

Multimode Relay MT

- 2 / 3 pole 10 A, 2 CO or 3 CO 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



F0161-B

Approvals

 REG.-Nr. 6182,  US E214025
Technical data of approved types on request

Contact data

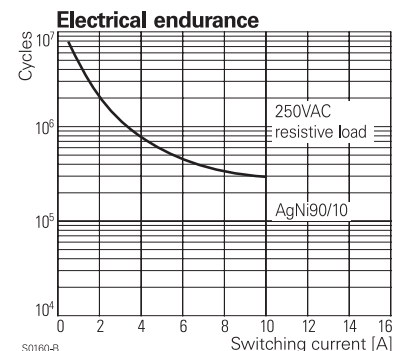
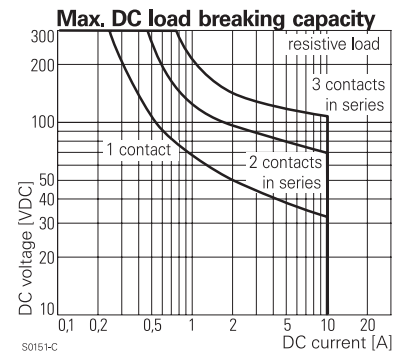
Contact configuration	2 CO or 3 CO		
Contact set	single cont.	single cont.	bifurcated
Type of interruption	micro disconnection		
Rated voltage / max. switching voltage AC	240 / 400 VAC		
Rated current	10 A	10 A	4 A
Maximum breaking capacity AC	2500 VA	2500 VA	500 VA
Limiting making capacity, max 20 ms	20 A	20 A	8 A
Contact material	AgNi90/10	AgNi90/10 gold plated	AgNi90/10 gold plated
Minimum contact load	12V/10mA	20mV/1mA	20mV/1mA
Rated frequency of operation with / without load	20/100 min ⁻¹		
Operate- / release time DC coil	max 15 / 10 ms		
Bounce time DC coil NO / NC contact	max 4 / 5 ms		

Contact ratings

Type	Contact	Load	Ambient temp. [°C]	Cycles
IEC 61810				
MT22 DC coil	CO	10 A, 250 VAC, cosφ=1	35°C	100x10 ³
MT22 AC coil	CO	10 A, 250 VAC, cosφ=1	35°C	20x10 ³
MT32 DC coil	CO	10 A, 250 VAC, cosφ=1	35°C	100x10 ³
MT32 AC coil	CO	10 A, 250 VAC, cosφ=1	35°C	20x10 ³
MT2	CO	10 A, 250 VAC, resistive	40°C	30x10 ³
MT2	NO / NC	B300	40°C	6.000
MT2	CO	4 A, 25 VAC, resistive, bifurcated	40°C	30x10 ³
MT3	CO	10 A, 250 VAC, resistive	40°C	30x10 ³
UL 508				
MT3	NO / NC	B300	40°C	6.000
MT3	CO	4 A, 25 VAC, resistive, bifurcated	40°C	30x10 ³

Coil data

Rated coil voltage range DC coil	6...220 VDC
AC coil	6...230 VAC
Operative range to IEC 61810	2



Multimode Relay MT (Continued)

Coil versions, DC-coil

Coil code		Rated	Operate	Release	Coil	Rated coil
STD	PD*)	voltage	voltage	voltage	resistance	power
		VDC	VDC	VDC	Ohm	W
006	0A6	6	4.5	0.6	32±10%	1.1
012	0B2	12	9.0	1.2	110±10%	1.3
024	0C4	24	18.0	2.4	475±10%	1.2
048	0E8	48	36.0	4.8	2000±10%	1.2
060	0G0	60	45.0	6.0	2850±10%	1.3
110	1B0	110	82.5	11.5	10000±12%	1.2
220	2C0	220	165.0	22.0	40000±15%	1.2

All figures are given for coil without preenergization, at ambient temperature +23°C

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

Coil versions, AC-coil 50 / 60 Hz

Coil code	Rated voltage VAC	Operate voltage 50 / 60 Hz VAC	Release voltage 50 / 60 Hz VAC	Coil resistance Ohm	Rated coil power 50 / 60 Hz VA
006	6	4.8 / 5.1	2.4	5.3±10%	2.29/1.98
012	12	9.6 / 10.2	4.8	24±10%	2.19/1.86
024	24	19.2 / 20.4	9.6	86±10%	2.26/ 1.95
048	48	38.4 / 40.8	19.2	345±10%	2.28/1.97
060	60	48.0 / 51.0	24.0	544±10%	2.27/1.96
115	115	92.0 / 97.8	46.0	2000±10%	2.37/2.00
230	230	184.0 / 195.5	92.0	8300±12%	2.32/ 1.96

All figures are given for coil without preenergization, at ambient temperature +23°C

Insulation

Dielectric strength coil-contact circuit	2500 V _{rms}
open contact circuit	1500 V _{rms}
adjacent contact circuits	2500 V _{rms}
Clearance / creepage coil-contact circuit	≥ 2.8/4.0 mm
adjacent contact circuits	≥ 2.8/4.0 mm
Material group of insulation parts	IIIa
Insulation to IEC 61810-1	
Type of insulation coil-contact circuit	2 pole basic
open contact circuit	micro disconnection
adjacent contact circuits	basic
Rated insulation voltage	250 V
Pollution degree	3
Rated voltage system	240 V
Overvoltage category	III

