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 typ, DC coil	15ms	
Release time typ, 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 12 to 230VAC
Operative range, IEC 61810	2
Coil insulation system according UL	class 130 (B)

Coil versions, DC coil

Coil code STD	Coil code PD[3]	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	30	1.1
012	0B2	12	9.0	1.2	115	1.3
024	0C4	24	18.0	2.4	475	1.2
048	0E8	48	36.0	4.8	1900	1.2
060	0G0	60	45.0	6.0	2950	1.3
110	1B0	110	82.5	11.5	9700[1)]	1.2
220	2C0	220	165.0	22.0	38700[2)]	1.2

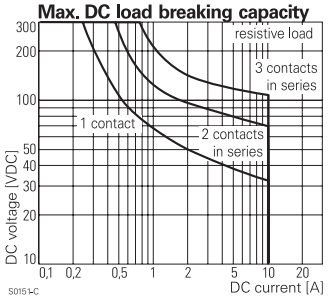
1) Coil resistance ±12%, 2) Coil resistance ±15%.
3) Protection diode PD; standard polarity: 2-pole relays: +2 / -7, 3-pole relays: +2 / -10.
All figures are given for coil without pre-energization, at ambient temperature +23°C.

Coil versions, AC coil, 50/60Hz

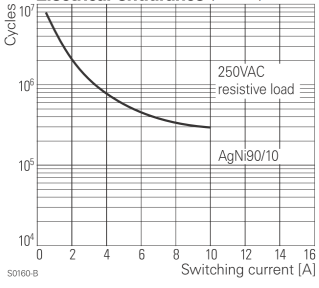
Coil code	Rated voltage VAC	Operate voltage 50/60Hz VAC	Release voltage 50/60Hz VAC	Coil resistance Ω±10%[1)]	Rated coil power 50/60Hz VA
012	12	9.6/10.2	3.6	24	2.19/1.86
024	24	19.2/20.4	7.2	86	2.26/1.95
048	48	38.4/40.8	14.4	345	2.28/1.97
060	60	48.0/51.0	18.0	544	2.27/1.96
115	115	92.0/97.8	34.5	2000	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.

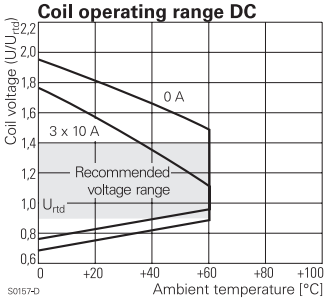
Max. DC load breaking capacity



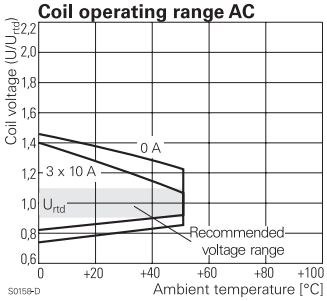
Electrical endurance (for DC coil)



Coil operating range DC



Coil operating range AC



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

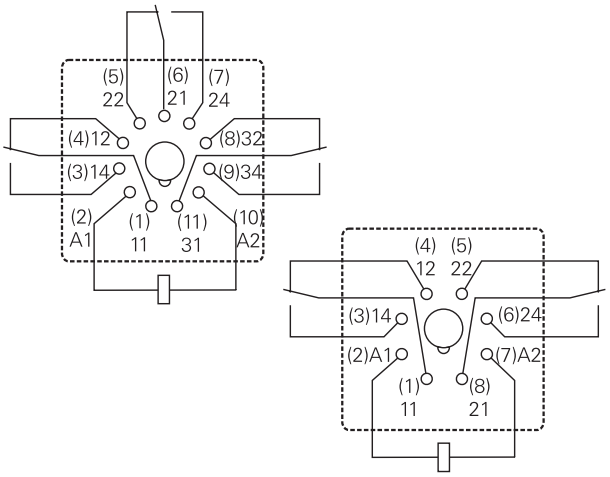
Accessories

For details see datasheet Accessories Multimode Relay MT

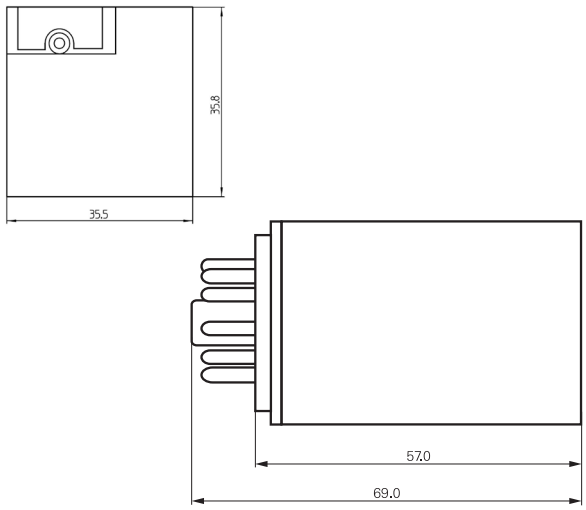
Note: indicated contact ratings and electrical endurance data for direct wiring of relays (according IEC 61810-1); for relays mounted on sockets deratings may apply.

Terminal assignment

Bottom view on pins



Dimensions



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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

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