

Type **C5-A2x/ ... V**
Power relays, 2 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
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

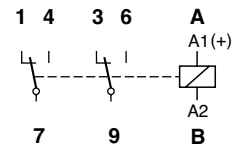


Fig. 1 AC voltage endurance

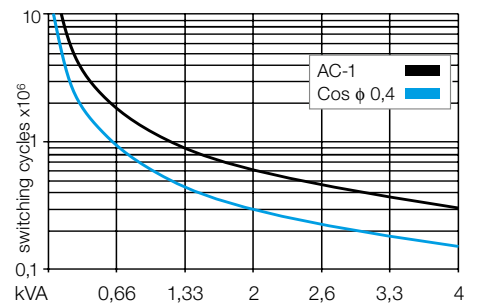
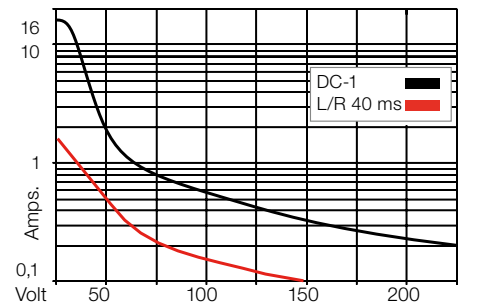
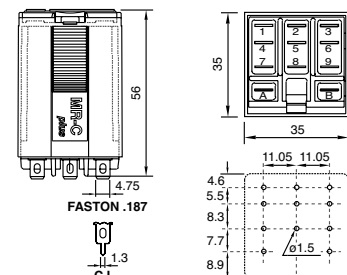


Fig. 2 DC load limit curve



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		$\geq 3 \text{ G}\Omega$
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		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 suppressor (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

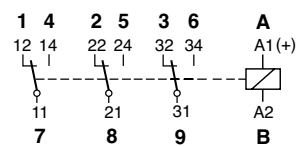


Fig. 1 AC voltage endurance

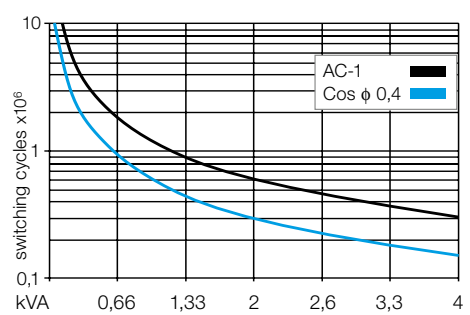
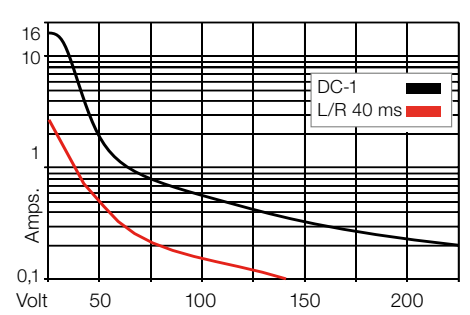
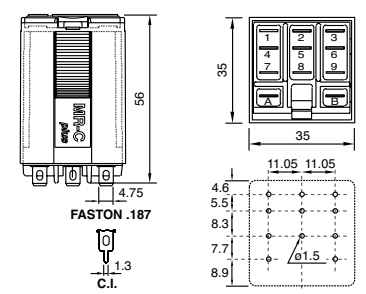


