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

Contact Data	RM2	RM3	RM7
Contact arrangement	2 form C	3 form C	3 form C
	2 CO	3 CO	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	ACdO, AgNi90/10	AgCdO, in preparation	AgCdO
Min. recommended contact load		24VDC/100mA	
Frequency of operation, with/without load		$960/6000h^{-1}$	
Operate/release time max., DC coil		15/10ms	
Bounce time max., DC coil, form A/form B		4/10ms	

Contact ratings

Type	Contact	Load	Cycles
IEC 61810			
RM20	C (CO)	16A, 400VAC, cosφ=1, 35°C	100×10^3
RM22	C (CO)	16A, 400VAC, cosφ=1, DC-coil, 70°C	100×10^3
RM22	C (CO)	16A, 400VAC, cosφ=1, AC-coil, 60°C	50×10^3
RM30	C (CO)	10A, 400VAC, cosφ=1, 35°C	100×10^3
RM70	C (CO)	16A, 400VAC, cosφ=1, 35°C	100×10^3
UL 508			
RM2	A (NO)	16A, 277VAC, general purpose, 70°C	30×10^3
RM2	A (NO)	16A, 415VAC, resistive, 70°C	100×10^3
RM20	A (NO)	10A, 48VDC, 50°C	30×10^3
RM3	C (CO)	10A, 415VAC, resistive, DC-coil, 70°C	100×10^3
RM3	C (CO)	10A, 415VAC, resistive, AC-coil, 55°C	100×10^3
RM30	A (NO)/B (NC)	10A, 277VAC, gen. purp., DC-coil, 70°C	30×10^3
RM30	A (NO)/B (NC)	10A, 277VAC, gen. purp., AC-coil, 55°C	30×10^3
RM7	A (NO)	16A, 415VAC, resistive, 50°C	100×10^3
RM7	A (NO)/B (NC)	16A, 277VAC, general purpose, 50°C	30×10^3

Contact Data (continued)

Contact Data (continued)	RM2	RM3	RM7
Mechanical endurance			
DC coil		20×10^6 operations	
AC coil		20×10^6 operations	

Coil Data

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

Coil versions, DC coil

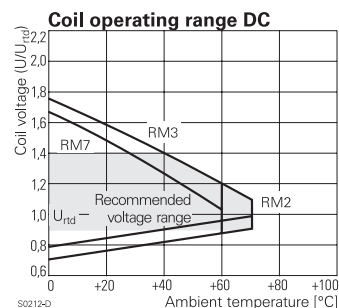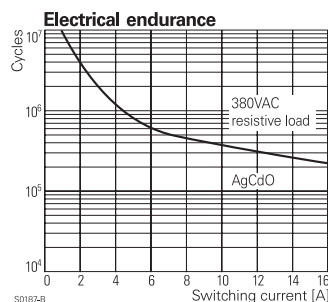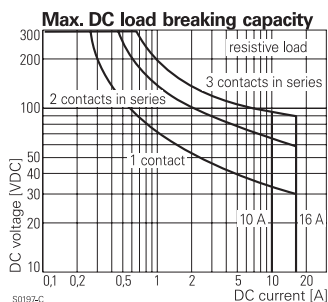| STD	LED bipolar	PD[3]	LED+ PD[3]	Rated voltage VDC	Coil resistance Ω±10%[1)2)]	Rated coil power W
Coil versions, DC coil, RM2, RM3						
006	L06	0A6	LA6	6	32	1.1
012	L12	0B2	LB2	12	110	1.3
024	L24	0C4	LC4	24	475	1.2
048	L48	0E8	LE8	48	2000	1.2
060	L60	0G0	LG0	60	2850	1.3
110	M10	1B0	MB0	110	10000[1]	1.2
221	N21	2C1	NC1	220	40000[2]	1.2
Coil versions, DC coil, RM7						
006	L06	0A6	LA6	6	24	1.5
012	L12	0B2	LB2	12	86	1.7
024	L24	0C4	LC4	24	345	1.7
048	L48	0E8	LE8	48	1340	1.7
060	L60	0G0	LG0	60	2200	1.6
110	M10	1B0	MB0	110	7300	1.7
221	N21	2C1	NC1	220	30000[2]	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

Max. DC load breaking capacity

S0197-C

Electrical endurance

S0187-B

Coil operating range DC

S0212-D

Power Relay RM 2/3/7 (Continued)

