimensions [mm]



Technical approvals, conformities



IEC 61810; EN 60947

C30-X10

11-pin power relay, 1-pole, double make, according to IEC 60067

Type	C30-X10/ ... V Power relays for DC applications 1 pole, NO, double make
-------------	--------------------------------------------------------------------------------------

Maximum contact load	10 A/250 V AC-1 7 A/110 V DC-1
	10 A/30 V DC-1 1,2 A/220 V DC-1

Contacts	
Material	AgNi
Rated current	10 A
Switch-on current max. (20 ms)	30 A
Switching voltage max.	250 V
AC load (Fig 1)	2,5 kVA
DC load	see Fig. 2

Coil	
Coil resistance	see table; tolerance $\pm 10\%$
Pick-up voltage	$\leq 0,8 \times U_N$
Release voltage	$\geq 0,1 \times U_N$
Nominal power	2,4 VA (AC)/1,3 W (DC)

Coil table					
VAC	Ω	mA	VDC	Ω	mA
24	65	100	24	480	50
115	1K7	21	48	1K8	26
230	6K8	10	110	9K	12
			220	29K	7,5

Insulation	
	Volt rms, 1 min
Contact open	2500 V
Contact/contact	2,5 kV
Contact/coil	2,5 kV
Insulation resistance at 500 V	≥ 1 G Ω
Insulation, IEC 61810-1	2,5 kV/3

Specifications	
Ambient temperature operation/storage	-40...70 °C DC (55 °C AC)/-40 ... 80 °C
Pick-up time/bounce time typ.	18 ms/3 ms
Release time/bounce time typ.	8 ms/1 ms
Mechanical life ops	AC: 10 Mill./DC: 20 Mill.
DC voltage endurance at rated load	≥ 100000 switching cycles
Switching frequency at rated load	≤ 1200 /ops/h
Protection class	IP40
Weight	83 g

Standard types	C30-X10/AC ... V
VAC 50 Hz: 24, 115, 230	C30-X10/AC ... V 60 Hz
VAC 60 Hz: 120	C30-X10X/AC ... V
LED	
VDC 24, 48, 110, 220	C30-X10/DC ... V
LED	C30-X10X/DC ... V
Free wheeling diode	C30-X10DX/DC ... V
Polarity and free wheeling diode	C30-X10FX/DC ... V
AC/DC bridge rectifier 24 V	C30-X10BX/UC ... V

"..." Enter the voltage for full type designation

Accessories	
Socket:	S30-B
Blanking plug:	PB30-BK
Button without lockable function:	PB30-OR
Retaining clip, plastic:	S30-CM



Connection diagram

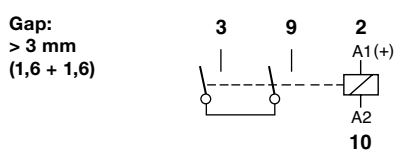


Fig. 1 AC voltage endurance

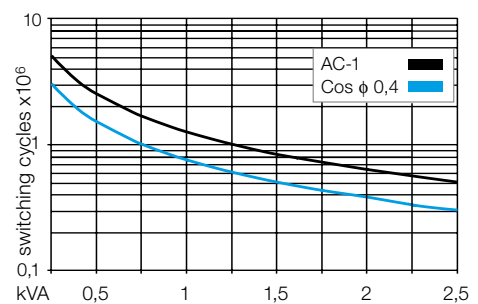
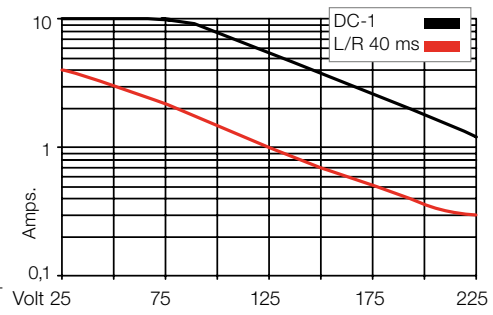
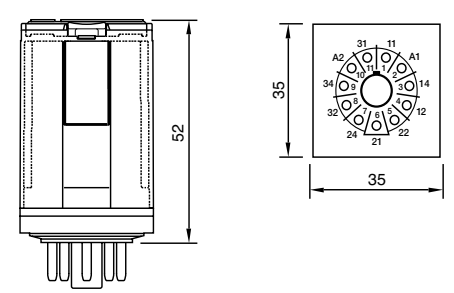


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



IEC 61810; EN 60947

Type	C4-A4x/ ... V Standard relays, 4 change-over contacts		
Maximum contact load	10 A/250 V AC-1	0,5 A/110 V DC-1	
	10 A/30 V DC-1	0,2 A/220 V DC-1	
Recommended minimum contact load	10 mA/10 V Code 0, 9		
	5 mA/5 V Code 8		
Contacts			
Material	Standard	Code 0	AgNi
	Optional	Code 8	AgNi + 10 μ Au
	Optional	Code 9	AgNi + 0,2 μ Au
Rated current	10 A		
Switch-on current max. (20 ms)	30 A		
Switching voltage max.	250 V		
AC load (Fig 1)	2,5 kVA		
DC load	see Fig. 2		

Coil			
Coil resistance	see table; tolerance ± 10 %		
Pick-up voltage	≤ 0,8 x U _N		
Release voltage	≥ 0,1 x U _N		
Nominal power	2,4 VA (AC)/1,4 W (DC)		

Coil table						
VAC	Ω	mA	VDC	Ω	mA	
24	65	100	24	414	58	
48	286	50	48	1K6	30	
115	1K7	21	110	8K1	13	
230	6K8	10	220	35K7	6,2	

Insulation		Volt rms, 1 min
Contact open		1000 V
Contact/contact		2,5 kV
Contact/coil		2,5 kV
Insulation resistance at 500 V		≥ 1 GΩ
Insulation, IEC 61810-1		2,5 kV/3