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



EN 60947; IEC 61810

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

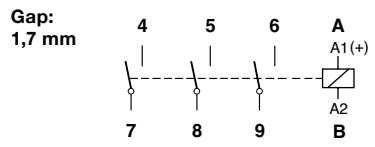


Fig. 1 AC voltage endurance

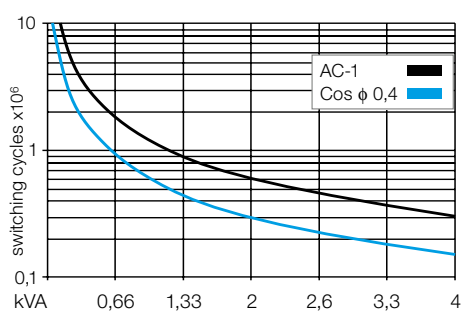
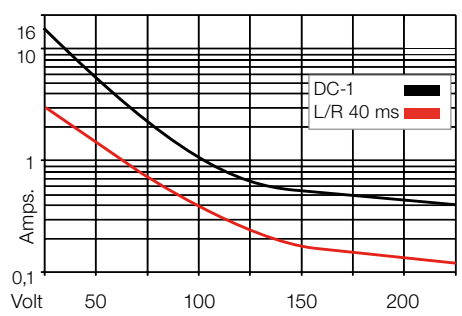
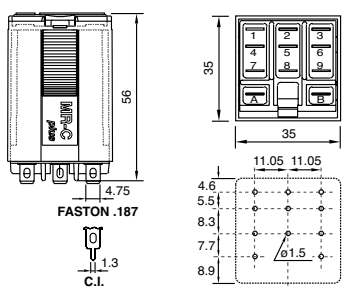


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



EN 60947; IEC 61810

Type	C5-X1x/ ... V Power relays, DC application 1 pole, NO, double make			
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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

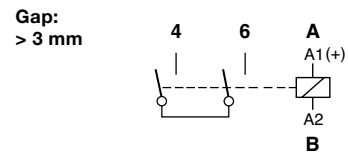


Fig. 1 AC voltage endurance

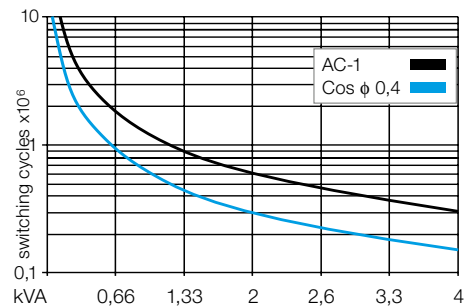
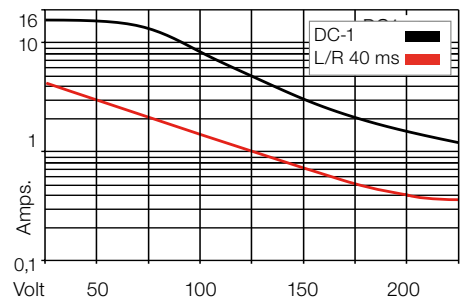
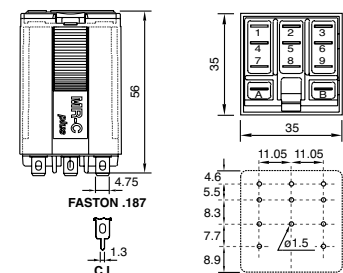


Fig. 2 DC load limit curve



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 3,6 A/110 V DC-13	10 A/220 V 2 A/220 V	DC-1 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	
Contact open	Volt rms, 1 min 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)	C5-M10/AC ... V
LED	C5-M10X/AC ... V
RC suppressor (max 250 V)	C5-M10R/AC ... V
VDC 12, 24, 48, 110, 220	C5-M10/DC ... V
LED	C5-M10X/DC ... V
Free wheeling diode	C5-M10DX/DC ... V
Polarity and free wheeling diode	C5-M10FX/DC ... V
AC/DC bridge rectifier 24 V, 48 V, 60 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

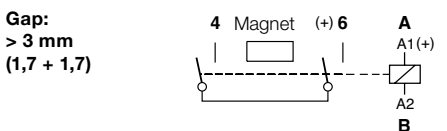


Fig. 1 AC voltage endurance

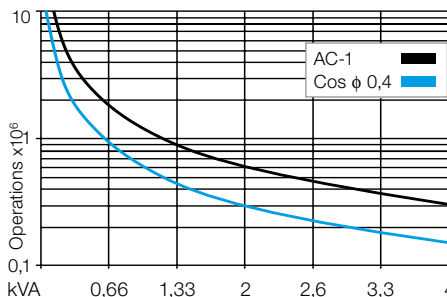
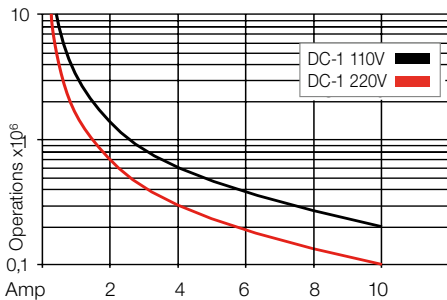
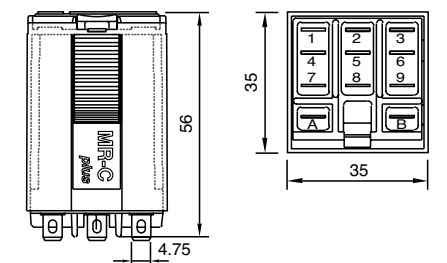


