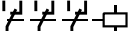
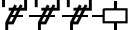
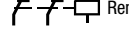
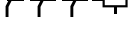
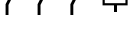
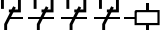
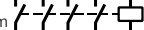
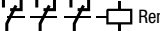
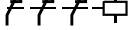


1.1 Plug-in Relays

1.1.1 Industrial Relays

MRC Series



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		 Rem.	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		 Rem.	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		 Rem.	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 AC1	0,5 A/110 V DC1	
	10 A/30 V DC1	0,2 A/220 V DC1	
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

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

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-A20/AC ... V	C2-A28/AC ... V	C2-A29AC ... V
C2-A20X/AC ... V	C2-A28X/AC ... V	C2-A29X/AC ... V
C2-A20R/AC ... V	C2-A28R/AC ... V	C2-A29R/AC ... V
C2-A20/DC ... V	C2-A28/DC ... V	C2-A29/DC ... V
C2-A20X/DC ... V	C2-A28X/DC ... V	C2-A29X/DC ... V
C2-A20DX/DC ... V	C2-A28DX/DC ... V	C2-A29DX/DC ... V
C2-A20FX/DC ... V	C2-A28FX/DC ... V	C2-A29FX/DC ... V
C2-A20BX/UC ... V	C2-A28BX/UC ... V	C2-A29BX/UC ... V

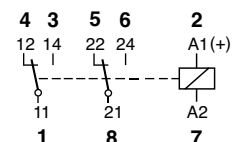
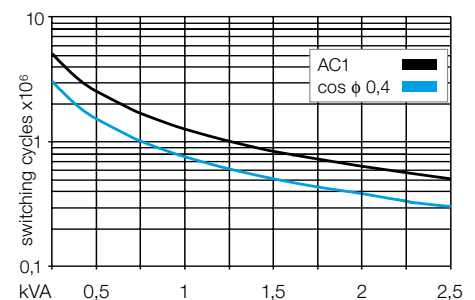
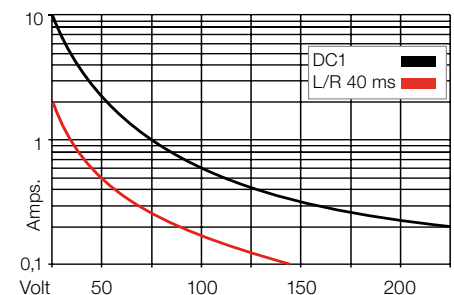
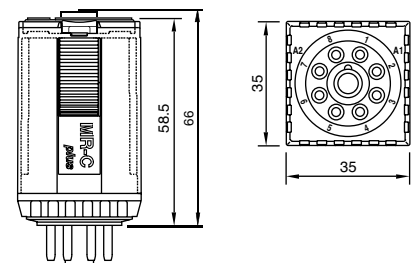
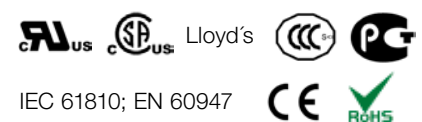
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Accessories

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	AC1	6 A/30 V	DC1
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

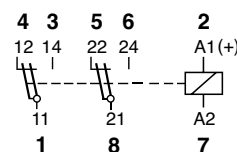
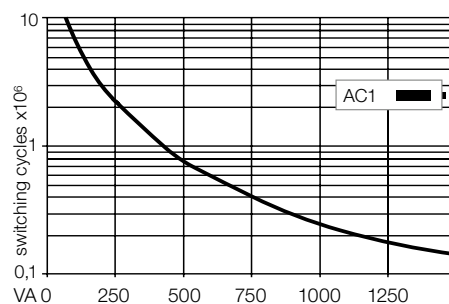
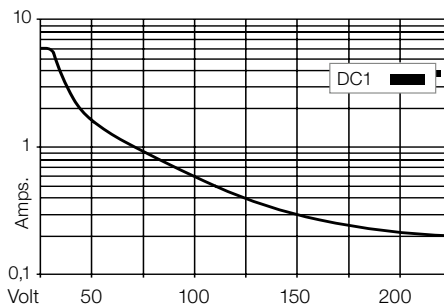
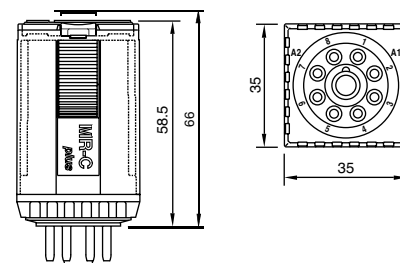
Specifications

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)****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-T21/AC ... V
C2-T21X/AC ... V
C2-T21R/AC ... V
C2-T21/DC ... V
C2-T21X/DC ... V
C2-T21DX/DC ... V
C2-T21FX/DC ... V
C2-T21BX/UC ... V
C2-T22/AC ... V
C2-T22X/AC ... V
C2-T22R/AC ... V
C2-T22/DC ... V
C2-T22X/DC ... V
C2-T22DX/DC ... V
C2-T22FX/DC ... V
C2-T22BX/UC ... V

"... Enter the voltage for full type designation

Accessories
 Socket:
 Optional accessories (blanking plug):

S2-B, S2-S, S2-L, S2-P, S2-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	C2-G2x/ ... V Standard relays, DC application 2 open contacts		
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Maximum contact load	10 A/250 V AC1	1,2 A/110 V DC1
	10 A/30 V DC1	0,4 A/220 V DC1

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/ ≤ 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****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**

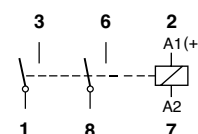
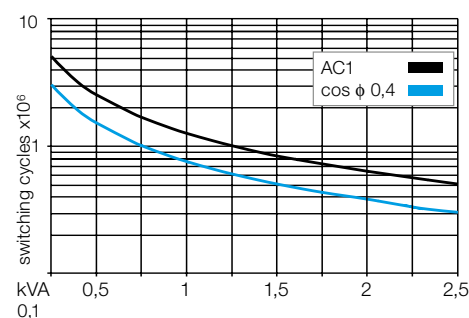
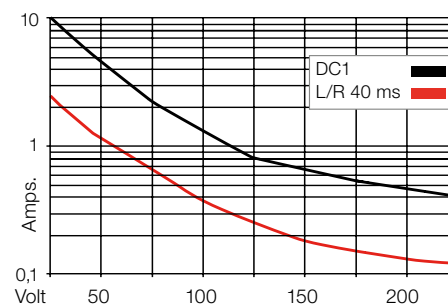
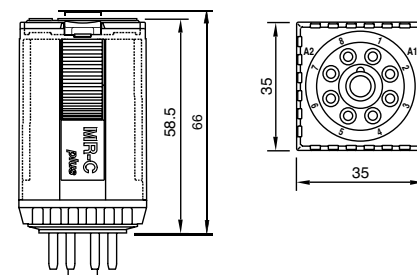
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Accessories

