

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
- RoHS compliant (Directive 2002/95/EC) as per product date code 0415

Applications

Mechanical engineering, plant control



F0161-A

Approvals

VDE REG.-Nr. 6182, **CE** 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 current	10 A	10 A	4 A
Rated voltage / max.switching voltage AC	240/400 VAC		
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
Mechanical endurance	20x10 ⁶ cycles		
Rated frequency of operation with / without load	20/100 min ⁻¹		

Contact ratings

Type	Load	Cycles
MT321	10 A, 250 VAC, CO contact, cosφ=1, 360/h, df 50%, 35°C	2.2x10 ⁵
MT321	I _{on} 50 A, I _{off} 5 A, 3x440 VAC, NO, cosφ=0.3, AC15, normal cond.	6x10 ³
MT321	I _{on} 30 A, I _{off} 3 A, 3x440 VAC, NC, cosφ=0.3, AC15, normal cond.	6x10 ³
MT3..	2 A, 125 V, L/R 30 ms, 3 NO contacts in series, 1800/h, DF 10%	1x10 ⁵
MT2..	0.7 A, 125 V, L/R 20 ms, 2 NO contacts in series, 1800/h, DF 10%	2x10 ⁵
MT2..	1 A, 125 V, L/R 20 ms, 2 NO contacts in series, 1800/h, DF 10%	4x10 ⁴

Coil data

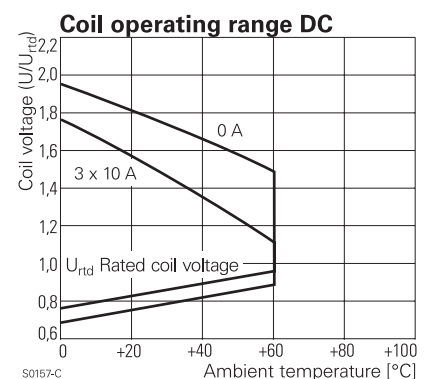
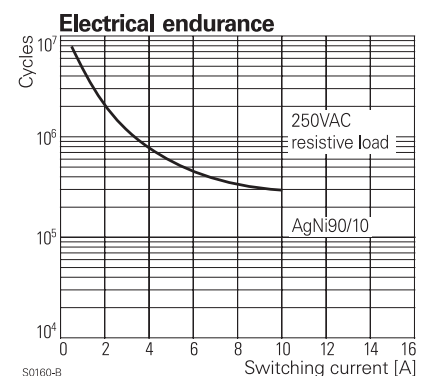
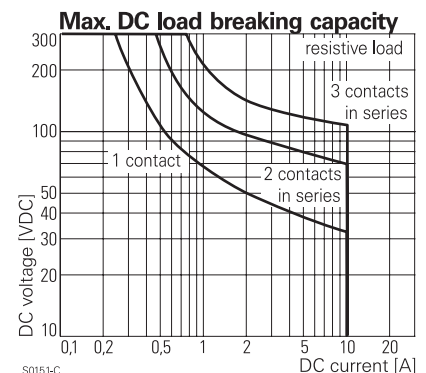
Rated coil voltage range DC coil	6...220 VDC
AC coil	6...230 VAC
Coil power DC coil	1.2 W
AC coil	2.3 VA
Operative range	2

Coil versions, DC-coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ohm	Rated coil power W
STD PD*)					
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



Multimode Relay MT (Continued)

Coil versions, AC-coil 50/60 Hz

Coil code	Rated voltage	Operate voltage 50/60Hz	Release voltage 50/60Hz	Coil resistance	Rated coil power 50/60Hz
	VAC	VAC	VAC	Ohm	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

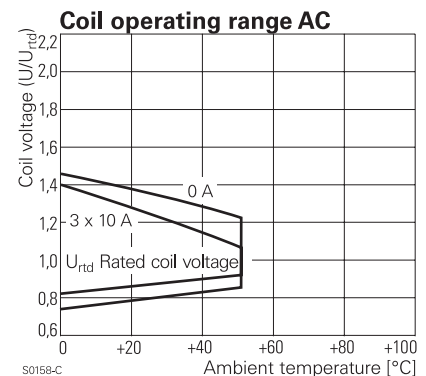
Dielectric strength coil-contact circuit	2500 V _{rms}
open contact circuit	1500 V _{rms}
adjacent contact circuits	2500 V _{rms}
Clearance / creepage coil-contact circuit	≥ 2.8/4.0 mm
adjacent contact circuits	≥ 2.8/4.0 mm
Material group of insulation parts	≥ IIIa
Insulation to IEC 60664-1	
Type of insulation coil-contact circuit	basic
open contact circuit	functional
adjacent contact circuits	basic
Rated insulation voltage	250 V
Pollution degree	2
Rated voltage system	240/400 V
Overvoltage category	III