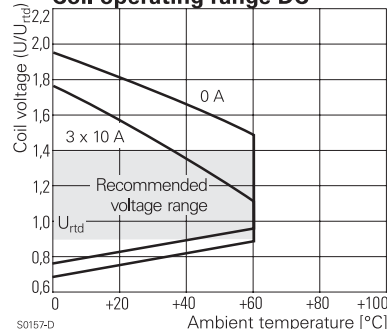
Other data

Mechanical endurance	20x10 ⁶ cycles
Material	RoHS - Directive 2002/95/EC compliant as per product date code 0415
Environment	
Ambient temperature range DC coil	-40...+60°C
AC coil	-45...+50°C
Vibration resistance (function) NO / NC contact	5/2 g
Shock resistance (function) NO / NC contact	50/10 g
Category of protection	RTI - dust protected
Processing	
Relay weight	80 g
Packaging unit	25 pcs

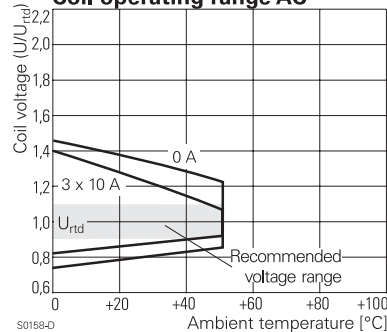
Accessories

For details see datasheet Accessories Multimode Relay MT

Coil operating range DC

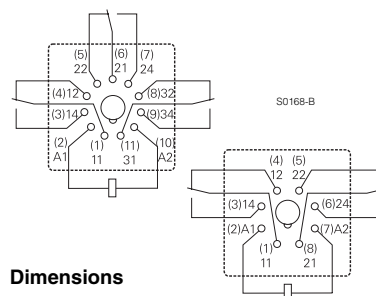


Coil operating range AC

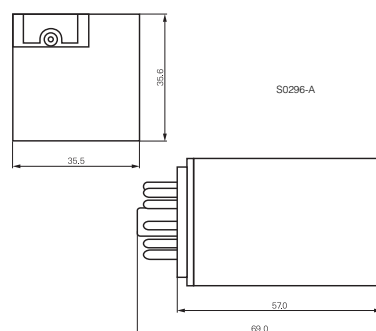


Terminal assignment

Bottom view on pins



Dimensions



Multimode Relay MT (Continued)

Product key		Typical product key		MT	3	2	6	230
Type		MT Multimode Relay MT						
Contact configuration		2 2 CO contacts (2 form C), 8-pin		3	3 CO contacts (3 form C), 11-pin			
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 bipolar 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								

Product key	Contact configuration	Contact material	Version	Coil	Part number
MT221012	2 CO contacts 8-pin	AgNi 90/10	DC	12 VDC	4-1393090-9
MT221024				24 VDC	5-1393090-0
MT221048				48 VDC	5-1393090-1
MT221060				60 VDC	5-1393090-2
MT221110				110 VDC	5-1393090-3
MT221220				220 VDC	5-1393090-4
MT223024			DC+LED+test button	24 VDC	5-1393090-7
MT226012			AC test button	12 VAC	6-1393090-3
MT226024				24 VAC	6-1393090-4
MT226048				48 VAC	6-1393090-5
MT226115				115 VAC	6-1393090-7
MT226230				230 VAC	6-1393090-8
MT228024				24 VAC	6-1393090-9
MT228115			AC+LED test button	115 VAC	7-1393090-0
MT228230				230 VAC	7-1393090-1
MT321012	3 CO contacts 11-pin	AgNi 90/10	DC	12 VDC	6-1393091-8
MT321024				24 VDC	7-1393091-0
MT321048				48 VDC	7-1393091-1
MT321060				60 VDC	7-1393091-2
MT321110				110 VDC	7-1393091-4
MT321220				220 VDC	7-1393091-7
MT323024			DC+LED+test button	24 VDC	8-1393091-4
MT3230C4			DC+LED+PT+TB	24 VDC	7-1393091-9
MT326012			AC test button	12 VAC	9-1393091-6
MT326024				24 VAC	9-1393091-7
MT326048				48 VAC	9-1393091-8
MT326115				115 VAC	1393092-1
MT326230				230 VAC	1393092-2
MT328024				24 VAC	1393092-4
MT328115			AC+LED test button	115 VAC	1393092-7
MT328230				230 VAC	1393092-8
MT331024		AgNi 90/10 gold plated	DC	24 VDC	1-1393092-1
MT331110				110 VDC	1-1393092-3
MT331220				220 VDC	1-1393092-5
MT333024			DC+LED+test button	24 VDC	1-1393092-8
MT3330C4			DC+LED+PD+TB	24 VDC	1-1393092-6
MT333110			DC+LED test button	110 VDC	2-1393092-0
MT333220				220 VDC	2-1393092-2
MT336115			AC test button	115 VAC	2-1393092-5
MT336230				230 VAC	2-1393092-6
MT338024				24 VAC	2-1393092-7
MT338115			test button	115 VAC	8-1415025-1
MT338230				230 VAC	2-1393092-8