Socket:

S2-B, S2-S, S2-L, S2-P, S2-P0

Optional accessories (blanking plug):

SO-NP, SO-OP**Connection diagram**Gap:
1,7 mm**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	ACI	0,5 A/110 V	DC1
	10 A/30	DCI	0,2 A/220 V	DC1
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 × 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
48	296	46	48	1K8
115	1K7	19	110	9K2
230	7K1	9,5	220	36K1

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)****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**

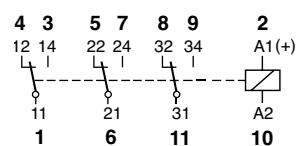
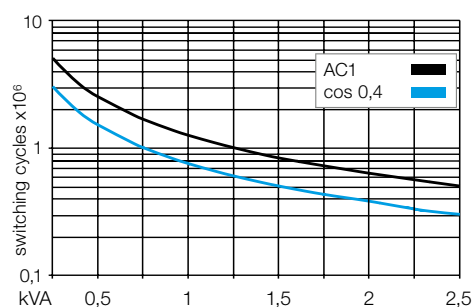
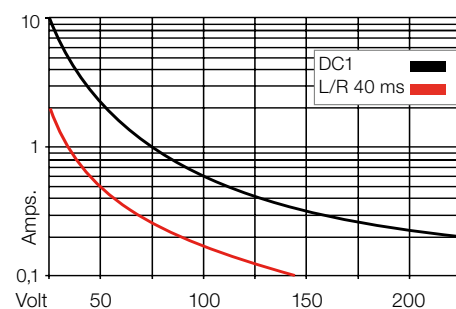
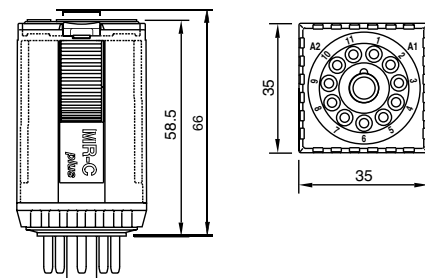
C3-A30/AC ... V	C3-A38/AC ... V	C3-A39/AC ... V
C3-A30X/AC ... V	C3-A38X/AC ... V	C3-A39X/AC ... V
C3-A30R/AC ... V	C3-A38R/AC ... V	C3-A39R/AC ... V
C3-A30/DC ... V	C3-A38/DC ... V	C3-A39/DC ... V
C3-A30X/DC ... V	C3-A38X/DC ... V	C3-A39X/DC ... V
C3-A30DX/DC ... V	C3-A38DX/DC ... V	C3-A39DX/DC ... V
C3-A30FX/DC ... V	C3-A38FX/DC ... V	C3-A39FX/DC ... V
C3-A30BX/UC ... V	C3-A38BX/UC ... V	C3-A39BX/UC ... V

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

Accessories

Socket:

Optional accessories (blanking plug):

S3-B, S3-S, S3-L, S3-P, S3-P0, S3-MP, S3-MS
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-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	DC1	
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

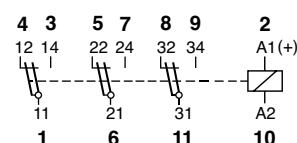
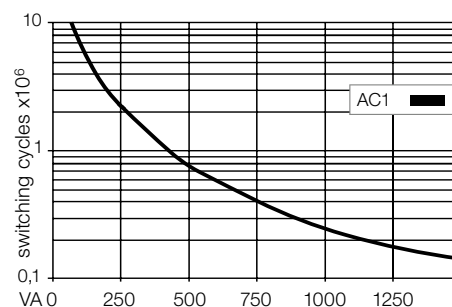
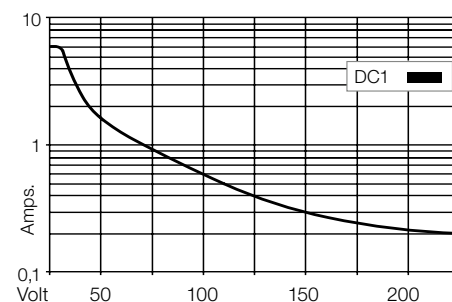
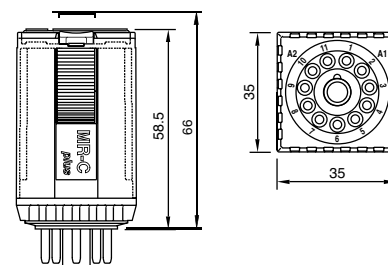
Standard types**VAC 50 Hz/60 Hz: 24, 48, 115 (120), 230 (240)****LED****RC Suppressor****VDC 24, 48, 110, 220****LED****Free wheeling diode****Polarity and free wheeling diode****AC/DC bridge rectifier 24 V, 48 V, 60 V**
C3-T31/AC ... V
C3-T31X/AC ... V
C3-T31R/AC ... V
C3-T31/DC ... V
C3-T31X/DC ...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

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

Accessories

Socket:

Optional accessories (blanking plug):

S3-B, S3-S, S3-L, S3-P, S3-P0, S3-MP, S3-MS
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	1,2 A/110 V DC1
	10 A 30 V DC 1	0,4 A/220 V DC1

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, IEC 61810-1	2,5 kV/3

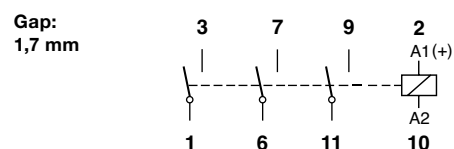
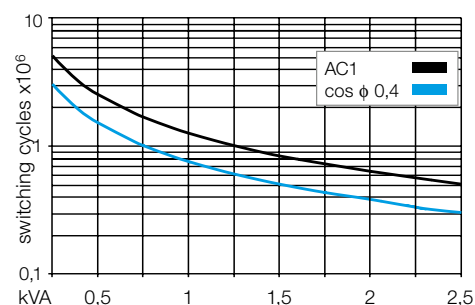
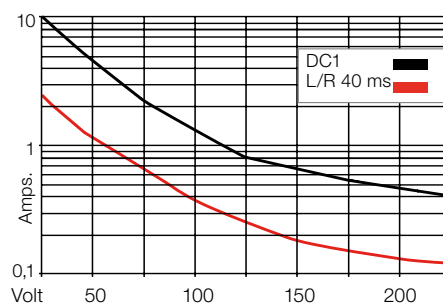
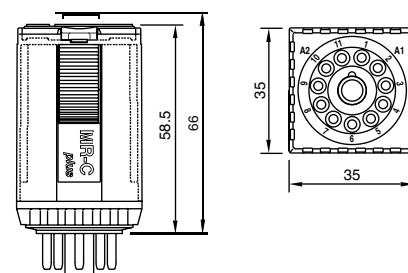
Specifications