Other data

RoHS - Directive 2002/95/EC	compliant as per product date code 0415
Ambient temperature range DC coil	-40...+60°C
AC coil	-45...+50°C
Operate- / release time	12/5 ms
Bounce time NO / NC contact	4 ms
Vibration resistance (function) NO / NC contact	5/2 g
Shock resistance (function) NO / NC contact	50/10 g
Category of protection	RTI - dust protected
Relay weight	80 g
Packaging unit	25 pcs

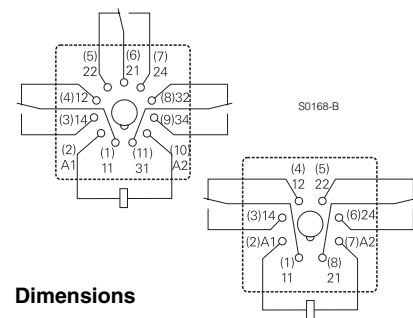
Accessories

For details see datasheet Accessories Multimode Relay MT

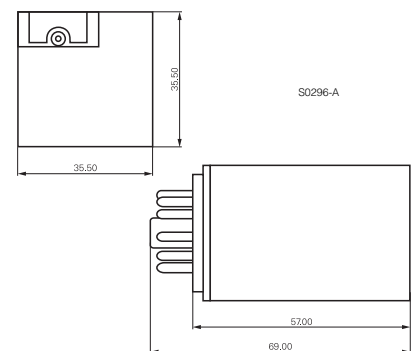


Terminal assignment

Bottom view on pins



Dimensions



Product key

Type

Contact configuration

2 2 CO contacts, 8-pin **3** 3 CO contacts, 11-pin

Contact material

2 AgNi 90/10 **B** AgNi 90/10 bifurcated contacts, gold plated
3 AgNi 90/10, gold plated

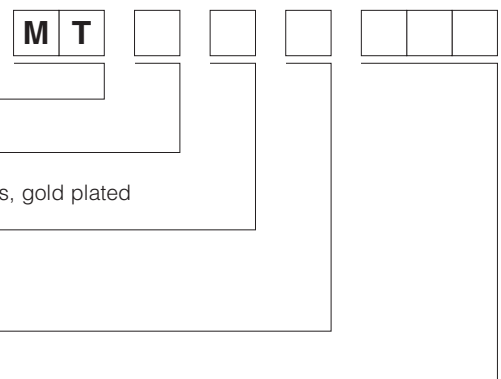
Version

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



Multimode Relay MT (Continued)

Product key	Contact configuration	Contact material	Version	Coil	Part number		
MT221012	2 CO contacts 8-pin	AgNi 90/10	DC with test button	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					12 VAC	6-1393090-3	
MT226024			AC test button		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 with test button	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					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	0-1393092-1	
MT326230					230 VAC	0-1393092-2	
MT328024					24 VAC	0-1393092-4	
MT328115					115 VAC	0-1393092-7	
MT328230			AC+LED test button		230 VAC	0-1393092-8	
MT331024		AgNi 90/10 gold plated			24 VDC	1-1393092-1	
MT331110			DC with test button	110 VDC	1-1393092-3		
MT331220				220 VDC	1-1393092-5		
MT333024				24 VDC	1-1393092-8		
MT3330C4			DC+LED+test button		24 VDC	1-1393092-6	
MT333110					110 VDC	2-1393092-0	
MT333220			test button		220 VDC	2-1393092-2	
MT336115					AC	115 VAC	2-1393092-5
MT336230			test button	230 VAC	2-1393092-6		
MT338024			AC+LED	24 VAC	2-1393092-7		
MT338115			test button		115 VAC	8-1415025-1	
MT338230					230 VAC	2-1393092-8	