Specifications	
Ambient temperature operation/storage	-40 (no ice)...60 °C / -40 ... 80 °C
Pick-up time/bounce time	20 ms/≤ 3 ms
Release time/bounce time	8 ms/≤ 1 ms
Mechanical life ops	AC: 10 Mill./DC: 20 Mill.
DC voltage endurance at rated load	≥ 100000 switching cycles
Switching frequency at rated load	≤ 1200/ops/h
Protection class	IP40
Weight	90 g

Standard types			
VAC 50 Hz/60 Hz: 24, 48, 115, (120), 230, (240)	C4-A40/AC ... V	C4-A48/AC ... V	
LED	C4-A40X/AC ... V	C4-A48X/AC ... V	
RC suppressor	C4-A40R/AC ... V	C4-A48R/AC ... V	
VDC 24, 48, 110, 220	C4-A40/DC ... V	C4-A48/DC ... V	
LED	C4-A40X/DC ... V	C4-A48X/DC ... V	
Free wheeling diode	C4-A40DX/DC ... V	C4-A48DX/DC ... V	
Polarity and free wheeling diode	C4-A40FX/DC ... V	C4-A48FX/DC ... V	
AC/DC bridge rectifier 24 V, 48 V, 60 V	C4-A40BX/UC ... V	C4-A48BX/UC ... V	

"..." Enter the voltage for full type designation

Accessories	
Socket:	S4-J, S4-L, S4-P, S4-P0
Optional accessories (blanking plug):	SO-NP, SO-OP



Connection diagram

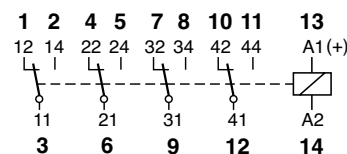


Fig. 1 AC voltage endurance

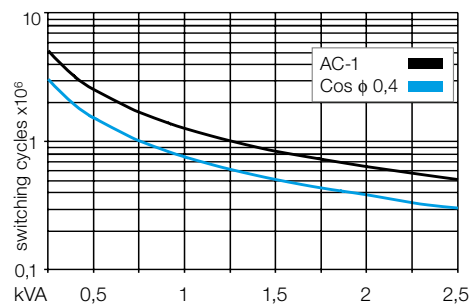
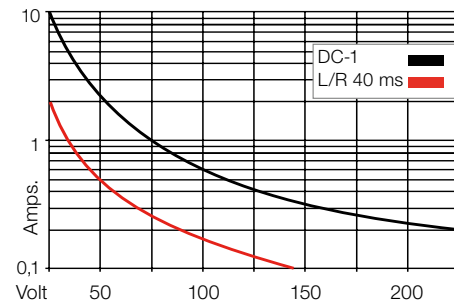
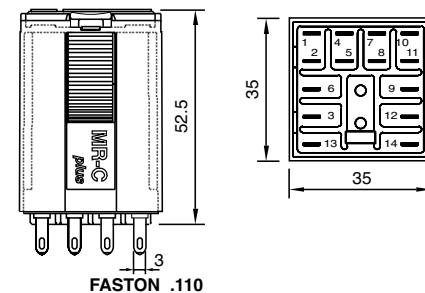


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



IEC 61810; EN 60947

Type	C4-X2x/ ... V Power relays, DC application 2-pole, NO, double make
-------------	---------------------------------------------------------------------------------

Maximum contact load	10 A/250 V AC-1 7 A/110 V DC-1
	10 A/30 V DC-1 1,2 A/220 V DC-1

Contacts

Material	Standard	Code 0	AgNi
Rated current			10 A
Switch-on current max. (20 ms)			30 A
Switching voltage max			250 V
AC load (Fig 1)			2,5 kVA
DC load			see Fig. 2

Coil

Coil resistance	see table; tolerance ± 10 %
Pick-up voltage	≤ 0,8 x U _N
Release voltage	≥ 0,1 x U _N
Nominal power	2,4 VA (AC)/1,3 W (DC)

Coil table

VAC	Ω	mA	VDC	Ω	mA
24	65	100	24	443	54
48	286	50	48	1K8	27
115	1K7	21	110	9K2	12
230	6k8	10	220	36K1	6

Insulation

	Volt rms, 1 min
Contact open	2500 V
Contact/contact	2,5 kV
Contact/coil	2,5 kV
Insulation resistance at 500 V	≥ 1 GΩ
Insulation, IEC 61810-1	2,5 kV/3

Specifications

Ambient temperature operation/storage	-40 (no ice)...60 °C / -40 ... 80 °C
Pick-up time/bounce time	20 ms/≤ 3 ms
Release time/bounce time	8 ms/≤ 1 ms
Mechanical life ops	AC: 10 Mill./DC: 20 Mill.
DC voltage endurance at rated load	≥ 100000 switching cycles
Switching frequency at rated load	≤ 1200/ops/h
Protection class	IP40
Weight	90 g

Standard types

VAC 50 Hz/60 Hz: 24, 48, 115, (120), 230, (240)

LED

RC Suppressor

VDC 24, 48, 110, 220

LED

Free wheeling diode

Polarity and free wheeling diode

AC/DC bridge rectifier 24 V, 48 V, 60 V

C4-X20/AC ... V

C4-X20X/AC ... V

C4-X20R/AC ... V

C4-X20/DC ... V

C4-X20X/DC ... V

C4-X20DX/DC ... V

C4-X20FX/DC ... V

C4-X20BX/UC ... V

"..." Enter the voltage for full type designation

Accessories

Socket:

Optional accessories (blanking plug):