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**
C3-G30/AC ... V
C3-G30X/AC ... V
C3-G30R/AC ... V
C3-G30/DC ... V
C3-G30X/DC ... V
C3-G30DX/DC... V
C3-G30FX/DC ... V
C3-G30BX/UC ... V

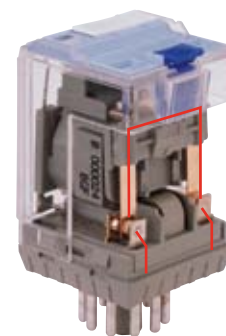
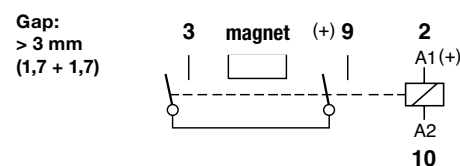
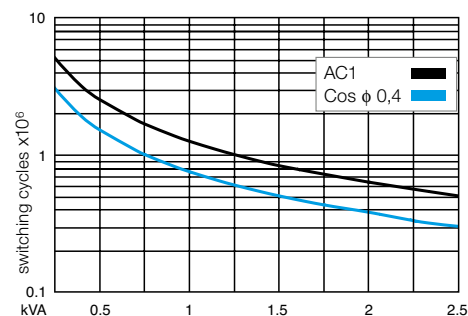
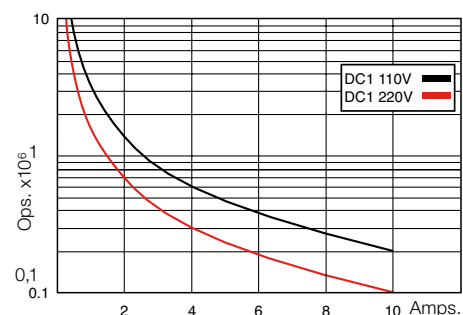
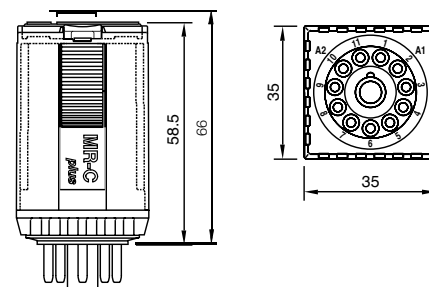
"... " Enter the voltage for full type designation

Accessories
 Socket:
 Optional accessories (blanking plug):

S3-B, S3-S, S3-L, S3-P, S3-P0, S3-MP, S3-MS
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 AC1 3,6 A 110 V L/R 40ms 10 A 220 V DC1 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><tr><th>VAC</th><th>Ω</th><th>mA</th><th>VDC</th><th>Ω</th><th>mA</th></tr><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></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 Suppresor			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, S3-MP, S3-MS																																
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	C3-X1x/ ... V Power relays for DC application 1 pole, NO, double make		
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Maximum contact load	10 A/250 V AC 1	7 A/110 V DC1
	10 A/30 V DC 1	1,2 A/220 V DC1

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

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	$\geq 1 \text{ G}\Omega$
Insulation, IEC 61810-1	2,5 kV/3

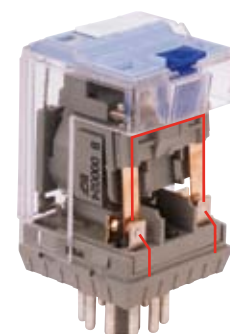
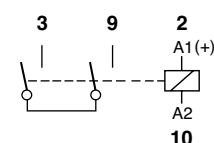
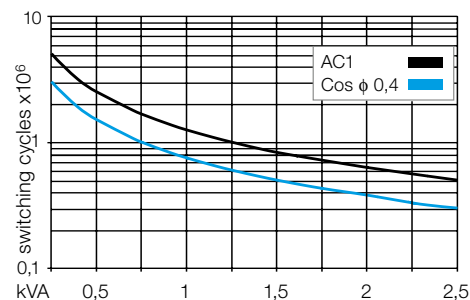
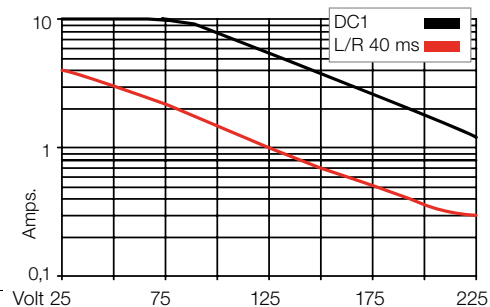
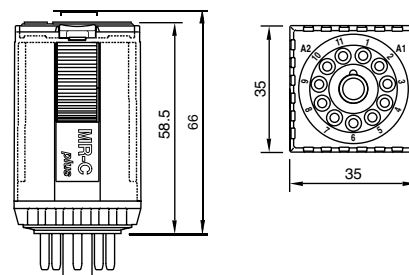
Specifications

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:
 Optional accessories (blanking plug):

S3-B, S3-S, S3-L, S3-P, S3-P0, S3-MP, S3-MS
SO-NP, SO-OP
**Connection diagram**
 Gap:
 $> 3 \text{ mm}$
 (1,7 + 1,7)
**Fig. 1 AC voltage endurance****Fig. 2 DC load limit curve****Dimensions [mm]****Technical approvals, conformities**

IEC 61810; EN 60947

Type	C3-R2x/ ... V Remanence plug-in relays, 2 change-over contacts			
Maximum contact load	10 A/250 V	AC1	0,5 A/110 V	DC1
	10 A/30 V	DC1	0,2 A/220 V	DC1
Recommended minimum contact load	10 mA/10 V	Code 0, 9		
	5 mA/5 V	Code 8		

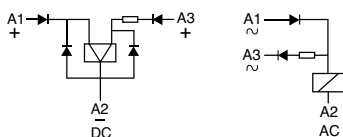
Contacts

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 %
ON pulse power	1,5 VA/W
OFF pulse power	0,5 VA/W
Pull-in ON/OFF	≤ 0,8 × 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 GΩ
Insulation, IEC 61810-1	2,5 kV/3

