

Multimode Relay MT

2 / 3 pole 10 A, DC- or AC-coil



- 2 C/O or 3 C/O contacts
- Cadmium-free contacts
- DC and AC coils
- Mechanical indicator as standard
- Electrical indicator
- New test system with front operated finger protected push-to-test button and integral locking test tab
- White write on panel

Applications
Mechanical engineering, plant control



Technical data of approved types on request

Contact data

Configuration	2 C/O contact or 3 C/O contact	
Type of contact	single contacts	bifurcated contacts
Rated current	10 A	4 A
Rated voltage / max. breaking voltage AC	250 Vac / 440 Vac	
Maximum breaking capacity AC	2500 VA	500 VA
Make current (max. 4 s at duty cycle 10%)	20 A	8 A
Contact material	AgNi 90/10	
Minimum contact load	24 V, 10 mA / 20 mV, 1 mA gold plated	

Contact life

Type	Load	Operations	Standard
MT321	10 A, 250 Vac, C/O contact	1x10 ⁵	VDE 0435

Coil data

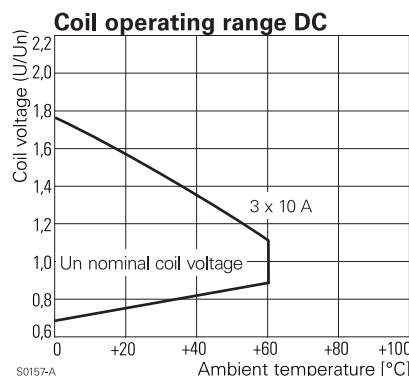
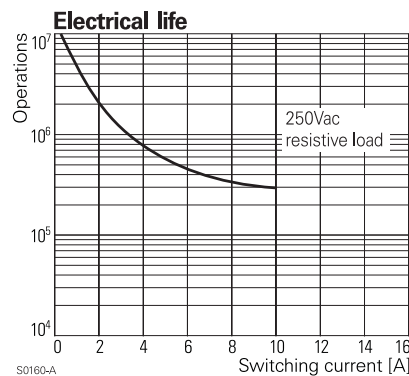
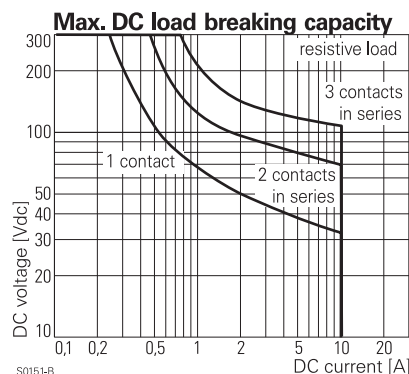
Nominal voltage	DC coil	6...220 Vdc
	AC coil	6...230 Vac
Nominal coil power	DC coil	typ. 1.2 W
	AC coil	typ. 2.3 VA
Operate category	1 / a	

Coil versions, DC-coil

Coil code standard	PD*	Nominal voltage Vdc	Pull-in voltage Vdc	Release voltage Vdc	Coil resistance Ω	Coil current mA
006	0A6	6	4.5	0.6	32±10%	187.5
012	0B2	12	9.0	1.2	110±10%	109.1
024	0C4	24	18.0	2.4	475±10%	50.5
048	0E8	48	36.0	4.8	2000±10%	24.0
060	0G0	60	45.0	6.0	2850±10%	21.1
110	1B0	110	82.5	11.5	10000±12%	11.0
220	2C0	220	165.0	22.0	40000±15%	5.5

All figures are given for coil without preenergization, at ambient temperature +20°C

* Protection diode PD; standard polarity: 2-pole relays: +2 / -7, 3-pole relays: +2 / -10



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Coil versions, AC-coil

Coil code	Nominal voltage Vac	Pull-in voltage Vac	Release voltage Vac	Maximum voltage Vac	Coil resistance Ω	Coil current mA
006	6	4.8	2.4	7.8	$5.3 \pm 10\%$	381.7
012	12	9.6	4.8	15.6	$24 \pm 10\%$	182.5
024	24	19.2	9.6	31.2	$86 \pm 10\%$	94.2
048	48	38.4	19.2	62.4	$345 \pm 10\%$	47.5
060	60	48.0	24.0	78.0	$544 \pm 10\%$	37.8
115	115	92.0	46.0	149.5	$2000 \pm 10\%$	20.6
230	230	184.0	92.0	299.0	$8300 \pm 12\%$	10.1

All figures are given for coil without preenergization, at ambient temperature +20°C

