

**Power Relay RM 2/3/7**

- 2/3 pole 10/16A, 2 form C (CO) or 3 form C (CO) contacts
- Switching capacity up to 6000VA
- DC or AC coil
- Mechanical indicator
- Push-to-test button
- Plug-in version, PCB terminals, chassis- or DIN-rail mount

Typical applications  
Elevator control, power supplies



F0163-B

**Approvals**

VDE Cert. No. 40003144, UL E214025  
Technical data of approved types on request

Contact Data	RM2	RM3	RM7
Contact arrangement	2 form C 2 CO	3 form C 3 CO	3 form C 3 CO
Rated voltage		400VAC	
Max. switching voltage		440VAC	
Rated current	16A	10A	16A
Limiting making current, max. 20ms	40A	40A	40A
Switching power	6000VA	3800VA	6000VA
Contact material		AgNi90/10	
Min. recommended contact load		24VDC/100mA	
Frequency of operation, with/without load		960/6000h <sup>-1</sup>	
Operate/release time typ., DC coil	15/10ms		
Bounce time max., DC coil, form A/form B		4/10ms	

**Contact ratings**

Type	Contact	Load	Cycles
<b>IEC 61810</b>			
RM22	C (CO)	16A, 400VAC, cosφ=1, DC-coil, 70°C	100x10 <sup>3</sup>
RM22	C (CO)	16A, 400VAC, cosφ=1, AC-coil, 60°C	50x10 <sup>3</sup>
RM3	C (CO)	10A, 400VAC, cosφ=1, 55°C	100x10 <sup>3</sup>
RM72	C (CO)	16A, 400VAC, cosφ=1, 50°C	50x10 <sup>3</sup>
<b>UL 508</b>			
RM2	A (NO)	16A, 277VAC, general purpose, 70°C	30x10 <sup>3</sup>
RM2	A (NO)	16A, 240VAC, 1HP, 70°C	6.050
RM2	A (NO)	16A, 415VAC, resistive, 70°C	100x10 <sup>3</sup>
RM3	C (CO)	10A, 415VAC, resistive, DC-coil, 70°C	100x10 <sup>3</sup>
RM3	C (CO)	10A, 415VAC, resistive, AC-coil, 55°C	100x10 <sup>3</sup>
RM3	A (NO)/B (NC)	10A, 277VAC, gen. purp., DC-coil, 70°C	30x10 <sup>3</sup>
RM3	A (NO)/B (NC)	10A, 277VAC, gen. purp., AC-coil, 55°C	30x10 <sup>3</sup>
RM7	A (NO)	16A, 415VAC, resistive, 50°C	100x10 <sup>3</sup>
RM7	A (NO)/B (NC)	16A, 277VAC, general purpose, 50°C	30x10 <sup>3</sup>
RM72	A (NO)	250VAC/1.5HP (3ph.) DC-coil, 70°C	10x10 <sup>3</sup>
RM72	A (NO)	28VDC/16A general purpose, 40°C	6x10 <sup>3</sup>
<b>IEC 60947-5-1</b>			
RM72	A (NO)	16A, AC-15 400VAC/5A, same pol., 25°C	6.050

Contact Data (continued)	RM2	RM3	RM7
Mechanical endurance			
DC coil		20x10 <sup>6</sup> operations	
AC coil		10x10 <sup>6</sup> operations	

**Coil Data**

Coil voltage range	6 to 220VDC 12 to 400VAC
Operative range, IEC 61810	2
Coil insulation system according UL	class 130 (B)

**Coil versions, DC coil**

STD	LED bipolar	Coil code	Rated voltage VDC	Coil resistance Ω±10% <sup>1)2)</sup>	Rated power W
		PD <sup>3)</sup>			
		LED+ PD <sup>3)</sup>			
<b>Coil versions, DC coil, RM2, RM3</b>					
006	L06	0A6	6	32	1.1
012	L12	0B2	12	110	1.3
024	L24	0C4	24	475	1.2
048	L48	0E8	48	2000	1.2
060	L60	0G0	60	2850	1.3
110	M10	1B0	110	10000 <sup>1)</sup>	1.2
221	N21	2C1	220	40000 <sup>2)</sup>	1.2