Coil Data (continued)

Coil versions, AC coil

Coil versions, AC-coil, RM2, RM3

Coil code STD	LED	Rated voltage VAC	Operate voltage 50/60Hz VAC	Release voltage 50/60Hz VAC	Coil resistance Ω±10%[1][2]	Rated coil power 50/60Hz VA
506	R06	6	4.8/5.1	1.8	5.3	2.29/1.98
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[1]	2.32/ 1.96
900	V00	400	320.0/340.0	120.0	27500[2]	2.31/1.96

Coil versions, AC-coil, RM7

Coil code STD	LED	Rated voltage VAC	Operate voltage 50/60Hz VAC	Release voltage 50/60Hz VAC	Coil resistance Ω±10%[1][2]	Rated coil power 50/60Hz VA
506	R06	6	4.8/5.1	1.8	4.7	2.86/2.36
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[2]	2.61/2.20

[1] Coil resistance ±12%, [2] Coil resistance ±15%
All figures are given for coil without pre-energization, at ambient temperature +23°C

Coil operating range AC

S0213-C
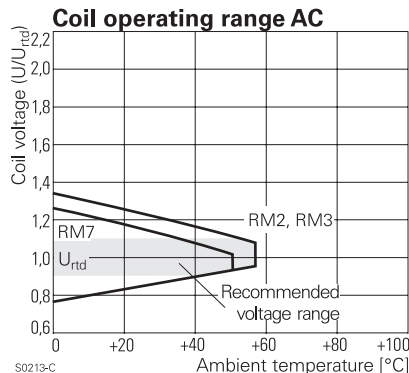
Insulation Data

	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
Clearance/creepage			
between contact and coil	≥4.0/14.9mm		
between adjacent contacts	≥6.1/7.3mm		
Material group of insulation parts	IIIa		

Other Data

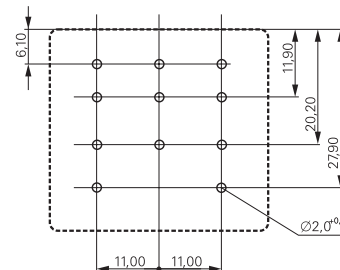|	RM2	RM3	RM7
Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter			
Ambient temperature			
for mounting/handling	-20 to 40°C		
in operation			
DC coil	-40 to 70°C	-40 to 70°C	-40 to 60°C
AC 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.
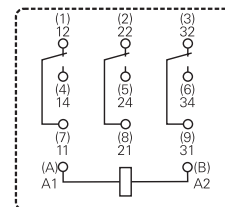
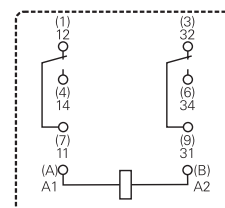**PCB layout / terminal assignment**
Bottom view on pins

S0269-AA

3 form C (CO) contacts

S0269-AB

2 form C (CO) contacts

S0269-AD

Datasheets and product specification
according to IEC 61810-1 and to be used
only together with the 'Definitions' section.

Datasheets and product data is subject to the
terms of the disclaimer and all chapters of
the 'Definitions' section, available at
http://relays.te.com/definitions

Datasheets, product data, 'Definitions' sec-
tion, application notes and all specifications
are subject to change.

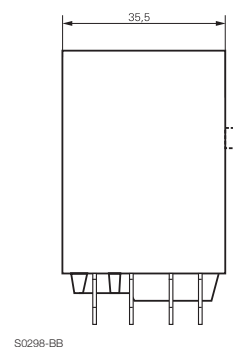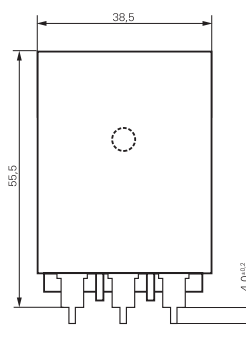## Power Relay RM 2/3/7 (Continued)

