

**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**

VDE REG.-Nr. 6182, **us** E214025  
 Technical data of approved types on request

**Contact data**

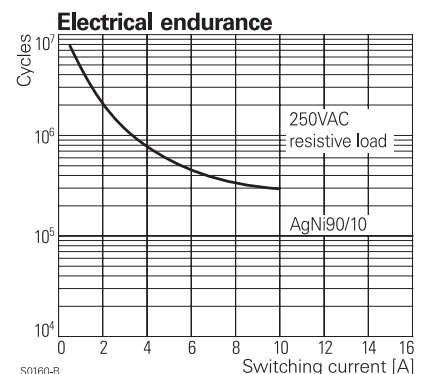
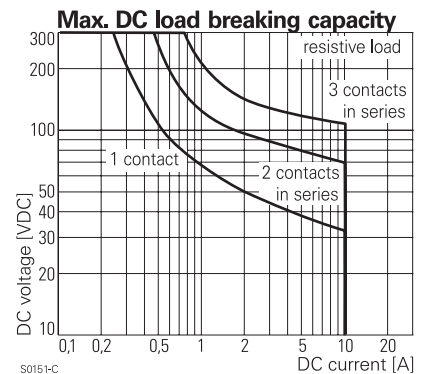
Contact configuration	2 CO or 3 CO		
Contact set	single cont.	single cont.	bifurcated
Type of interruption	micro disconnection		
Rated voltage / max. switching voltage AC	240 / 400 VAC		
Rated current	10 A	10 A	4 A
Maximum breaking capacity AC	2500 VA	2500 VA	500 VA
Limiting making capacity, max 20 ms	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 <sup>-1</sup>		
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
<b>IEC 61810</b>				
MT22 DC coil	CO	10 A, 250 VAC, cosφ=1	35°C	100x10 <sup>3</sup>
MT22 AC coil	CO	10 A, 250 VAC, cosφ=1	35°C	20x10 <sup>3</sup>
MT32 DC coil	CO	10 A, 250 VAC, cosφ=1	35°C	100x10 <sup>3</sup>
MT32 AC coil	CO	10 A, 250 VAC, cosφ=1	35°C	20x10 <sup>3</sup>
MT2	CO	10 A, 250 VAC, resistive	40°C	30x10 <sup>3</sup>
MT2	NO / NC	B300	40°C	6.000
MT2	CO	4 A, 25 VAC, resistive, bifurcated	40°C	30x10 <sup>3</sup>
MT3	CO	10 A, 250 VAC, resistive	40°C	30x10 <sup>3</sup>
<b>UL 508</b>				
MT3	NO / NC	B300	40°C	6.000
MT3	CO	4 A, 25 VAC, resistive, bifurcated	40°C	30x10 <sup>3</sup>

**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	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ohm	Rated coil power W
006	6	4.5	0.6	32±10%	1.1
012	12	9.0	1.2	110±10%	1.3
<b>024</b>	<b>24</b>	<b>18.0</b>	<b>2.4</b>	<b>475±10%</b>	<b>1.2</b>
048	48	36.0	4.8	2000±10%	1.2
060	60	45.0	6.0	2850±10%	1.3
110	110	82.5	11.5	10000±12%	1.2
220	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
<b>024</b>	<b>24</b>	<b>19.2 / 20.4</b>	<b>9.6</b>	<b>86±10%</b>	<b>2.26/ 1.95</b>
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
<b>230</b>	<b>230</b>	<b>184.0 / 195.5</b>	<b>92.0</b>	<b>8300±12%</b>	<b>2.32/ 1.96</b>

All figures are given for coil without preenergization, at ambient temperature +23°C

**Insulation**

Dielectric strength coil-contact circuit	2500 V <sub>rms</sub>
open contact circuit	1500 V <sub>rms</sub>
adjacent contact circuits	2500 V <sub>rms</sub>
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 basic 3 pole basic
Type of insulation coil-contact circuit	basic micro disconnection micro disconnection
open contact circuit	basic micro disconnection
adjacent contact circuits	basic micro disconnection
Rated insulation voltage	250 V 250 V
Pollution degree	3 2
Rated voltage system	240 V 230 / 400 V
Overvoltage category	III III