Specifications

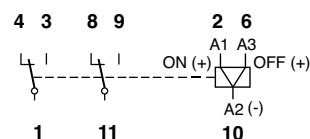
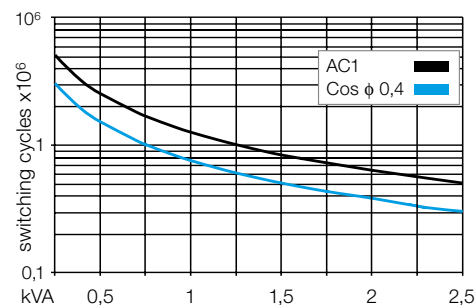
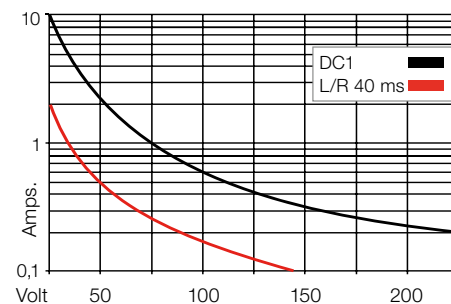
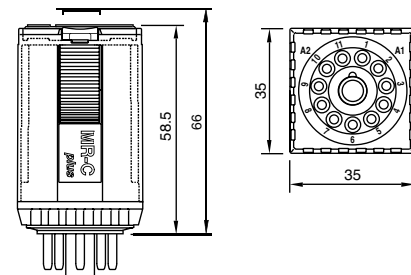
Ambient temperature operation/storage	-40 (no ice)...60 °C / -40 ... 80 °C
Minimum pulse length for ON/OFF	50 ms
Mechanical life ops	10 Mill.
DC voltage endurance at rated load	≥ 100000 switching cycles
Switching frequency at rated load	≤ 1200/ops/h
Protection class	IP40
Weight	95 g

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, S3-MP, S3-MS
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-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	AC1	6 A/30 V	DC1
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

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

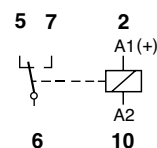
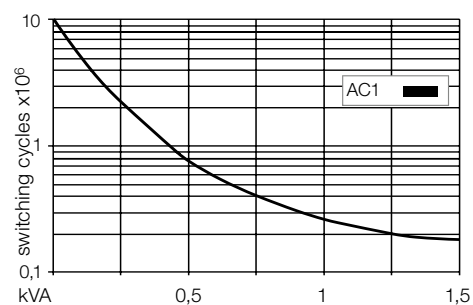
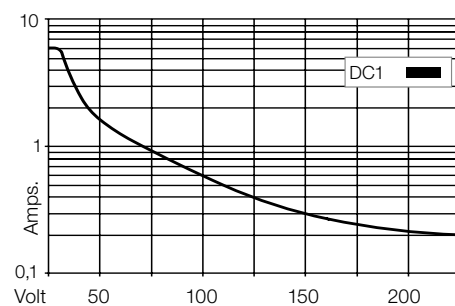
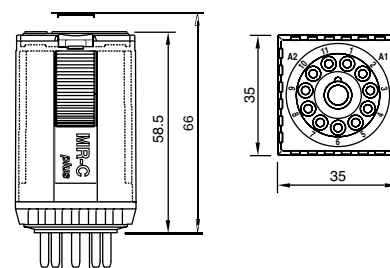
Standard types**VDC 12, 24, 48****Free wheeling diode****Polarity and free wheeling diode****C3-S14/DC ... V****C3-S14D/DC ... V****C3-S14F/DC ... V****C3-S18/DC ... V****C3-S18D/DC ... V****C3-S18F/DC ... V****Connection of diodes to the coil will increase the release time.****LED available upon request.**

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

Accessories

Socket:

Optional accessories (blanking plug):

S3-B, S3-S, S3-L, S3-P, S3-P0, S3-MP, S3-MS
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	AC1	6 A/30 V	DC1															
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><tr><th>VDC</th><th>Ω</th><th>mA</th></tr><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></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																			
Contact open	Volt rms, 1 min																		
Contact/contact	1000 V																		
Contact/coil	2,5 kV																		
Insulation resistance at 500 V	2,5 kV																		
Insulation, IEC 61810-1	≥1 GΩ																		
	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-E24/DC ... V****C3-E24D/DC ... V****C3-E24F/DC ... V****C3-E28/DC ... V****C3-E28D/DC ... V****C3-E28F/DC ... V****Connection of diodes to the coil will increase the release time.****LED available upon request.**

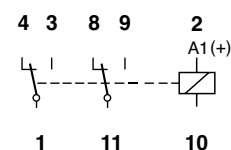
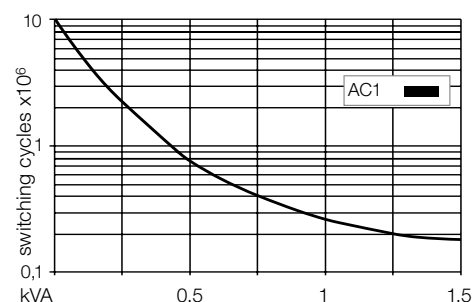
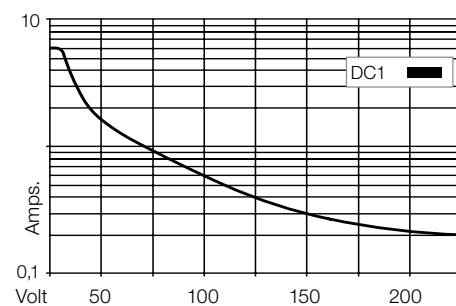
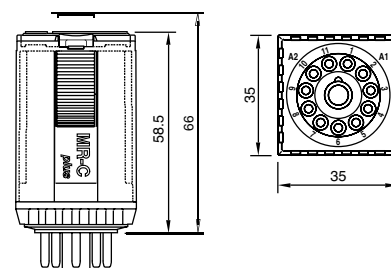
"..." Enter the voltage for full type designation

Accessories

Socket:

S3-B, S3-S, S3-L, S3-P, S3-P0, S3-MP, S3-MS

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	DC1
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

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

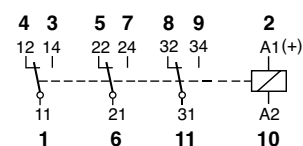
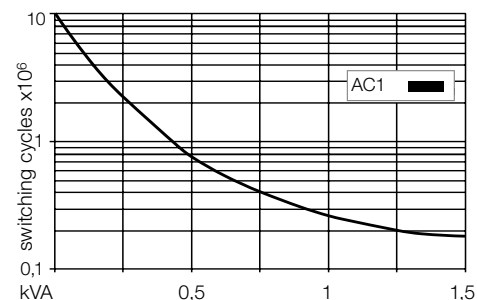
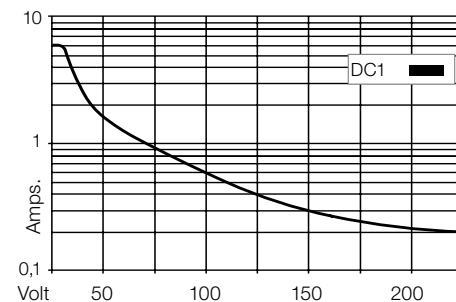
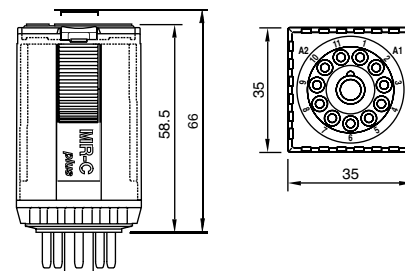
C3-N34/DC ... V**C3-N34D/DC ... V****C3-N34F/DC ... V****C3-N38/DC ... V****C3-N38D/DC ... V****C3-N38F/DC ... V****Connection of diodes to the coil will increase the release time.****LED available upon request.**

