

Multimode Relay MT

- 2/3 pole 10A, 2 form C (CO) or 3 form C (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



Typical applications
Mechanical engineering, plant control.

Approvals

VDE Cert. No. 40009096, UL E214025
Technical data of approved types on request.

Contact Data

Contact arrangement	2 form C (CO) or 3 form C (CO)	
Rated voltage	240VAC	
Max. switching voltage	400VAC	
Rated current	10A	10A
Limiting making current, max. 20ms	20A	20A
Limiting breaking current	10A	10A
Switching power	2500VA	2500VA
Contact material	AgNi90/10	AgNi90/10 gold plated
Contact style	single contact	single contact
Min. recommended contact load	12V at 10mA	20mV at 1mA
Initial voltage drop	30mV at 100mA/6VAC/1kHz	
Frequency of operation, with/without load	1200/6000h ⁻¹	
Operate time max., DC coil	15ms	
Release time max., DC coil	10ms	
Bounce time max., DC coil, form A/form B	4/10ms	

Contact ratings

Type	Contact	Load	Cycles
IEC 61810			
MT22 DC coil	C (CO)	10A, 250VAC, cosφ=1, 35°C	100x10 ³
MT22 AC coil	C (CO)	10A, 250VAC, cosφ=1, 35°C	20x10 ³
MT32 DC coil	C (CO)	10A, 250VAC, cosφ=1, 35°C	100x10 ³
MT32 AC coil	C (CO)	10A, 250VAC, cosφ=1, 35°C	20x10 ³
UL 508			
MT3	A (NO)/B (NC)	B300, 40°C	6.000
MT2	C (CO)	10A, 250VAC, resistive, 40°	30x10 ³
MT2	A (NO)/B (NC)	B300 40°C	6.000
MT3	C (CO)	10A, 250VAC, resistive, 40°C	100x10 ³



Contact Data (continued)

Mechanical endurance	
DC coil	20x10 ⁶ operations
AC coil	20x10 ⁶ operations

Coil Data

Coil voltage range	6 to 220VDC 6 to 230VAC
Operative range, IEC 61810	2
Coil insulation system according UL	class 130 (B)

Coil versions, DC coil

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

1) Coil resistance ±12%, 2) Coil resistance ±15%.
3) Protection diode PD; standard polarity: 2-pole relays: +2 / -7, 3-pole relays: +2 / -10.
All figures are given for coil without pre-energization, at ambient temperature +23°C.

Coil versions, AC coil, 50/60Hz

Coil code	Rated voltage VAC	Operate voltage 50/60Hz VAC	Release voltage 50/60Hz VAC	Coil resistance Ω±10% ¹⁾	Rated coil power 50/60Hz VA
006	6	4.8/5.1	1.8	5.3	2.29/1.98
012	12	9.6/10.2	3.6	24	2.19/1.86
024	24	19.2/20.4	7.2	86	2.26/1.95
048	48	38.4/40.8	14.4	345	2.28/1.97
060	60	48.0/51.0	18.0	544	2.27/1.96
115	115	92.0/97.8	34.5	2000	2.37/2.00
230	230	184.0/195.5	69.0	8300 ¹⁾	2.32/1.96

1) Coil resistance ±12%.
All figures are given for coil without pre-energization, at ambient temperature +23°C.



Multimode Relay MT (Continued)

Insulation Data

Initial dielectric strength	
between open contacts	1500Vrms
between contact and coil	2500Vrms
between adjacent contacts	2500Vrms
Clearance/creepage	
between contact and coil	≥2.8/4mm
between adjacent contacts	≥2.8/4mm
Material group of insulation parts	IIIa

Other Data

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customer-support/rohssupportcenter

Ambient temperature	
DC coil	-40 to +60°C
AC coil	-40 to +50°C
Category of environmental protection	
IEC 61810	RT1 - dust protected
Vibration resistance (functional), form A (NO)/form B (NC)	5/2g
Shock resistance (functional), form A (NO)/form B (NC)	50/10g
Terminal type	plug-in
Cover retention, pull/push force	100/100N
Weight	80g
Packaging unit	25 pcs.

Accessories

For details see datasheet [Accessories Multimode Relay MT](#)

Note: indicated contact ratings and electrical endurance data for direct wiring of relays (according IEC 61810-1); for relays mounted on sockets deratings may apply.

Terminal assignment

Bottom view on pins



Dimensions



Multimode Relay MT (Continued)

Product code structure

Typical product code

MT 3 2 6 230

Type

MT Multimode Relay MT

Contact configuration

2 2 form C contacts (2 CO contacts), 8-pin
3 3 form C contacts (3 CO contacts), 11-pin

Contact material

2 AgNi 90/10
3 AgNi 90/10, 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

Other types on request

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