**Coil versions, DC coil, RM7**

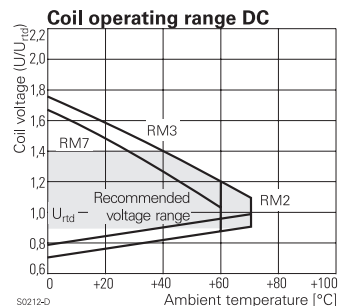
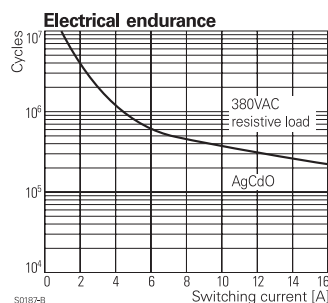
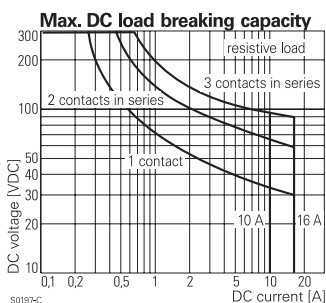
006	L06	0A6	6	24	1.5
012	L12	0B2	12	86	1.7
024	L24	0C4	24	345	1.7
030	-	0D0	30	490	1.8
048	L48	0E8	48	1340	1.7
060	L60	0G0	60	2200	1.6
110	M10	1B0	110	7300	1.7
221	N21	2C1	220	30000 <sup>2)</sup>	1.6

Operate voltage, DC coil 75% of rated coil voltage  
Release voltage, DC coil 10% of rated coil voltage

1) Coil resistance ±12%, 2) Coil resistance ±15%

3) Protection diode PD; standard polarity: +A1 / -A2

All figures are given for coil without pre-energization, at ambient temperature +23°C



**Power Relay RM 2/3/7 (Continued)**

**Coil Data (continued)**

**Coil versions, AC coil**

Coil code	Rated voltage	Operate voltage	Release voltage	Coil resistance	Rated coil power
STD	LED	50/60Hz	50/60Hz	$\Omega \pm 10\%^{1/2)}$	50/60Hz
		VAC	VAC	VAC	VA

**Coil versions, AC-coil, RM2, RM3**

512	R12	12	9.6/10.2	3.6	24	2.19/1.86
524	R24	24	19.2/20.4	7.2	86	2.26/1.95
548	R48	48	38.4/40.8	14.4	345	2.28/1.97
560	R60	60	48.0/51.0	18.0	544	2.27/1.96
615	S15	115	92.0/97.8	34.5	2000	2.37/2.00
730	T30	230	184.0/195.5	69.0	8300 <sup>1)</sup>	2.32/1.96
900	V00	400	320.0/340.0	120.0	27500 <sup>2)</sup>	2.31/1.96

**Coil versions, AC-coil, RM7**

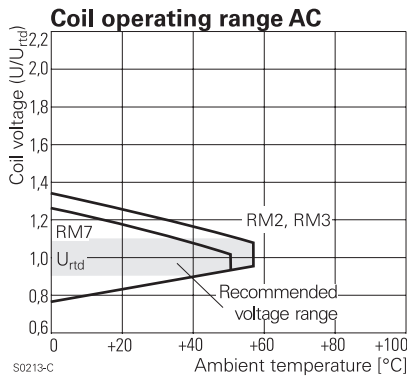
512	R12	12	9.6/10.2	3.6	19.5	2.71/2.27
524	R24	24	19.2/20.4	7.2	80	2.62/2.00
548	R48	48	38.4/40.8	14.4	320	2.60/2.17
560	R60	60	48.0/51.0	18.0	500	2.62/2.20
615	S15	115	92.0/97.8	34.5	1850	2.65/2.22
730	T30	230	184.0/195.5	69.0	7500	2.69/2.26
900	V00	400	320.0/340.0	120.0	23500 <sup>2)</sup>	2.61/2.20

<sup>1)</sup> Coil resistance  $\pm 12\%$ , <sup>2)</sup> Coil resistance  $\pm 15\%$

All figures are given for coil without pre-energization, at ambient temperature +23°C

**Insulation Data**

**RM2 RM3 RM7**



**Initial dielectric strength**

between open contacts	1500Vrms	1500Vrms	1500Vrms
between contact and coil	2500Vrms	2500Vrms	2500Vrms
between adjacent contacts	2500Vrms	2500Vrms	2500Vrms

**Initial surge withstand voltage**

between contact and coil	5000V	4000V	4000V
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**Clearance/creepage**

between contact and coil	$\geq 4.0/14.9\text{mm}$
between adjacent contacts	$\geq 6.1/7.3\text{mm}$

**Material group of insulation parts**

IIIa

**Other Data**

**RM2 RM3 RM7**

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at [www.te.com/customer-support/rohssupportcenter](http://www.te.com/customer-support/rohssupportcenter)

