

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 |

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