S4-S, S4-L, S4-P, S4-P0

SO-NP, SO-OP



Connection diagram

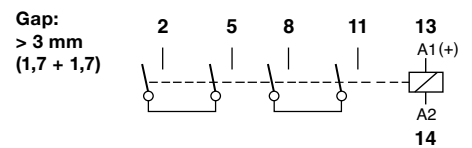


Fig. 1 AC voltage endurance

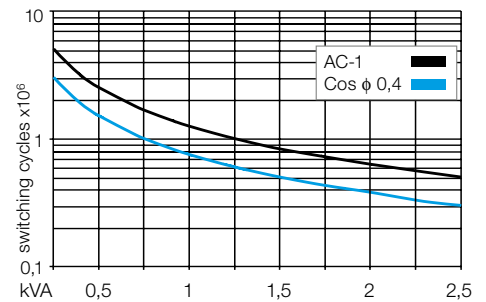
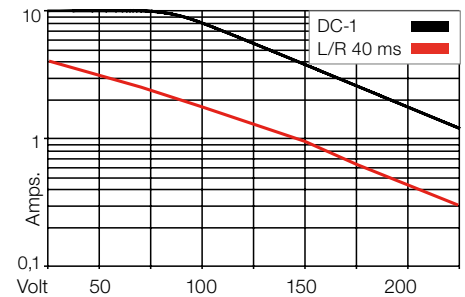
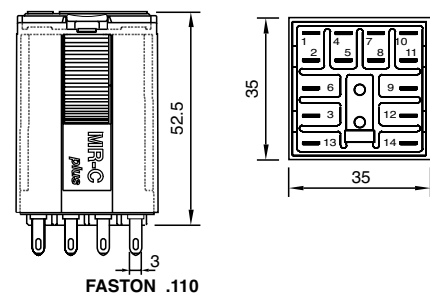


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



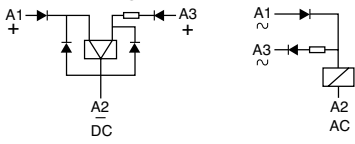
IEC 61810; EN 60947

Type	C4-R3x/ ... V Magnetic remanence relay 3 change-over contact
Maximum contact load	10 A/250 V AC-1 0,5 A/110 V DC-1 10 A/10 V DC-1 0,2 A/220 V DC-1
Recommended minimum contact load	10 mA/10 V Code 0, 9 5 mA/5 V Code 8

Contacts			
Material	Standard	Code 0	AgNi
	Optional	Code 8	AgNi + 10 μ Au
	Optional	Code 9	AgNi + 0,2 μ Au
Rated current	10 A		
Switch-on current max. (20 ms)	30 A		
Switching voltage max.	250 V		
AC load	2,5 kVA		
DC load	see Fig. 2		

Coil	
Coil resistance	see table; tolerance ± 10 %
ON pulse power	1,5 VA/W
OFF pulse power	0,5 VA/W
	1 Winding for AC, 2 Windings for DC
Pull-in ON/OFF	≤ 0,8 x U _N

Internal Diagram:



Coil table

VAC	mA ON	mA OFF	VDC	mA ON	mA OFF
24	75	12	12	125	41
48	38	6	24	63	21
115	16	2,5	48	31	10
230	8	1,3	110	14	4,5

Insulation	Volt rms, 1 min
Contact open	1000 V
Contact/contact	2,5 kV
Contact/coil	2,5 kV
Insulation resistance at 500 V	≥ 1 G.Ω
Insulation, IEC 61810-1	2,5 kV/3

Specifications	
Ambient temperature operation/storage	-40 (no ice)...60 °C / -40 ... 80 °C
Minimum pulse length for ON/OFF	50 ms
Mechanical life ops	AC: 10 Mill./DC: 20 Mill. switching cycles
DC voltage endurance at rated load	≥ 100000 switching cycles
Switching frequency at rated load	≤ 1200/h
Protection class	IP40
Weight	95 g

Standard types

VAC 50 Hz/60 Hz: 24, 48, 115 (120), 230 (240)

VDC 12, 24, 48, 110

C4-R30/AC ... V	C4-R38/AC ... V	C4-R39/AC ... V
C4-R30/DC ... V	C4-R38/DC ... V	C4-R39/DC ... V

"..." Enter the voltage for full type designation

Accessories

Socket:	S4-J, S4-L, S4-P, S4-P0
Optional accessories (blanking plug):	SO-NP, SO-OP



Connection diagram

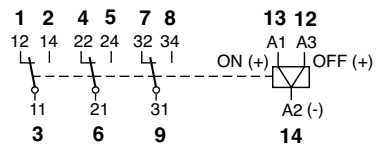


Fig. 1 AC voltage endurance

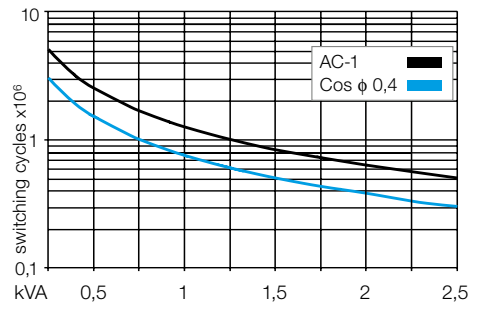
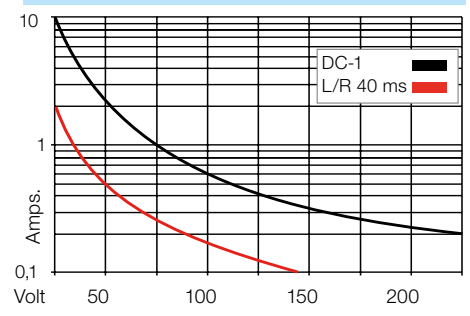
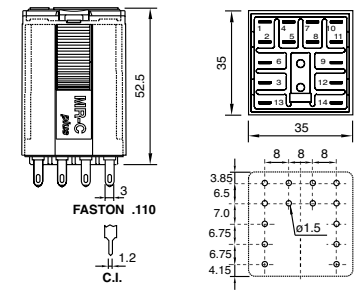


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



IEC 61810; EN 60947

Type	C5-A2x/ ... V Power relays, 2 change-over contacts		
Maximum contact load	16 A/400 V AC-1 16 A/30 V DC-1	0,5 A/110 V DC-1	0,2 A/220 V DC-1
Contacts	Material Standard Code 0	AgNi	
	Rated current	16 A	
	Switch-on current max. (20 ms)	40 A	
	Switching voltage max.	400 V	
	AC load (Fig 1)	4 kVA	
	DC load	see Fig. 2	