Fig. 2 DC voltage endurance



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



Connection diagram

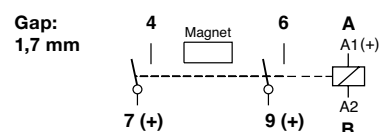


Fig. 1 AC voltage endurance

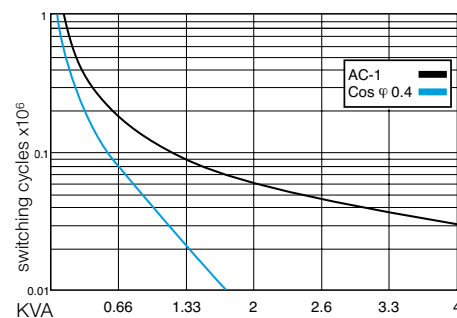
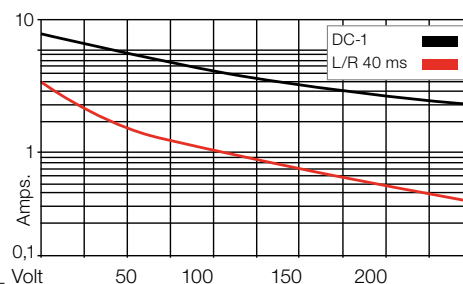
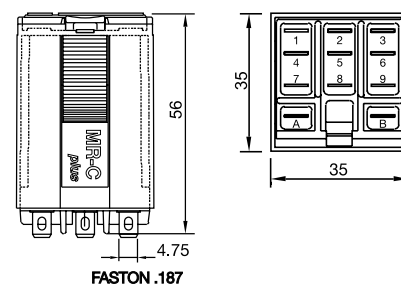


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



IEC 61810; EN 60947

C5-R2x

9-pin, remanence relay, 2-pole, faston

Type **C5-R2x/ ... V**
Magnetic latching – Remanence relays
2 change-over contact, 10A

Maximum contact load **10 A/400 V AC-1** **10 A/30 V DC-1**
0,2 A/250 V DC-1 **0,5 A/110 V DC-1**

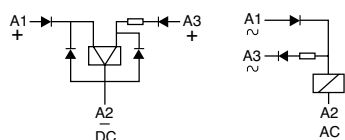
Contacts

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 ± 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 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 4 kV
Contact/coil 4 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
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, 230

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

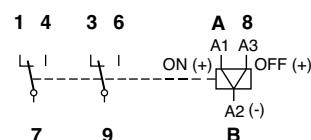


Fig. 1 AC voltage endurance

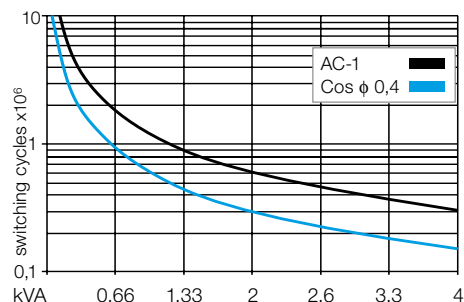
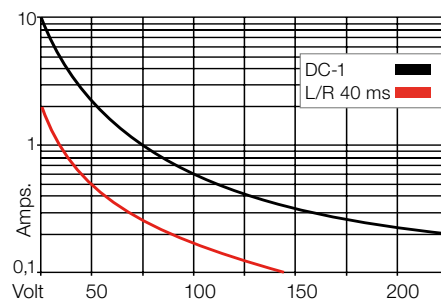
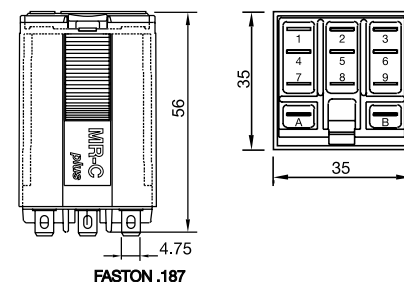


Fig. 2 DC load limit curves



Dimensions [mm]



Technical approvals, conformities



IEC 61810, EN 60947