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

Accessories

Socket:

Optional accessories (blanking plug):

S3-B, S3-S, S3-L, S3-P, S3-P0, S3-MP, S3-MS**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	R3-NxD/ ... V Relays for Railway application 3 change-over contacts special wide range voltage			
-------------	--	--	--	--

Maximum contact load	6 A 250 V AC1	6 A 30 V DC1
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	1,07 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 strength (1Minute/V rms)	
Contact/coil	4 kV / 2220 V
Contact/contact	4 kV / 2220 V
Between contact and the same pole	1550 kV / 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

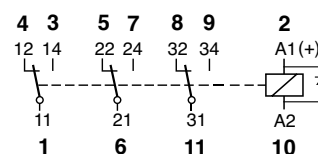
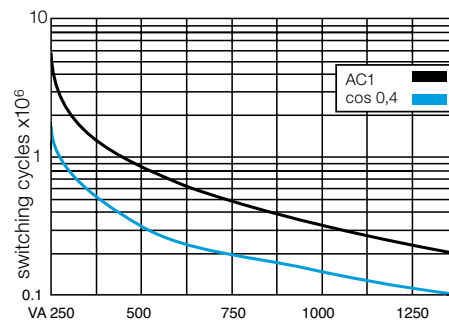
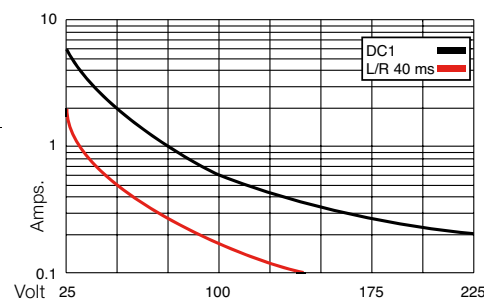
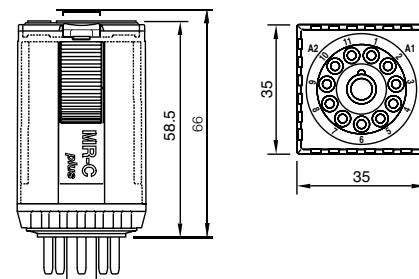
LED + free wheeling diode

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, S3-MP, S3-MS
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

Type	C4-A4x/ ... V Standard relays, 4 change-over contacts			
Maximum contact load	10 A/250 V	AC1	0,5 A/110 V	DC1
	10 A/30 V	DC1	0,2 A/220 V	DC1
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 × U _N
Release voltage	≥ 0,1 × U _N
Nominal power	2,4 VA (AC)/1,4 W (DC)

Coil table

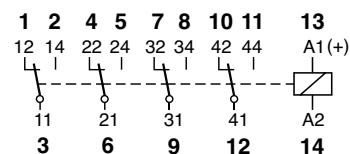
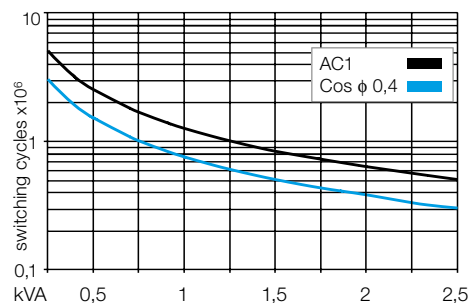
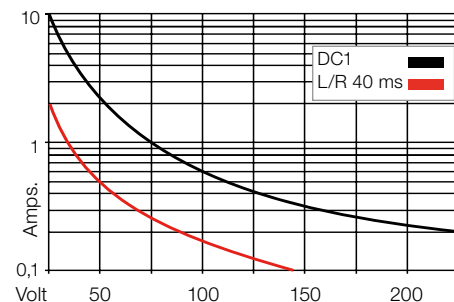
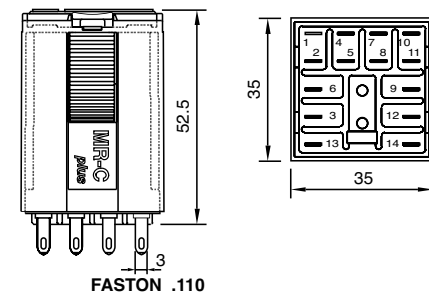
VAC	Ω	mA	VDC	Ω	mA
24	65	100	24	414	58
48	286	50	48	1K6	30
115	1K7	21	110	8K1	13
230	6K8	10	220	35K7	6,2

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)****LED****RC suppresor****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-A40/AC ... V****C4-A40X/AC ... V****C4-A40R/AC ... V****C4-A40/DC ... V****C4-A40X/DC ... V****C4-A40DX/DC ... V****C4-A40FX/DC ... V****C4-A40BX/UC ... V****C4-A48/AC ... V****C4-A48X/AC ... V****C4-A48R/AC ... V****C4-A48/DC ... V****C4-A48X/DC ... V****C4-A48DX/DC ... V****C4-A48FX/DC ... V****C4-A48BX/UC ... V****Connection diagram****Fig. 1 AC voltage endurance****Fig. 2 DC load limit curve****Dimensions [mm]****Technical approvals, conformities**

IEC 61810; EN 60947

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

Accessories
 Socket:
 Optional accessories (blanking plug):

S4-J, S4-L, S4-P, S4-P0
SO-NP, SO-OP

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 $\pm 10\%$
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	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	$\geq 1 \text{ G}\Omega$
Insulation, IEC 61810-1	2,5 kV/3