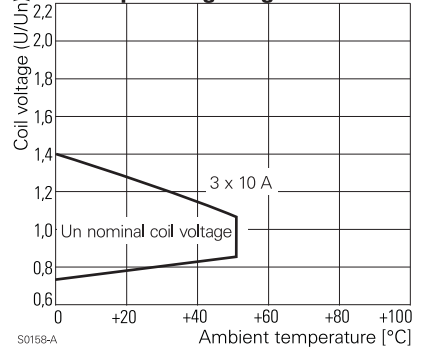
Insulation

Dielectric strength	coil-contacts	2500 V _{rms}
	open contact circuit	1500 V _{rms}
	adjacent contacts	2500 V _{rms}
Clearance / creepage		2.8 / 4 mm
Insulation to IEC 664/VDE 0110 (1/89)		
	Voltage rating	250 V
	Pollution degree	3
	Overvoltage category	III
Insulation to VDE 0110b (2/79)		C / 250
Tracking resistance of relay base		CTI 175

Other data

Flammability class UL		V-0
Ambient temperature	DC-coil	-45...+60 °C
	AC-coil	-45...+50 °C
Mechanical life		>20x10 ⁶ operations
Max. switching rate at rated- / minimum load		20 min ⁻¹ / 100 min ⁻¹
Operate- / release time		12 / 5 ms
Bounce time		4 ms
Vibration resistance N/O / N/C contact		>5 / 2 g
Shock resistance (function) N/O / N/C		>50 / 10 g
Protection category		IP 50
Relay weight		80 g
Packaging unit		25 pcs.
Accessories		see accessories MT

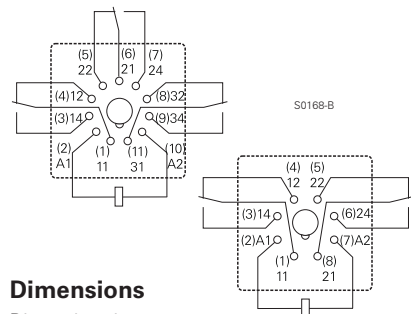
Coil operating range AC



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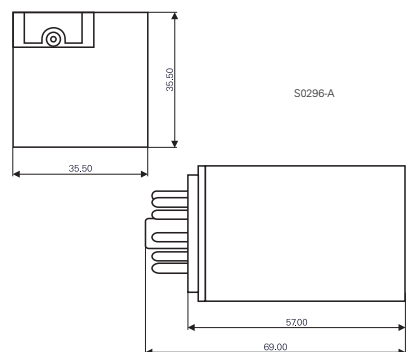
Terminal assignment

View on solder pins



Dimensions

Dimensions in mm



S0296-A

Ordering key

Type	M	T				
Contact configuration	2 2 C/O contacts, 8-pole	3 3 C/O contacts, 11-pole				
Contact material	2 AgNi 90/10	B AgNi 90/10, bifurcated contacts, gold plated				
	3 AgNi 90/10, gold plated					
Version	1 DC with test button	6 AC with test button				
	3 DC with test button and LED	8 AC with test button and LED				
Coil	Coil code: please refer to coil versions table, preferred types in bold print					
Other types on request						

Accessories Multimode Relay MT



F0205-A

Socket system MT 78 740 and MT 78 745

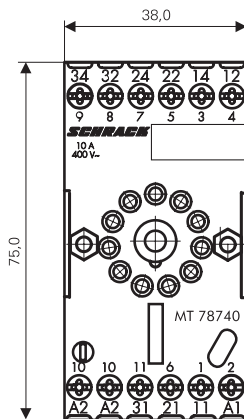
- 8/11 pin socket for MT2 / MT3
- Double A2 screw for simple further connection of coil supply
- Snap-on mounting on DIN-rail
- Screw mounting
- Pozidrive screws with rising clamp terminals
- Logical layout of input/output connections
- With marking area

MT 78 740 MT socket with screw-type terminals for MT3

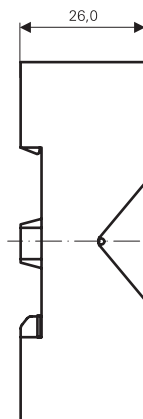
MT 78 745 MT socket with screw-type terminals for MT2



F0200-A



S0366-A



Dimensions in mm



Technical Data

Rated current	10 A
Rated voltage	400 Vac
Dielectric strength coil/cont.	>3000 V _{eff}
Ambient temperature	+80 °C
Protection category	IP 20
Protection against accidental contact meets	VBG 4
Mounting/DIN rail	DIN50022
Wire cross section	2 x 2,5mm ²
Packaging unit	10 Stk.