Ambient temperature for mounting/handling in operation	-20 to 40°C		
DC coil	-40 to 70°C	-40 to 70°C	-40 to 60°C
AC coil	-40 to 60°C	-40 to 55°C	-40 to 50°C
Cold storage, IEC 60068-2-1	16h/-40°C		
Dry heat, IEC 60068-2-2	16h/+85°C		
Damp heat cyclic, IEC 60068-2-30, Db, Variant 112/12h +25/+55°C			
Category of environmental protection IEC 61810	RTI - dust protected		
Vibration resistance (functional) form A (NO)/form B (NC)	5/2g	5/2g	12/4g
Terminal type	PCB-THT, plug-in, quick-connect		
Cover retention, pull/push force	100/100N		
Weight	81g		
Resistance to soldering heat THT IEC 60068-2-20	270°C/10s		
Packaging unit	10/25 pcs.		

**Accessories**

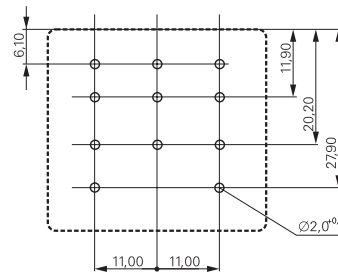
For details see datasheet

[Accessories Power Relay RM](#)

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.

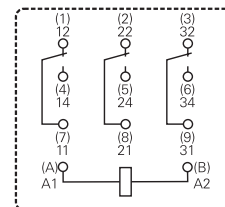
**PCB layout / terminal assignment**

Bottom view on pins



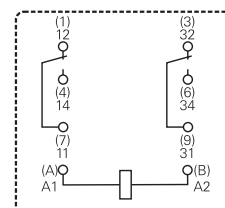
S0269-AA

**3 form C (CO) contacts**



S0269-AB

**2 form C (CO) contacts**

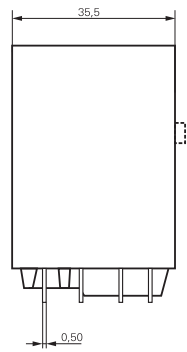
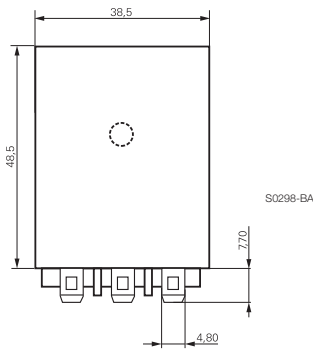


S0269-AD

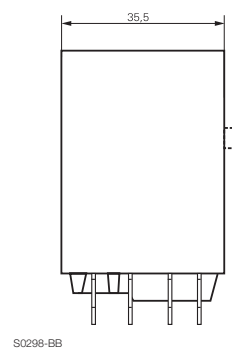
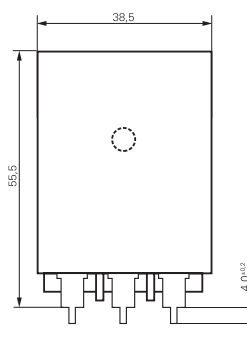
**Power Relay RM 2/3/7** (Continued)

**Dimensions**

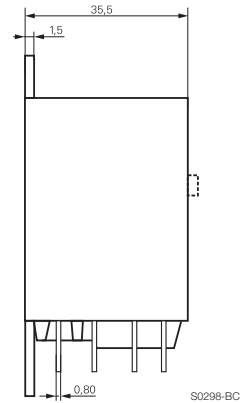
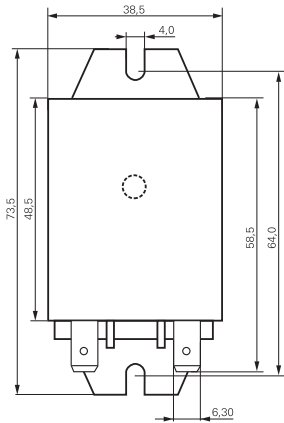
Plain cover, plug-in version



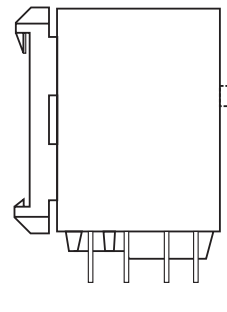
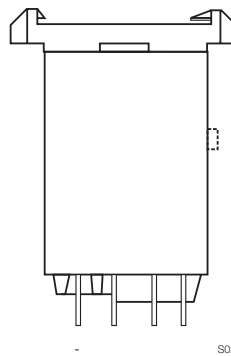
PCB version