Specifications

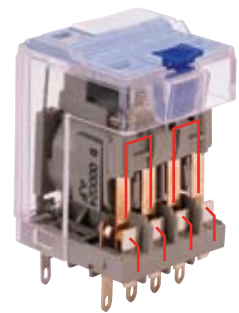
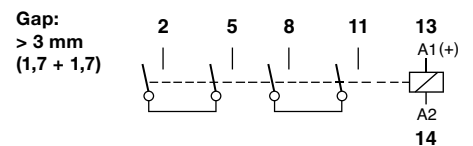
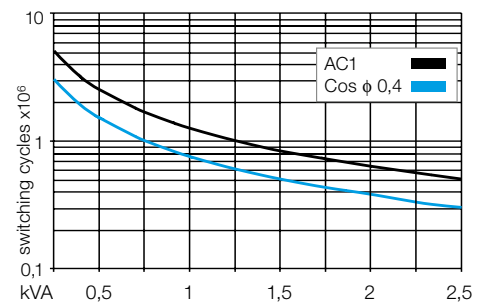
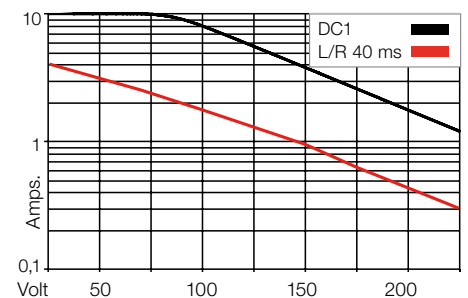
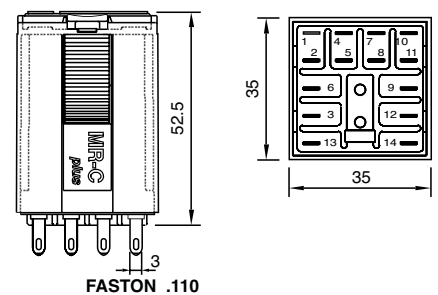
Ambient temperature operation/storage	-40 (no ice)...60 °C / -40 ... 80 °C
Pick-up time/bounce time	20 ms/ ≤ 3 ms
Release time/bounce time	8 ms/ ≤ 1 ms
Mechanical life ops	AC: 10 Mill./DC: 20 Mill.
DC voltage endurance at rated load	≥ 100000 switching cycles
Switching frequency at rated load	≤ 1200 /ops/h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

Standard types**VAC 50 Hz/60 Hz: 24, 48, 115, (120), 230, (240)****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:	S4-S, 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

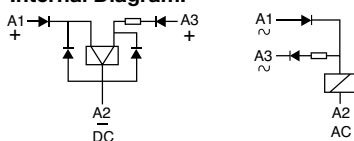
Type	C4-R3x/ ... V Magnetic remanence relay 3 change-over contact			
Maximum contact load	10 A/250 V	AC 1	0,5 A/110 V	DC1
	10 A/10 V	DC 1	0,2 A/220 V	DC1
Recommended minimum contact load	10 mA/10 V	Code 0, 9		
	5 mA/5 V	Code 8		

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
Pull-in ON/OFF	1 Winding for AC, 2 Windings for DC ≤ 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

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

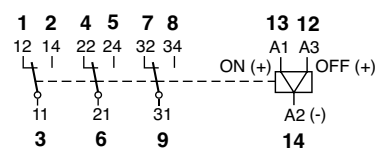
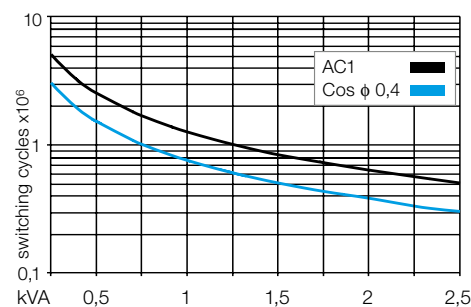
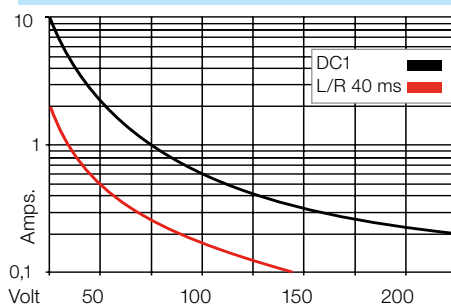
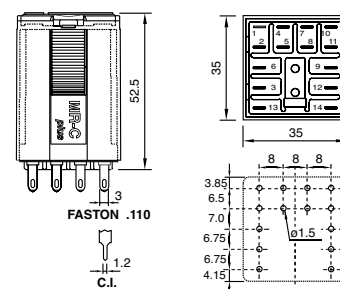
Standard types**VAC 50 Hz/60 Hz: 24, 48, 115 (120), 230 (240)****VDC 12, 24, 48, 110**

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 AC1	0,5 A/110 V DC1	
	16 A/30 V DC1	0,2 A/220 V DC1	

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
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

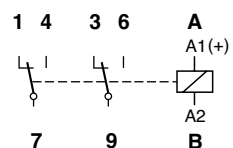
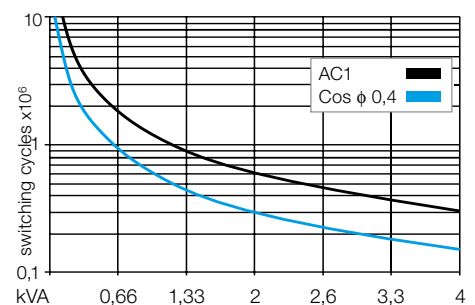
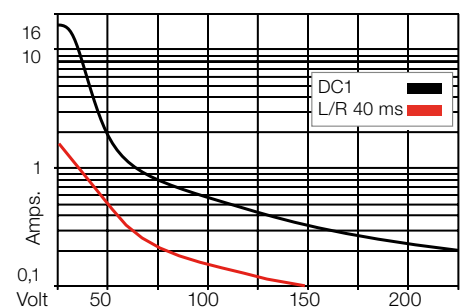
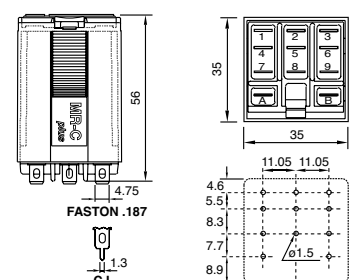
Ambient temperature operation/storage	-40 (no ice)...60 °C / -40 ... 80 °C
Pick-up time/bounce time	20 ms/ ≤ 3 ms
Release time/bounce time	10 ms/ ≤ 1 ms
Mechanical life ops	AC: 10 Mill./DC: 20 Mill.
DC voltage endurance at rated load	≥ 100000 switching cycles
Switching frequency at rated load	≤ 1200 /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)****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-A20/AC ... V****C5-A20X/AC ... V****C5-A20R/AC ... V****C5-A20/DC ... V****C5-A20X/DC ... V****C5-A20DX/DC ... V****C5-A20FX/DC ... 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 AC1 16 A/30 V DC1	0,5 A/110 V DC1 0,2 A/220 V DC1		