Coil	
Coil resistance	see table; tolerance $\pm 10\%$
Pick-up voltage	$\leq 0,8 \times U_N$
Release voltage	$\geq 0,1 \times U_N$
Nominal power	2,4 VA (AC)/1,4 W (DC)

Coil table																																					
	<table border="1"> <thead> <tr> <th>VAC</th> <th>Ω</th> <th>mA</th> <th>VDC</th> <th>Ω</th> <th>mA</th> </tr> </thead> <tbody> <tr> <td>24</td> <td>65</td> <td>100</td> <td>24</td> <td>414</td> <td>58</td> </tr> <tr> <td>48</td> <td>286</td> <td>50</td> <td>48</td> <td>1K6</td> <td>30</td> </tr> <tr> <td>115</td> <td>1K7</td> <td>21</td> <td>110</td> <td>8K1</td> <td>13</td> </tr> <tr> <td>230</td> <td>6K8</td> <td>10</td> <td>220</td> <td>35K6</td> <td>6</td> </tr> <tr> <td>400</td> <td>18K8</td> <td>6</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	VAC	Ω	mA	VDC	Ω	mA	24	65	100	24	414	58	48	286	50	48	1K6	30	115	1K7	21	110	8K1	13	230	6K8	10	220	35K6	6	400	18K8	6			
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115	1K7	21	110	8K1	13																																
230	6K8	10	220	35K6	6																																
400	18K8	6																																			

Insulation	Volt rms, 1 min
Contact open	1000 V
Contact/contact	4 kV
Contact/coil	4 kV
Insulation resistance at 500 V	$\geq 3 \text{ G}\Omega$
Insulation, IEC 61810-1	4 kV/3

Specifications	
Ambient temperature operation/storage	-40 (no ice)...60 °C / -40 ... 80 °C
Pick-up time/bounce time	20 ms/ ≤ 3 ms
Release time/bounce time	10 ms/ ≤ 1 ms
Mechanical life ops	AC: 10 Mill./DC: 20 Mill.
DC voltage endurance at rated load	≥ 100000 switching cycles
Switching frequency at rated load	≤ 1200 /ops/h
Protection class	IP40
Weight	90 g

Standard types
VAC 50 Hz/60 Hz: 24, 48, 115 (120), 230 (240)
LED
RC suppresor (max 250 V)

C5-A20/AC ... V
C5-A20X/AC ... V
C5-A20R/AC ... V

VDC 24, 48, 110, 220
LED
Free wheeling diode
Polarity and free wheeling diode

C5-A20/DC ... V
C5-A20X/DC ... V
C5-A20DX/DC ... V
C5-A20FX/DC ... V

AC/DC bridge rectifier 24 V, 48 V, 60 V

C5-A20BX/UC ... V

"..." Enter the voltage for full type designation

Accessories	
Socket:	S5-S, S5-L, S5-P, S5-P0, S5-M
Optional accessories (blanking plug):	SO-NP, SO-OP



Connection diagram

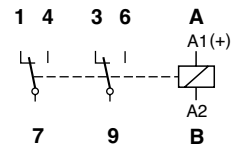


Fig. 1 AC voltage endurance

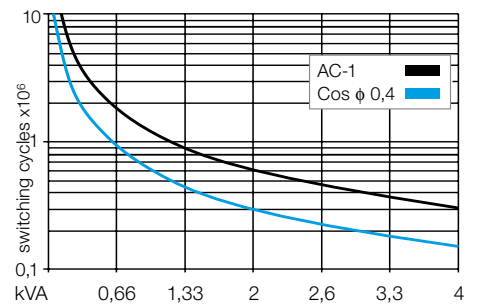
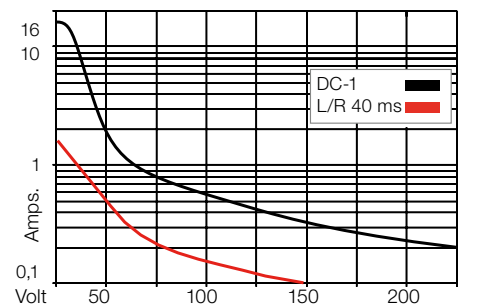
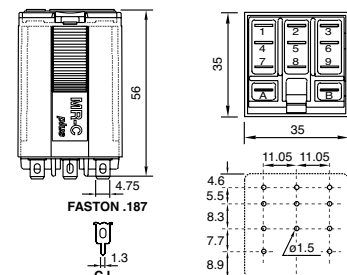


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



IEC 61810; EN 60947

Type	C5-A3x/ ... V Power relays, 3 change-over contacts		
-------------	--------------------------------------------------------------	--	--

Maximum contact load	16 A/400 V AC-1	0,5 A/110 V DC-1
	16 A/30 V DC-1	0,2 A/220 V DC-1

Contacts

Material	Standard	Code 0	AgNi
Rated current			16 A
Switch-on current max. (20 ms)			40 A
Switching voltage max.			400 V
AC load (Fig 1)			4 kVA
DC load			see Fig. 2

Coil

Coil resistance	see table; tolerance $\pm 10\%$
Pick-up voltage	$\leq 0,8 \times U_N$
Release voltage	$\geq 0,1 \times U_N$
Nominal power	2,4 VA (AC)/1,4 W (DC)

Coil table

VAC	Ω	mA	VDC	Ω	mA
24	65	100	24	414	58
48	286	50	48	1K6	30
115	1K7	21	110	8K1	13
230	6K8	10	220	35K6	6,2
400	18K8	6			

Insulation

	Volt rms, 1 min
Contact open	1000 V
Contact/contact	4 kV
Contact/coil	4 kV
Insulation resistance at 500 V	$\geq 3 G\Omega$
Insulation, IEC 61810-1	4 kV/3

Specifications

Ambient temperature operation/storage	-40 (no ice)...60 °C /-40 ... 80 °C
Pick-up time/bounce time	20 ms/ ≤ 3 ms
Release time/bounce time	10 ms/ ≤ 1 ms
Mechanical life ops	AC: 10 Mill./DC: 20 Mill.
DC voltage endurance at rated load	≥ 100000 switching cycles
Switching frequency at rated load	$\leq 1200/h$
Protection class	IP40
Weight	95 g