Retaining clip **MR 28 800**

LED and Protection Modules



F0201-A



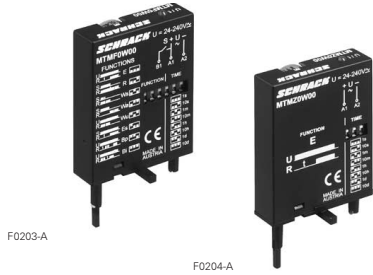
F0202-A

LED and Protection modules

Ordering code	Type	
MTM T0 0A0	Protection diode 1N4007	
MTM U0 524	RC-network 6...24 Vac	
MTM U0 730	RC-network 110...230 Vac	
red LED	green LED	
MTM L0 024	MTM G0 024	LED 24 Vac / Vdc
MTM L0 730	MTM G0 730	LED 110...230 Vac / Vdc

Accessories Multimode Relay MT

MT Function Modules



Function modules

Ordering code	Type
MTM Z0 W00	Delay ON
MTM F0 W00	Multifunction

Technical data - Function modules

Nominal voltage	24...240 Vac / Vac
Mains frequency	48...63 Hz
Precision of time setting	± 0,5 %
Readiness for repetition	≤ 0,5 % or 5 ms
Influence of temperature	≤ 0,1 %/°C
Time range switchable	0,05s...240h in 8 ranges
Ambient temperature	-25...+55 °C

Function modules

Function

Delay ON



Delay OFF



single shot leading edge



single shot trailing edge



Delay ON
triggerd by signal contact



single shot



flasher starting with pause



flasher starting with pulse



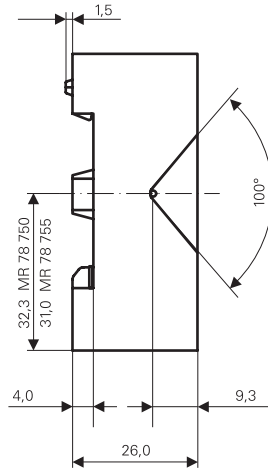
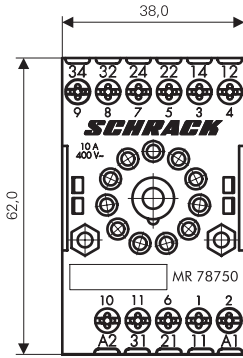
Accessories Multimode Relay MT

MR 78 750 MT3 socket 11 pole

MR 78 755 MT2 socket 8 pole



F0103-A



Retaining clip **MR 28 800**

S0311-A



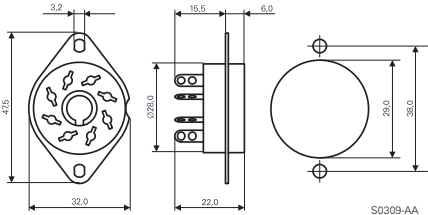
Technical data

Rated current	10 A
Rated voltage	400 Vac
Dielectric strength coil/cont.	>3500 V _{rms}
Insulation cat. (VDE 0110b)	C / 400 Vac
Tracking resistance	CTI 300
Ambient temperature	+80 °C
Protection category	IP 20
Protection against accidental contact meets	VBG 4
Mounting	DIN 50024 / 22
Wire cross section	2 x 2.5 mm ²
Terminal torque	0.8 Nm
max.	1.0 Nm
Packaging unit	25 pcs.

MR 78 710 Socket 8 pole with solder terminals



F0107-A



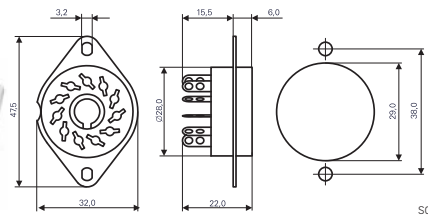
S0309-AA

Retaining clip **RN 28 611**

MR 78 711 Socket 11 pole with solder terminals



F0104-A



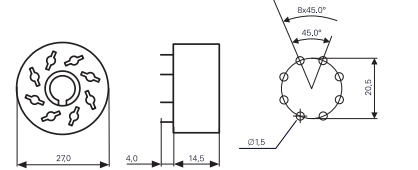
S0309-AB

Retaining clip **RN 28 611**

MR 78 712 Socket 8 pole with PCB terminals



F0105-A

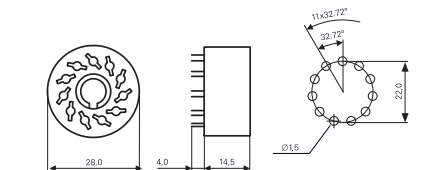


S0309-AC

MR 78 713 Socket 11 pole with PCB terminals



F0106-A

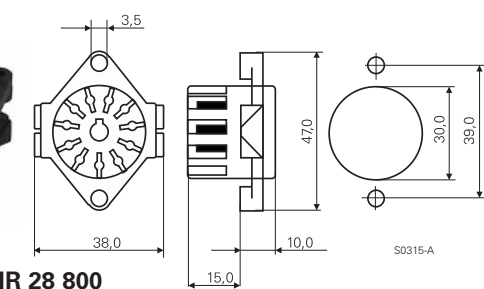


S0309-AD

RN 78 731 Socket 11 pole with Faston connectors



F0181-A



S0315-A

Retaining clip **MR 28 800**

Technical data MR78710...RN78731

Rated current	10 A
Rated voltage	250 Vac
Dielectric strength coil/cont.	>2500 V _{rms}
Ambient temperature	-40...+70 °C

Dimensions in mm