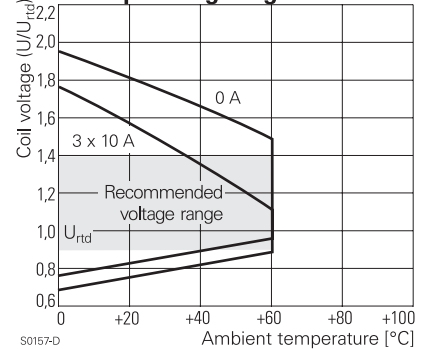
**Other data**

Mechanical endurance	20x10 <sup>6</sup> 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	RT1 - dust protected
Processing	Relay weight 80 g Packaging unit 25 pcs

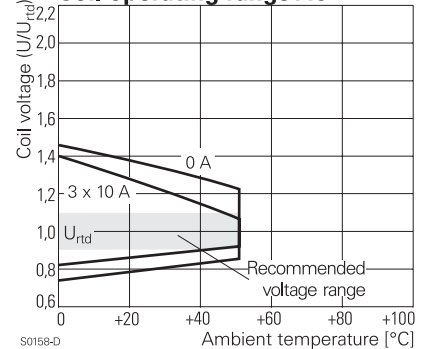
**Accessories**

For details see datasheet Accessories Multimode Relay MT

**Coil operating range DC**

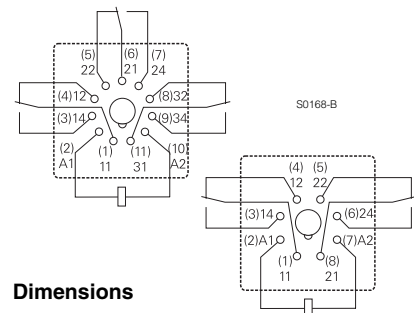


**Coil operating range AC**

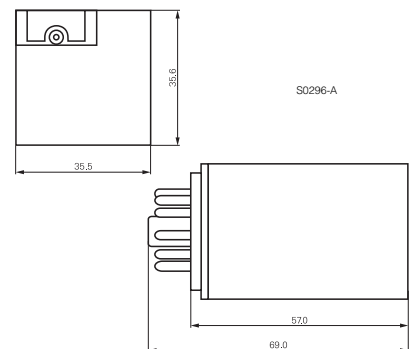


**Terminal assignment**

Bottom view on pins



**Dimensions**



**Multimode Relay MT (Continued)**

<b>Product key</b>	Typical product key					<b>MT</b>	<b>3</b>	<b>2</b>	<b>6</b>	<b>230</b>
<b>Type</b>	MT Multimode Relay MT									
<b>Contact configuration</b>	<b>2</b> 2 CO contacts (2 form C), 8-pin		<b>3</b> 3 CO contacts (3 form C), 11-pin							
<b>Contact material</b>	<b>2</b> AgNi 90/10		<b>B</b> AgNi 90/10 bifurcated contacts, gold plated							
	<b>3</b> AgNi 90/10, gold plated									
<b>Version</b>	<b>1</b> DC with test button		<b>6</b> AC with test button							
	<b>3</b> DC with test button and bipolar LED		<b>8</b> AC with test button and LED							
<b>Coil</b>	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 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		AC test button	24 VDC	5-1393090-7						
MT226012							12 VAC	6-1393090-3						
MT226024							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		AC test button	24 VDC	8-1393091-4						
MT3230C4							24 VDC	7-1393091-9						
MT326012							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 with test button	24 VDC	1-1393092-1
MT331110													110 VDC	1-1393092-3
MT331220	220 VDC	1-1393092-5												
MT333024	DC+LED+test button		AC test button	24 VDC	1-1393092-8									
MT3330C4				24 VDC	1-1393092-6									
MT333110				110 VDC	2-1393092-0									
MT333220				220 VDC	2-1393092-2									
MT336115				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						