Standard types

VAC 50 Hz/60 Hz: 24, 48, 115, (120), 230, (240)

LED

RC suppressor (max 250 V)

VDC 24, 48, 110, 220

LED

Free wheeling diode

Polarity and free wheeling diode

AC/DC bridge rectifier 24 V, 48 V, 60 V

C5-A30/AC ... V

C5-A30X/AC ... V

C5-A30R/AC ... V

C5-A30/DC ... V

C5-A30X/DC ... V

C5-A30DX/DC ... V

C5-A30FX/DC ... V

C5-A30BX/UC ... V

"..." Enter the voltage for full type designation

Accessories

Socket: **S5-S, S5-L, S5-P, S5-P0, S5-M**

Optional accessories (blanking plug): **SO-NP, SO-OP**



Connection diagram

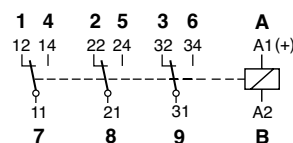


Fig. 1 AC voltage endurance

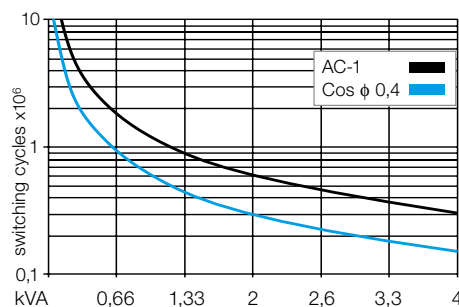
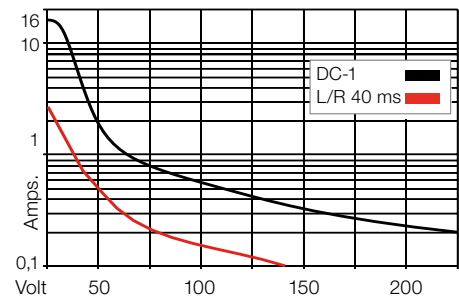
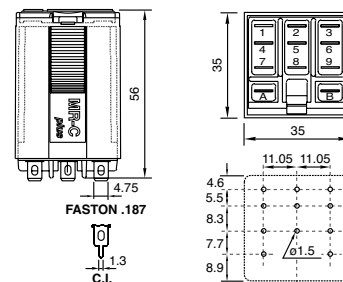


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



EN 60947; IEC 61810

Type	C5-G3x/ ... V Power relays, DC application. 3 open contacts		
-------------	--------------------------------------------------------------------------	--	--

Maximum contact load	16 A/400 V AC-1	1,2 A/110 V DC-1
	16 A/30 V DC-1	0,4 A/220 V DC-1

Contacts			
Material	Standard	Code 0	AgNi
Rated current			16 A
Switch-on current max. (20 ms)			40 A
Switching voltage max.			400 V
AC load (Fig 1)			4 kVA
DC load			see Fig. 2

Coil	
Coil resistance	see table; tolerance ± 10 %
Pick-up voltage	≤ 0,8 × U _N
Release voltage	≥ 0,1 × U _N
Nominal power	2,4 VA (AC)/1,6 W (DC)

Coil table	VAC	Ω	mA	VDC	Ω	mA
	24	65	100	12	90	133
	48	286	50	24	373	66
	115	1K7	21	48	1K4	34
	230	6K8	10	110	7K6	15
	400	18K8	6	220	30K3	7,5

Insulation		Volt rms, 1 min
Contact open		2000 V
Contact/contact		4 kV
Contact/coil		4 kV
Insulation resistance at 500 V		≥ 3 GΩ
Insulation, IEC 61810-1		4 kV/3

Specifications	
Ambient temperature operation/storage	-40 (no ice)...60 °C /-40 ... 80 °C
Pick-up time/bounce time	20 ms/≤ 3 ms
Release time/bounce time	10 ms/≤ 1 ms
Mechanical life ops	AC: 10 Mill./DC: 20 Mill.
DC voltage endurance at rated load	≥ 100000 switching cycles
Switching frequency at rated load	≤ 1200/h
Protection class	IP40
Weight	95 g

Standard types	C5-G30/AC ... V
VAC 50 Hz/60 Hz: 24, 48, 115, (120), 230, (240)	C5-G30X/AC ... V
LED	C5-G30R/AC ... V
RC suppressor (max 250 V)	
VDC 12, 24, 48, 110, 220	C5-G30/DC ... V
LED	C5-G30X/DC ... V
Free wheeling diode	C5-G30DX/DC ... V
Polarity and free wheeling diode	C5-G30FX/DC ... V
AC/DC bridge rectifier 24 V, 48 V, 60 V	C5-G30BX/UC ... V

"..." Enter the voltage for full type designation

Accessories	
Socket:	S5-S, S5-L, S5-P, S5-P0, S5-M
Optional accessories (blanking plug):	SO-NP, SO-OP



Connection diagram

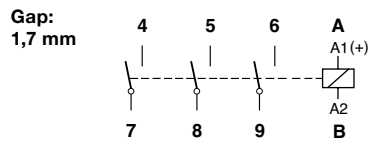


Fig. 1 AC voltage endurance

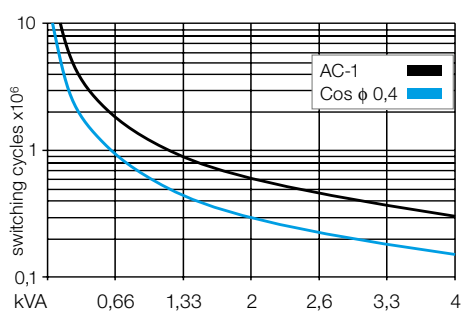
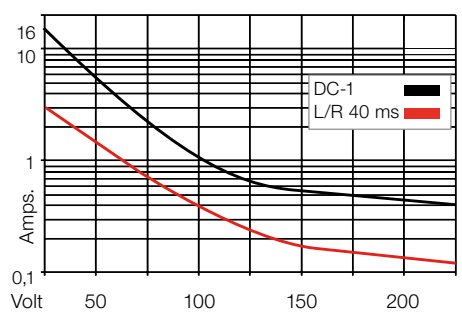
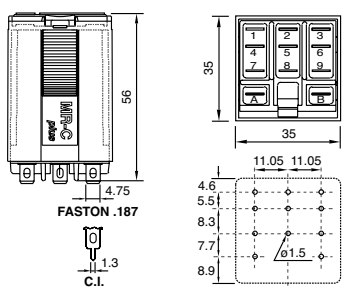