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	≥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	
VAC 50 Hz/60 Hz: 24, 48, 115, (120), 230, (240)	C5-A30/AC ... V
LED	C5-A30X/AC ... V
RC suppresor (max 250 V)	C5-A30R/AC ... V
VDC 24, 48, 110, 220	C5-A30/DC ... V
LED	C5-A30X/DC ... V
Free wheeling diode	C5-A30DX/DC ... V
Polarity and free wheeling diode	C5-A30FX/DC ... V
AC/DC bridge rectifier 24 V, 48 V, 60 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

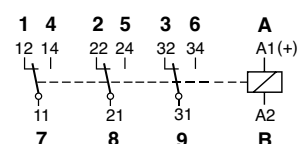


Fig. 1 AC voltage endurance

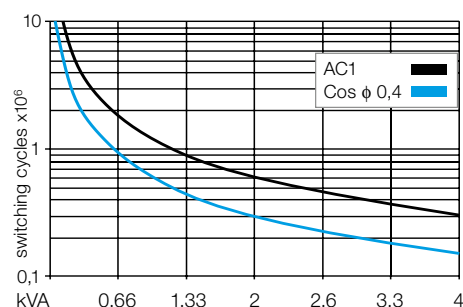
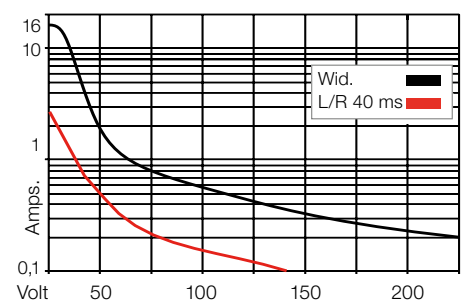
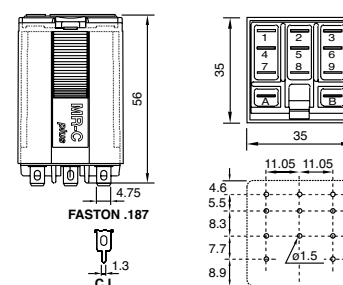


Fig. 2 DC load limit curve



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 AC1	1,2 A/110 V DC1
	16 A/30 V DC1	0,4 A/220 V DC1

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)/1,6 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	$\geq 3 \text{ G}\Omega$
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	$\leq 1200/\text{h}$
Protection class	IP40
Weight	95 g

Standard types

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

LED

RC suppresor (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-G30/AC ... V

C5-G30X/AC ... V

C5-G30R/AC ... V

C5-G30/DC ... V

C5-G30X/DC ... V

C5-G30DX/DC ... V

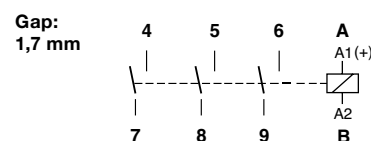
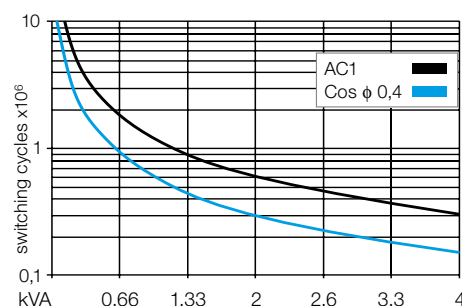
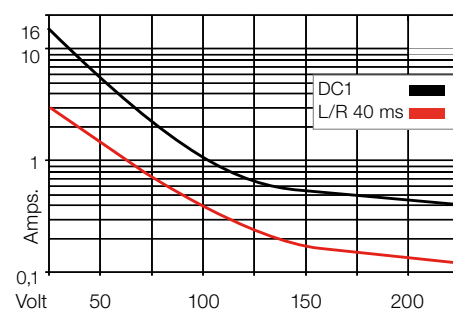
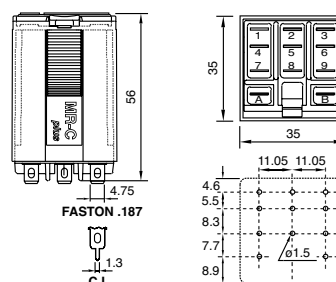
C5-G30FX/DC ... V

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		
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Maximum contact load	16 A/400 V AC1	7 A/110 V DC1
	16 A/30 V DC1	1,2 A/220V DC13

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	$\leq 1200/\text{h}$
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)

VDC 12, 24, 48, 110, 220

LED

Free wheeling diode

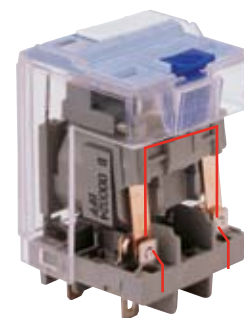
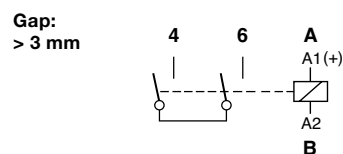
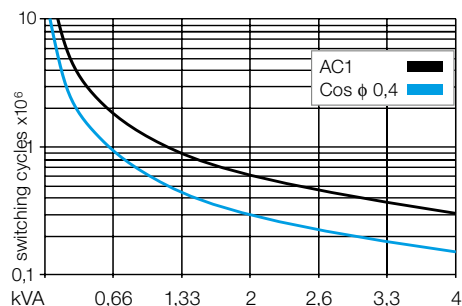
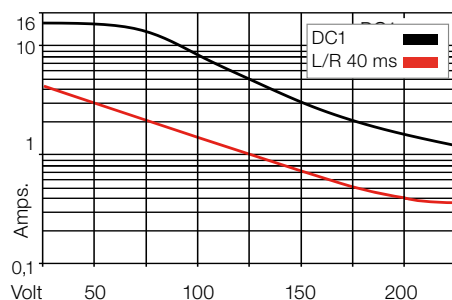
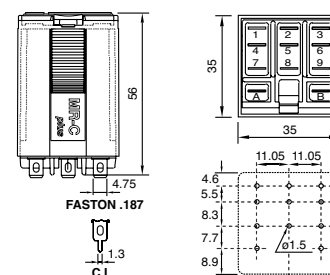
Polarity and free wheeling diode

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

C5-X10/AC ... V
C5-X10X/AC ... V
C5-X10R/AC ... V
C5-X10/DC ... V
C5-X10X/DC ... V
C5-X10DX/DC ... V
C5-X10FX/DC ... V
C5-X10BX/UC ... V

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

Accessories
 Socket:
 Optional accessories (blanking plug):

S5-S, S5-L, S5-P, S5-P0, S5-M
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-M1x/ ... V Power relays, DC application 1 pole, NO, magnetic blow out			
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Maximum contact load	16 A/400 V AC1	10 A/220 V DC1		
	3,6 A/110 V DC13	2 A/220 V DC13		

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	4000 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

