

**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**

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

**Contact data**

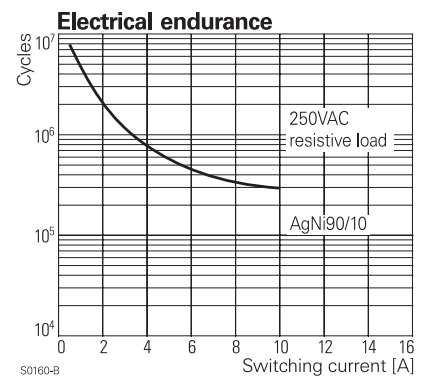
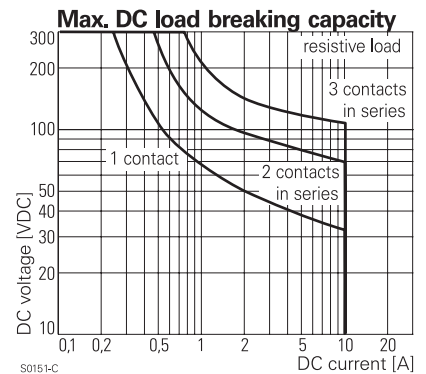
Contact configuration	2 CO or 3 CO		
Contact set	single cont.	single cont.	bifurcated
Type of interruption	micro disconnection		
Rated voltage / max. switching voltage AC	240 / 400 VAC		
Rated current	10 A	10 A	4 A
Maximum breaking capacity AC	2500 VA	2500 VA	500 VA
Limiting making capacity, max 20 ms	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	Operate voltage	Release voltage	Coil resistance	Rated coil power
STD	PD*)	VDC	VDC	Ohm	W
006	0A6	6	4.5	0.6	1.1
012	0B2	12	9.0	1.2	1.3
<b>024</b>	<b>0C4</b>	<b>24</b>	<b>18.0</b>	<b>2.4</b>	<b>1.2</b>
048	0E8	48	36.0	4.8	1.2
060	0G0	60	45.0	6.0	1.3
110	1B0	110	82.5	11.5	1.2
220	2C0	220	165.0	22.0	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	Operate voltage	Release voltage	Coil resistance	Rated coil power
	VAC	50 / 60 Hz VAC	50 / 60 Hz VAC	Ohm	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 basic
adjacent contact circuits	basic basic
Rated insulation voltage	250 V 250 V
Pollution degree	3 2
Rated voltage system	240 V 230 / 400 V
Overvoltage category	III III

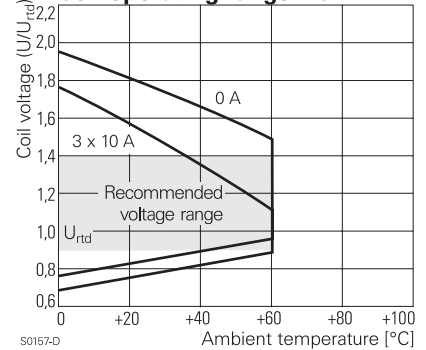
**Other data**

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	RTI - dust protected
Processing	Relay weight 80 g Packaging unit 25 pcs

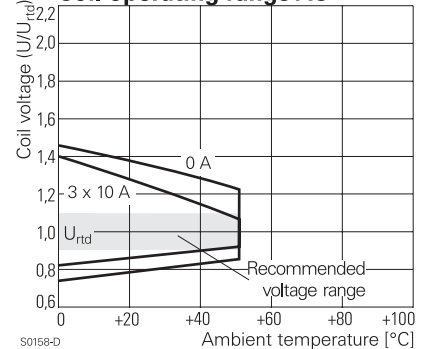
**Accessories**

For details see datasheet Accessories Multimode Relay MT

**Coil operating range DC**

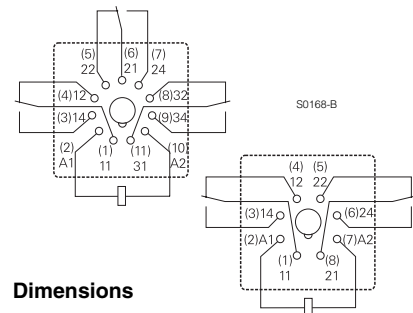


**Coil operating range AC**

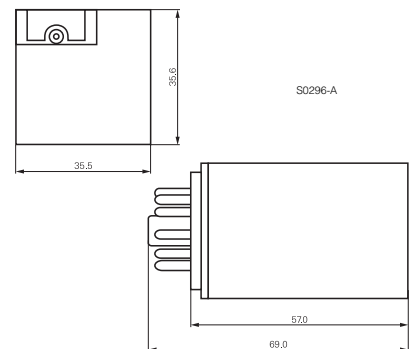


**Terminal assignment**

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>3</b> AgNi 90/10, gold plated		<b>B</b> AgNi 90/10 bifurcated contacts, gold plated						
<b>Version</b>	<b>1</b> DC with test button <b>3</b> DC with test button and bipolar LED		<b>6</b> AC with test button <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	12 VDC	4-1393090-9		
MT221024			with test button	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				AC	12 VAC	6-1393090-3	
MT226024				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	24 VAC	6-1393090-9	
MT228115				test button	115 VAC	7-1393090-0	
MT228230			230 VAC	7-1393090-1			
MT321012	3 CO contacts 11-pin	AgNi 90/10	DC	12 VDC	6-1393091-8		
MT321024			with test button	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				DC+LED+PT+TB	24 VDC	7-1393091-9	
MT326012				AC	12 VAC	9-1393091-6	
MT326024				test button	24 VAC	9-1393091-7	
MT326048					48 VAC	9-1393091-8	
MT326115					115 VAC	1393092-1	
MT326230					230 VAC	1393092-2	
MT328024				AC+LED	24 VAC	1393092-4	
MT328115				test button	115 VAC	1393092-7	
MT328230					230 VAC	1393092-8	
MT331024				AgNi 90/10 gold plated	DC	24 VDC	1-1393092-1
MT331110					with test button	110 VDC	1-1393092-3
MT331220						220 VDC	1-1393092-5
MT333024					DC+LED+test button	24 VDC	1-1393092-8
MT3330C4					DC+LED+PD+TB	24 VDC	1-1393092-6
MT333110					DC+LED	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		