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



EN 60947; IEC 61810

Type	C5-X1x/ ... V Power relays, DC application 1 pole, NO, double make			
Maximum contact load	16 A/400 V AC-1	7 A/110 V DC-1		
	16 A/30 V DC-1	1,2 A/220V DC-13		
Contacts				
Material	Standard	Code 0	AgNi	
Rated current	16 A			
Switch-on current max. (20 ms)	40 A			
Switching voltage max.	400 V			
AC load (Fig 1)	4 kVA			
DC load	see Fig. 2			

Coil				
Coil resistance	see table; tolerance $\pm 10\%$			
Pick-up voltage	$\leq 0,8 \times U_N$			
Release voltage	$\geq 0,1 \times U_N$			
Nominal power	2,4 VA (AC)/1,3 W (DC)			

Coil table	VAC	Ω	mA	VDC	Ω	mA
	24	65	100	12	110	108
	48	286	50	24	443	54
	115	1K7	21	48	1K7	27
	230	6K8	10	110	9K2	12
	400	18K8	6	220	34K5	6,2

Insulation	Volt rms, 1 min	
Contact open	4 kV	
Contact/contact	4 kV	
Contact/coil	4 kV	
Insulation resistance at 500 V	$\geq 3 \text{ G}\Omega$	
Insulation, IEC 61810-1	4 kV/3	

Specifications		
Ambient temperature operation/storage	-40 (no ice)...60 °C / -40 ... 80 °C	
Pick-up time/bounce time	20 ms/ ≤ 3 ms	
Release time/bounce time	10 ms/ ≤ 1 ms	
Mechanical life ops	AC: 10 Mill./DC: 20 Mill.	
DC voltage endurance at rated load	≥ 100000 switching cycles	
Switching frequency at rated load	≤ 1200 /h	
Protection class	IP40	
Weight	90 g	

Standard types	
VAC 50 Hz/60 Hz: 24, 48, 115 (120), 230 (240)	C5-X10/AC ... V
LED	C5-X10X/AC ... V
RC suppressor (max 250 V)	C5-X10R/AC ... V
VDC 12, 24, 48, 110, 220	C5-X10/DC ... V
LED	C5-X10X/DC ... V
Free wheeling diode	C5-X10DX/DC ... V
Polarity and free wheeling diode	C5-X10FX/DC ... V
AC/DC bridge rectifier 24 V, 48 V, 60 V	C5-X10BX/UC ... V

"..." Enter the voltage for full type designation

Accessories	
Socket:	S5-S, S5-L, S5-P, S5-P0, S5-M
Optional accessories (blanking plug):	SO-NP, SO-OP



Connection diagram

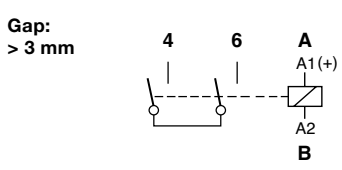


Fig. 1 AC voltage endurance

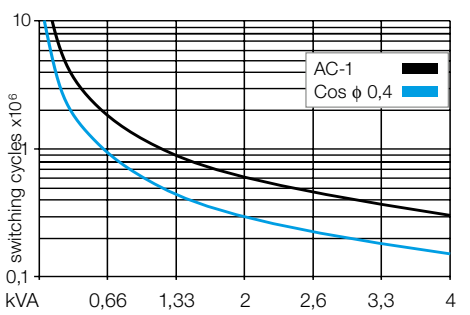
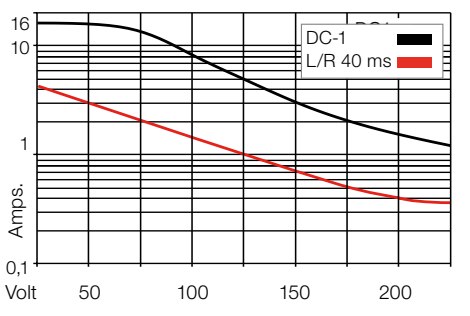
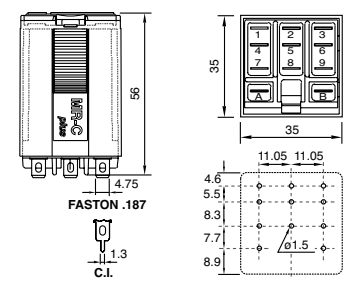


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



IEC 61810; EN 60947

C5-M1x

4-pin, power relay, 1-pole double make, magnetic blow out, faston

Type **C5-M1x/ ... V**
 Power relays, DC application
 1 pole, NO, magnetic blow out

Maximum contact load **16 A/400 V AC-1 10 A/220 V DC-1**
3,6 A/110 V DC-13 2 A/220 V DC-13

Contacts

Material Standard Code 0 AgNi
 Rated current 16 A
 Switch-on current max. (20 ms) 40 A
 Switching voltage max. 400 V
 AC load (Fig 1) 4 kVA
 DC load see Fig. 2

Coil

Coil resistance see table; tolerance ± 10 %
 Pick-up voltage ≤ 0,8 × U_N
 Release voltage ≥ 0,1 × U_N
 Nominal power 2,4 VA (AC)/1,3 W (DC)

Coil table

VAC	Ω	mA	VDC	Ω	mA
24	65	100	12	110	108
48	286	50	24	443	54
115	1K7	21	48	1K7	27
230	6K8	10	110	9K2	12
400	18K8	6	220	34K5	6,2

Insulation

Volt rms, 1 min
 Contact open 4000 V
 Contact/contact 4 kV
 Contact/coil 4 kV
 Insulation resistance at 500 V ≥ 3 G.Ω
 Insulation, IEC 61810-1 4 kV/3