Cover with mounting brackets, 6.3mm quick connect (4.8mm available)



Cover with DIN-snap-on attachment (6.3mm quick connect only)  
horizontal vertical



**Product code structure**

Typical product code **RM 7 2 2 730**

<b>Type</b> RM Power Relay RM 2/3/7					
<b>Contact arrangement</b>					
2	2 form C contacts (2 CO contacts), 16A	7	3 form C contacts (3 CO contacts), 16A		
3	3 form C contacts (3 CO contacts), 10A				
<b>Version</b>					
0	Discontinued: AgCdO, without test button <sup>1)</sup>	3	Discontinued: AgCdO, with test button <sup>1)</sup>		
2	AgNi 90/10, without test button	7	AgNi 90/10, with test button		
<b>Enclosure</b>					
2	Plain cover, 4.8mm quick connect terminals				
3	Cover with mounting brackets, 4.8mm quick connect terminals				
5	Cover with mounting brackets, 6.3mm quick connect terminals				
7	PCB version				
8	Cover with DIN-snap-on attachment, horizontal, 6.3mm quick connect terminals				
9	Cover with DIN-snap-on attachment, vertical, 6.3mm quick connect terminals				
<b>Coil</b>					
Coil code: please refer to coil versions table					

1) AgCdO contacts are discontinued and replaced with AgNi contacts (see PCN E-18-003016)

**Power Relay RM 2/3/7** (Continued)

Product code	Contacts	Cont. material	Version	Enclosure	Coil	Coil	Part number
RM222012	2 form C	AgNi	Without	Plain cover	DC-coil	12VDC	1-1415546-7
RM222024	2 CO contacts	AgNi	test button	4.8 mm terminal	DC-coil	24VDC	1-1415546-8
RM225012	16A	AgNi		Mounting brackets	DC-coil	12VDC	1415542-7
RM225024		AgNi		quick c. 6.3 mm	DC-coil	24VDC	1415542-8
RM225524		AgNi			AC-coil	24VAC	1-1415546-9
RM225615		AgNi			AC-coil	115VAC	2-1415546-0
RM225730		AgNi			AC-coil	230VAC	1415542-9
RM227024		AgNi		PCB version	DC-coil	24VDC	2-1415546-1
RM227730		AgNi			AC-coil	230VAC	2-1415546-2
RM322024	3 form C	AgNi		Plain cover	DC-coil	24VDC	2-1415546-3
RM327024	3 CO contacts	AgNi		4.8 mm terminal	DC-coil	24VDC	5-1415538-3
	10A	AgNi					
RM722012	3 form C	AgNi		Plain cover	DC-coil	12VDC	3-1415546-1
RM722024	3 CO contacts	AgNi		4.8 mm terminal	DC-coil	24VDC	3-1415546-2
RM7220C4	16A	AgNi			DC-coil (PD)	24VDC	4-1415547-1
RM723024		AgNi		Mounting brackets	DC-coil	24VDC	3-1415546-3
				quick c. 4.8 mm			
RM725024		AgNi		Mounting brackets	DC-coil	24VDC	3-1415546-4
RM725615		AgNi		quick c. 6.3 mm	AC-coil	115VAC	3-1415546-5
RM725730		AgNi			AC-coil	230VAC	3-1415546-6
RM727024		AgNi		PCB version	DC-coil	24VDC	3-1415546-7
RM727730		AgNi			AC-coil	230VAC	3-1415546-8
RM772012		AgNi	With test button	Plain cover	DC-coil	12VDC	3-1415546-9
RM772024		AgNi		4.8 mm terminal	DC-coil	24VDC	5-1415544-7
RM772060		AgNi			DC-coil	60VDC	2-1415545-1
RM772524		AgNi			AC-coil	24VAC	1-1415547-8
RM772730		AgNi			AC-coil	230VAC	4-1415546-0
RM772900		AgNi			AC-coil	400VAC	4-1415546-1
RM775730		AgNi		Mounting brackets	AC-coil	230VAC	1-1415547-9
				quick c. 6.3 mm			
RM778024		AgNi		DIN-snap-on	DC-coil	24VDC	4-1415546-2
RM778730		AgNi		horizontal	AC-coil	230VAC	2-1415547-0
RM779730		AgNi		DIN-snap-on	AC-coil	230VAC	4-1415546-3
				vertical			

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