

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

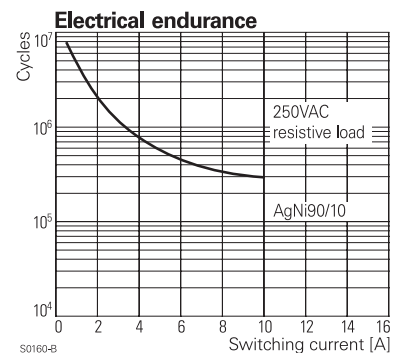
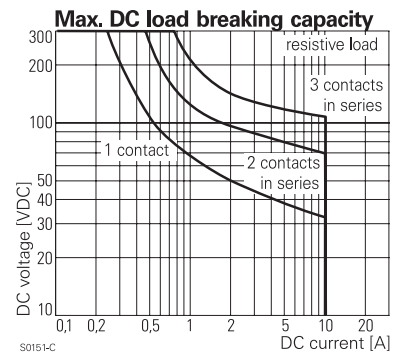
Contact configuration	2 CO or 3 CO		
Contact set	single cont.	single cont.	bifurcated
Type of interruption	micro disconnection		
Rated voltage / max. switching voltage AC	240 / 400 VAC		
Rated current	10 A	10 A	4 A
Maximum breaking capacity AC	2500 VA	2500 VA	500 VA
Limiting making capacity, max 20 ms	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 STD	PD*)	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ohm	Rated coil power 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 / -7, 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	2 pole	3 pole
Type of insulation coil-contact circuit	basic	basic
open contact circuit	micro disconnection	micro disconnection
adjacent contact circuits	basic	basic
Rated insulation voltage	250 V	250 V
Pollution degree	3	2
Rated voltage system	240 V	230 / 400 V
Overvoltage category	III	III

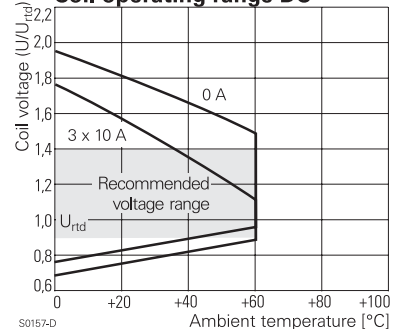
Other data

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

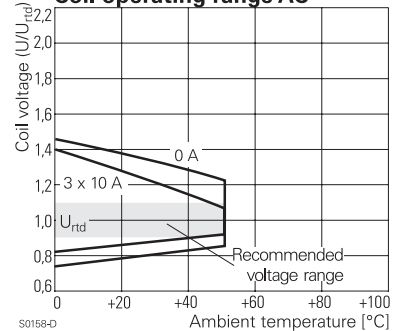
Accessories

For details see datasheet Accessories Multimode Relay MT

Coil operating range DC

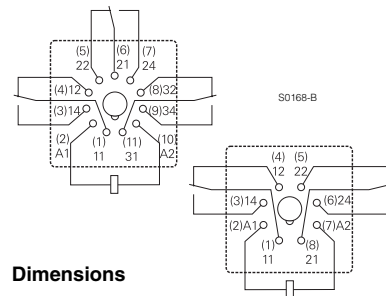


Coil operating range AC

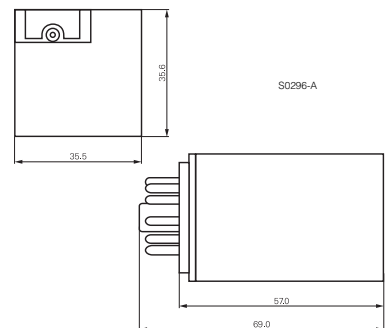


Terminal assignment

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 3 AgNi 90/10, gold plated		B AgNi 90/10 bifurcated contacts, gold plated						
Version	1 DC with test button 3 DC with test button and bipolar LED		6 AC with test button 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	AC	24 VDC	5-1393090-7	
MT226012					12 VAC	6-1393090-3	
MT226024			test button	AC+LED	24 VAC	6-1393090-4	
MT226048					48 VAC	6-1393090-5	
MT226115			115 VAC	6-1393090-7			
MT226230			230 VAC	6-1393090-8			
MT228024			AC+LED	test button	24 VAC	6-1393090-9	
MT228115					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	AC	24 VDC	8-1393091-4	
MT3230C4					24 VDC	7-1393091-9	
MT326012			test button	AC+LED	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			AC+LED	test button	24 VAC	1393092-4	
MT328115					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	AC	24 VDC	1-1393092-8
MT3330C4						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	AC+LED	test button		24 VAC	2-1393092-7		
MT338115				115 VAC	8-1415025-1		
MT338230	230 VAC	2-1393092-8					