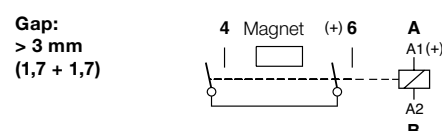
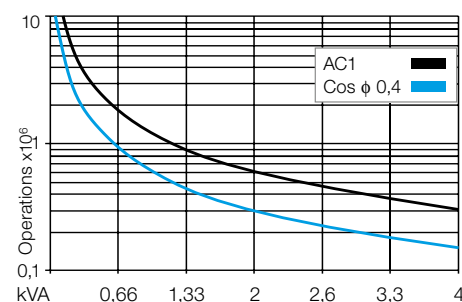
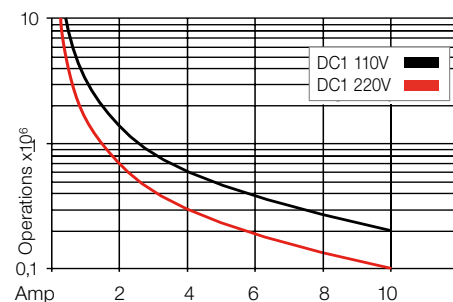
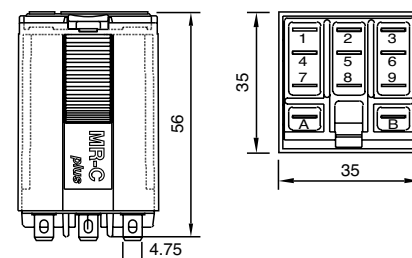
Ambient temperature operation/storage	-40 (no ice)...60 °C / -40 ... 80 °C
Pick-up time/bounce time	20 ms/ ≤ 3 ms
Release time/bounce time	10 ms/ ≤ 1 ms
Mechanical life ops	AC: 10 Mill./DC: 20 Mill.
DC voltage endurance	see fig. 2
Switching frequency at rated load	$\leq 1200/\text{h}$
Protection class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

Standard types**VAC 50 Hz/60 Hz: 24, 48, 115 (120), 230 (240)****LED****RC suppresor (max 250 V)****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 AC1 7 A @ 110 V DC1 3 A @ 220 V DC1
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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 $\pm 10\%$
Pick-up voltage	$\geq 0,8 \times U_N$
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	12	90	133
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	$\geq 3 \text{ G}\Omega$
Insulation, EN 60947/IEC 61810-1:	4 KV/3

Specifications

Ambient temperature operation/storage	-40 (no ice)...60 °C / -40 ... 80 °C
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	$\leq 1200/\text{h}$
Protection class	IP40
Weight	90 g

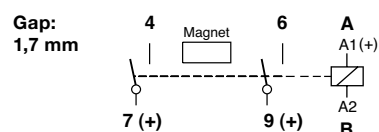
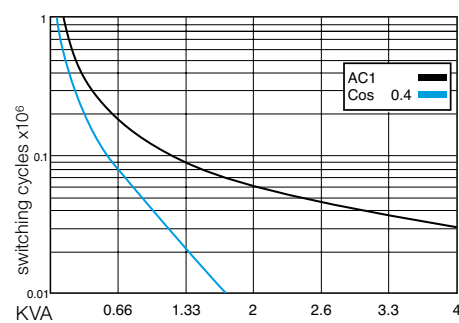
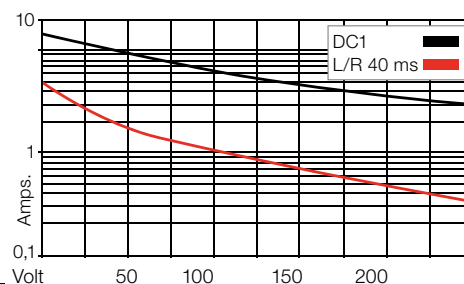
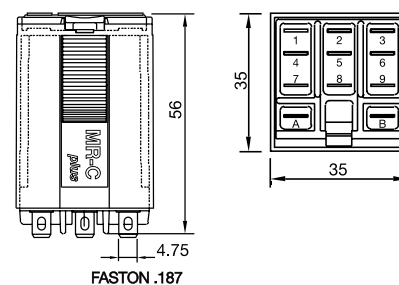
Standard types**VAC 50 Hz/60 Hz: 24, 48, 115 (120), 230 (240)****LED****RC suppresor (max 250 V)****VDC 12, 24, 48, 110, 220****LED****Free wheeling diode****Polarity and free wheeling diode****AC/DC bridge rectifier 24 V, 48 V, 60 V****C5-M20/AC ... V****C5-M20X/AC ... V****C5-M20R/AC ... V****C5-M20/DC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

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

Accessories

Socket:

Optional accessories (blanking plug):

S5-S, S5-L, S5-P, S5-P0, S5-M**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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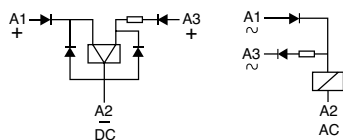
Maximum contact load	10 A/400 V AC1 0,2 A/250 V DC1	10 A/30 V DC1 0,5 A/110 V DC1
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Contacts

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

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	$< 0,8 \times U_N$
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	$\leq 1200/\text{h}$
Protection class	IP40
Weight	95 g

Standard types

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

C5-R20/AC ... V

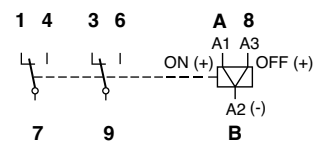
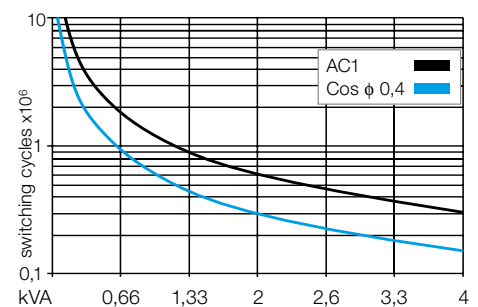
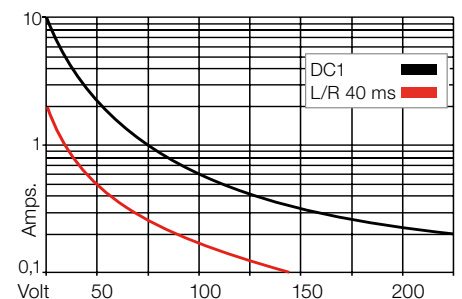
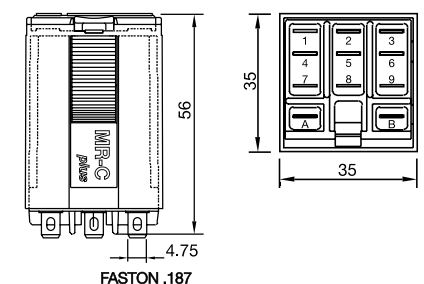
VDC : 12, 24, 48, 110,

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