Specifications

Ambient temperature operation/storage -40 (no ice)...60 °C /-40 ... 80 °C
 Pick-up time/bounce time 20 ms/≤ 3 ms
 Release time/bounce time 10 ms/≤ 1 ms
 Mechanical life ops AC: 10 Mill./DC: 20 Mill.
 DC voltage endurance see fig. 2
 Switching frequency at rated load ≤ 1200/h
 Protection class IP40
 Weight 90 g

Standard types

VAC 50 Hz/60 Hz: 24, 48, 115 (120), 230 (240)

LED

RC suppressor (max 250 V)

VDC 12, 24, 48, 110, 220

LED

Free wheeling diode

Polarity and free wheeling diode

AC/DC bridge rectifier 24 V, 48 V, 60 V

C5-M10/AC ... V

C5-M10X/AC ... V

C5-M10R/AC ... V

C5-M10/DC ... V

C5-M10X/DC ... V

C5-M10DX/DC ... V

C5-M10FX/DC ... V

C5-M10BX/UC ... V

"..." Enter the voltage for full type designation

Accessories

Socket: S5-S, S5-L, S5-P, S5-P0, S5-M
 Optional accessories (blanking plug): SO-NP, SO-OP



Connection diagram

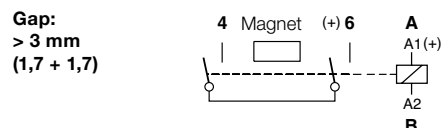


Fig. 1 AC voltage endurance

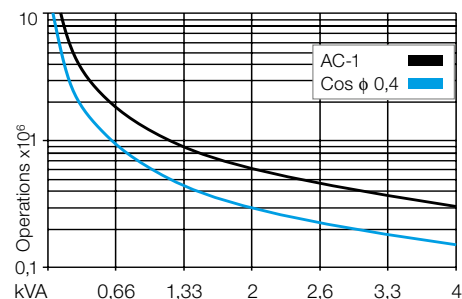
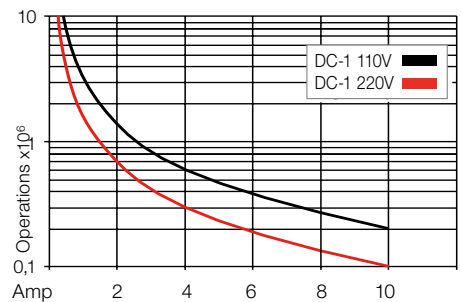
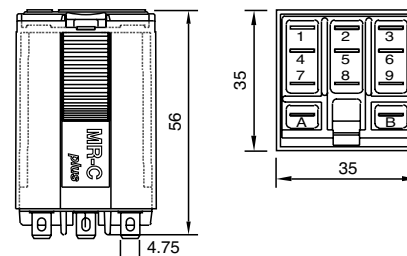


Fig. 2 DC voltage endurance



Dimensions [mm]



Technical approvals, conformities



IEC 61810; EN 60947

Type	C5-M2x/ ... V Power relays, DC application double pole, NO, magnetic blow out
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Maximum contact load	16 A / 250 V AC-1 7 A / 110 V DC-1 3 A / 220 V DC-1
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Contacts			
Material	Standard	Code 0	AgNi
Rated current			16 A
Switch-on current max. (20 ms)			40 A
Switching voltage max.			250 V
AC load (Fig 1)			4 kVA
DC load			see Fig. 2

Coil	
Coil resistance	see table; tolerance ± 10 %
Pick-up voltage	≥ 0,8 x U _N
Release voltage	≥ 0,1 x U _N
Nominal power	2,4 VA (AC) / 1,6 W (DC)

Coil table																															
	<table border="1"> <thead> <tr> <th>VAC</th> <th>Ω</th> <th>mA</th> <th>VDC</th> <th>Ω</th> <th>mA</th> </tr> </thead> <tbody> <tr> <td>24</td> <td>65</td> <td>100</td> <td>12</td> <td>90</td> <td>133</td> </tr> <tr> <td>48</td> <td>286</td> <td>50</td> <td>24</td> <td>373</td> <td>66</td> </tr> <tr> <td>115</td> <td>1K7</td> <td>21</td> <td>48</td> <td>1K4</td> <td>33</td> </tr> <tr> <td>230</td> <td>6K8</td> <td>10.4</td> <td>110</td> <td>7K6</td> <td>15</td> </tr> </tbody> </table>	VAC	Ω	mA	VDC	Ω	mA	24	65	100	12	90	133	48	286	50	24	373	66	115	1K7	21	48	1K4	33	230	6K8	10.4	110	7K6	15
VAC	Ω	mA	VDC	Ω	mA																										
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48	286	50	24	373	66																										
115	1K7	21	48	1K4	33																										
230	6K8	10.4	110	7K6	15																										

Insulation	Volt rms, 1 min
Contact open	2 kV
Contact/contact	4 kV
Contact/coil	3 kV
Insulation resistance at 500 V	≥ 3 GΩ
Insulation, EN 60947/IEC 61810-1:	4 KV/3

Specifications	
Ambient temperature operation/storage	-40 (no ice)...60 °C / -40 ... 80 °C
Pick-up time/bounce time	20 ms/≤ 3 ms
Release time/bounce time	10 ms/≤ 1 ms
Mechanical life ops	AC: 10 Mill./DC: 20 Mill. switching cycles
DC Rated load	≥ 75.000 switching cycles
Switching frequency at rated load	≤ 1200/h
Protection class	IP40
Weight	90 g

Standard types	
VAC 50 Hz/60 Hz: 24, 48, 115 (120), 230 (240)	C5-M20/AC ... V
LED	C5-M20X/AC ... V
RC suppressor (max 250 V)	C5-M20R/AC ... V
VDC 12, 24, 48, 110, 220	C5-M20/DC ... V
LED	C5-M20X/DC ... V
Free wheeling diode	C5-M20DX/DC ... V
Polarity and free wheeling diode	C5-M20FX/DC ... V
AC/DC bridge rectifier 24 V, 48 V, 60 V	C5-M20BX/UC ... V

