

- 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 <sup>6</sup> cycles		
Rated frequency of operation with / without load	20/100 min <sup>-1</sup>		

**Contact ratings**

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

**Coil data**

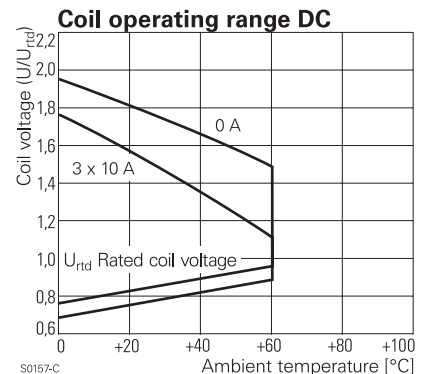
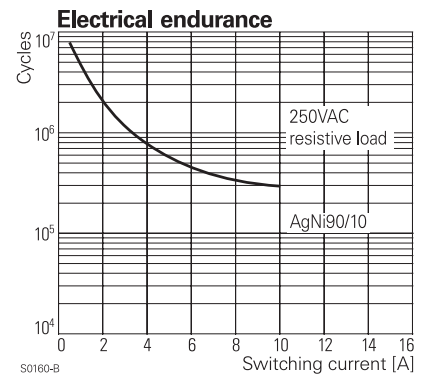
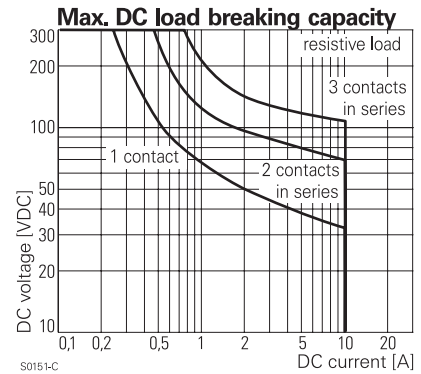
Rated coil voltage range DC coil	6...220 VDC
AC coil	6...230 VAC
Coil power DC coil	1.2 W
AC coil	2.3 VA
Operative range	1

**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
<b>024 0C4</b>	<b>24</b>	<b>18.0</b>	<b>2.4</b>	<b>475±10%</b>	<b>1.2</b>
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



**Coil versions, AC-coil 50/60 Hz**

Coil code	Rated voltage	Operate voltage	Release voltage	Coil resistance	Rated coil power
	VAC	50/60Hz	50/60Hz	Ohm	50/60Hz VA
006	6	4.8	2.4	5.3±10%	2.29/1.98
012	12	9.6	4.8	24±10%	2.19/1.86
<b>024</b>	<b>24</b>	<b>19.2</b>	<b>9.6</b>	<b>86±10%</b>	<b>2.26/1.95</b>
048	48	38.4	19.2	345±10%	2.28/1.97
060	60	48.0	24.0	544±10%	2.27/1.96
115	115	92.0	46.0	2000±10%	2.37/2.00
<b>230</b>	<b>230</b>	<b>184.0</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 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

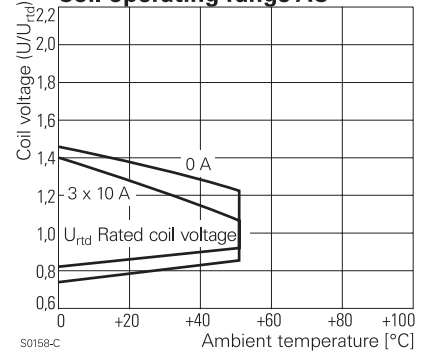
**Other data**

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	RT1 - dust protected
Relay weight	80 g
Packaging unit	25 pcs

**Accessories**

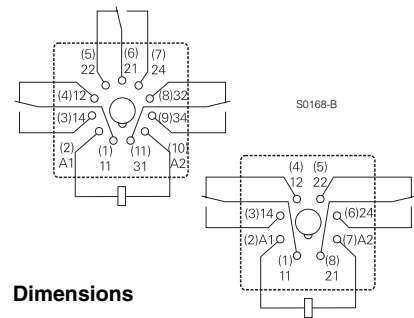
For details see datasheet Accessories Multimode Relay MT

**Coil operating range AC**

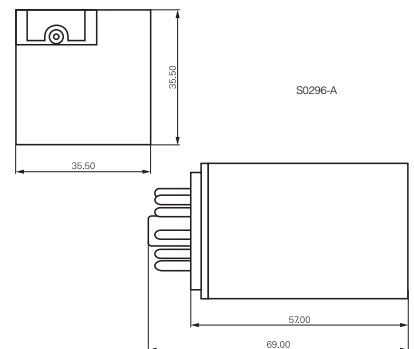


**Terminal assignment**

Bottom view on pins



**Dimensions**



**Product key**

Type

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

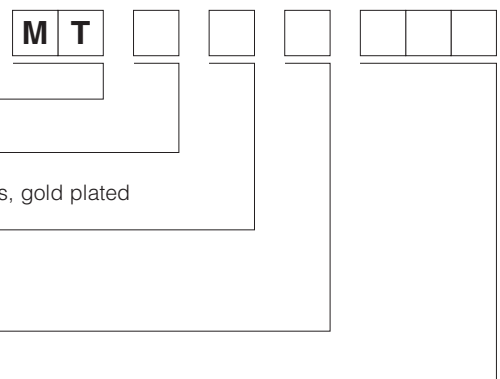
Contact material **2** AgNi 90/10 **B** AgNi 90/10 bifurcated contacts, gold plated  
**3** AgNi 90/10, gold plated

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



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			0-1393092-1		
MT326230		230 VAC			0-1393092-2		
MT328024	AC+LED	24 VAC			0-1393092-4		
MT328115	test button	115 VAC			0-1393092-7		
MT328230		230 VAC			0-1393092-8		
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	