"..." Enter the voltage for full type designation

Accessories	
Socket:	S5-S, S5-L, S5-P, S5-P0, S5-M
Optional accessories (blanking plug):	SO-NP, SO-OP



Connection diagram

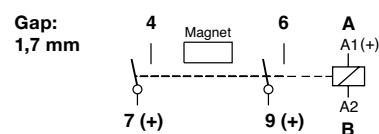


Fig. 1 AC voltage endurance

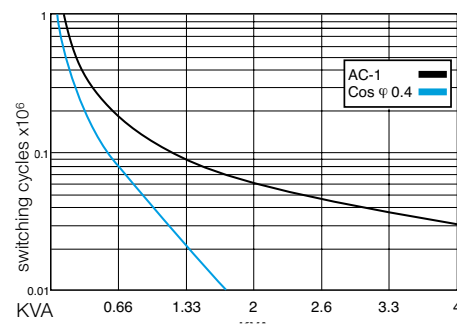
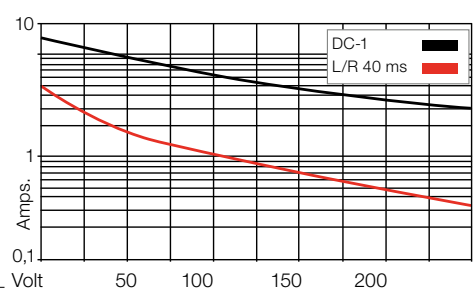
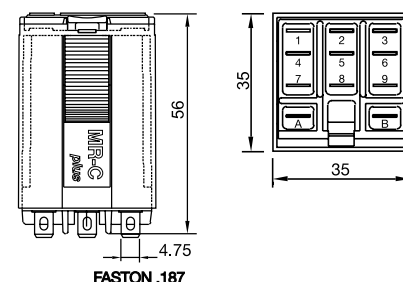


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



IEC 61810; EN 60947

Type	C5-R2x/ ... V Magnetic latching – Remanence relays 2 change-over contact, 10A		
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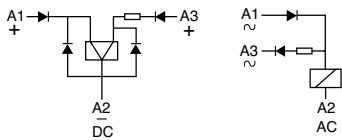
Maximum contact load	10 A/400 V AC-1 0,2 A/250 V DC-1	10 A/30 V DC-1 0,5 A/110 V DC-1	
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Contacts

Material	Standard	Code 0	AgNi
Rated current			10 A
Switch-on current max. (20 ms)			30 A
Switching voltage max.			400 V
AC load (Fig 1)			4 kVA
DC load			see Fig. 2

Coil

Coil resistance	see table; tolerance $\pm 10\%$
ON pulse power	1,5 VA/W
OFF pulse power	0,5 VA/W
1 winding for AC, 2 winding for DC	
Pull-in ON/OFF	$< 0,8 \times U_N$

Internal Diagram:**Coil table**

VAC	mA ON	mA OFF	VDC	mA ON	mA OFF
24	75	12	12	125	41
48	38	6	24	63	21
115	16	2,5	48	31	10
230	8	1,3	110	14	4,5

Insulation

	Volt rms, 1 min
Contact open	1000 V
Contact/contact	4 kV
Contact/coil	4 kV
Insulation resistance at 500 V	$\geq 3 \text{ G}\Omega$
Insulation, EN 60947/IEC 61810-1	4 kV/3

Specifications

Ambient temperature operation/storage	-40 (no ice)...60 °C / -40 ... 80 °C
Minimum pulse ON/OFF	50 ms
Mechanical life ops	AC: 10 Mill./DC: 20 Mill.
DC voltage endurance at rated load	≥ 100000 switching cycles
Switching frequency at rated load	≤ 1200 /h
Protection class	IP40
Weight	95 g

Standard types

VAC 50 Hz/60 Hz: **24, 48, 115 (120), 230 (240)**

C5-R20/AC ... V

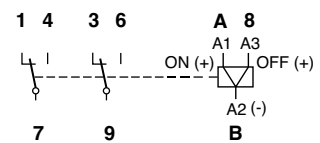
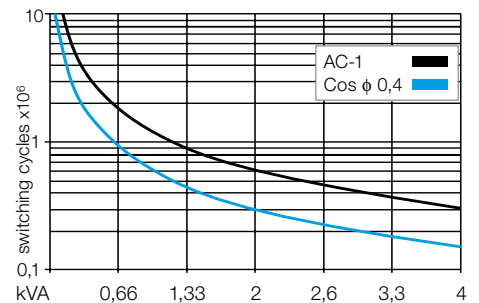
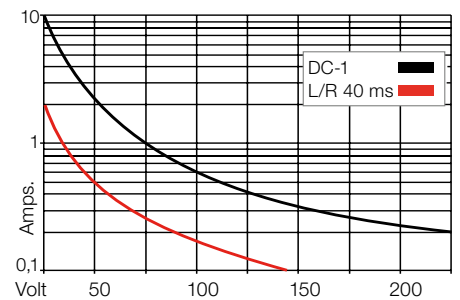
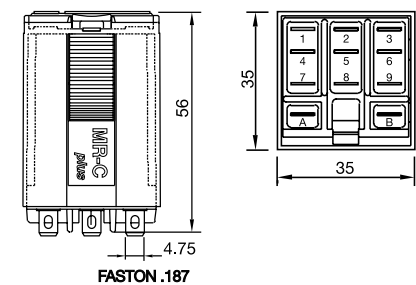
VDC : **12, 24, 48, 110,**

C5-R20/DC ... V

"..." Enter the voltage for full type designation

Accessories

Socket:	S5-S, S5-L, S5-P, S5-P0, S5-M
Optional accessories (blanking plug):	SO-NP, SO-OP

**Connection diagram****Fig. 1 AC voltage endurance****Fig. 2 DC load limit curves****Dimensions [mm]****Technical approvals, conformities**

IEC 61810, EN 60947

Notes