Dimensions

Plain cover, plug-in version
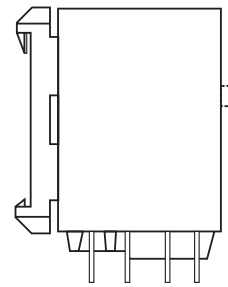

S0298-BA

PCB version

S0298-BB
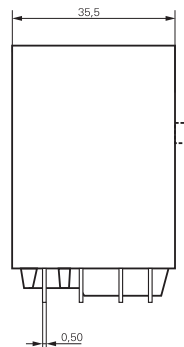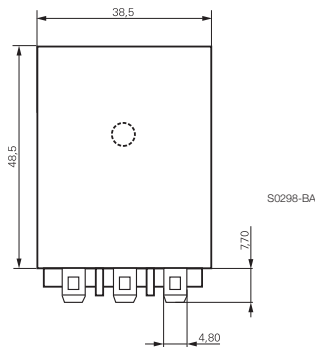
Cover with mounting brackets, 6.3mm quick connect (4.8mm available)

S0298-BC
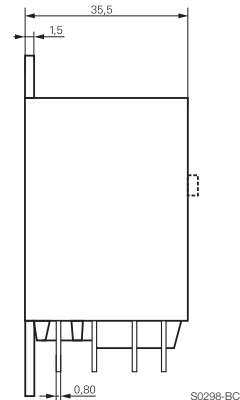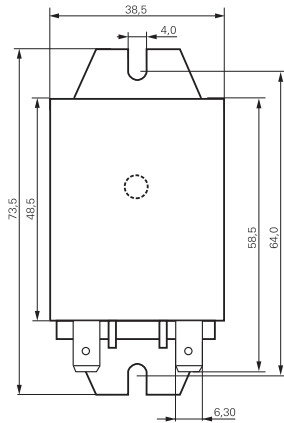
Cover with DIN-snap-on attachement (6.3mm quick connect only)
horizontal   vertical

-           S0298-BD   S0298-BE
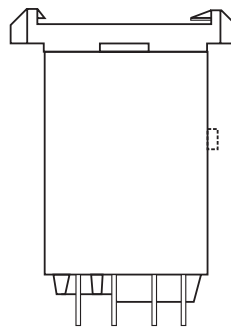
Product code structure

			Typical product code	**RM**	**7**	**0**	**2**	**730**

Type
RM Power Relay RM 2/3/7

Contact arrangement

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		

Version

0	AgCdO, without test button	**3**	AgCdO, with test button
2	AgNi 90/10, without test button	**7**	AgNi 90/10, with test button

Enclosure

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

Coil
Coil code: please refer to coil versions table

Power Relay RM 2/3/7 (Continued)

Product code	Contacts	Version	Enclosure	Coil	Coil	Part number
RM202024	2 form C	Without	Plain cover	DC coil	24VDC	8-1393149-2
RM202524	2 CO contacts	test button	quick c. 4.8mm	AC coil	24VAC	1-1393146-9
RM202615	16 A				115VAC	2-1393146-0
RM202730					230VAC	1-1393148-4
RM203024			Mounting brackets	DC coil	24VDC	1-1393148-6
RM203524			quick c. 4.8mm	AC coil	24VAC	2-1393146-5
RM203615					115VAC	2-1393146-6
RM203730					230VAC	2-1393146-8
RM205024			Mounting brackets	DC coil	24VDC	2-1393146-9
RM205524			quick c. 6.3mm	AC coil	24VAC	3-1393146-0
RM205615					115VAC	3-1393146-1
RM205730					230VAC	3-1393146-2
RM207024			PCB version	DC coil	24VDC	3-1393146-3
RM207615				AC coil	115VAC	8-1393149-5
RM207730					230VAC	3-1393146-4
RM208024			DIN-snap-on	DC coil	24VDC	3-1393146-5
RM208730			horizontal	AC coil	230VAC	8-1393149-6
RM209730			DIN vertical		230VAC	3-1393146-6
RM232024		With	Plain cover	DC coil	24VDC	3-1393146-8
RM232524		test button	quick c. 4.8mm	AC coil	24VAC	3-1393146-9
RM232615					115VAC	4-1393146-0
RM232730					230VAC	3-1393107-4
RM233024			Mounting brackets	DC coil	24VDC	3-1393107-5
RM233615			quick c. 4.8mm	AC coil	115VAC	4-1393146-2
RM235024			Mounting brackets	DC coil	24VDC	8-1393149-8
RM235730			quick c. 6.3mm	AC coil	230VAC	4-1393146-5
RM239730			DIN vertical		230VAC	4-1393148-7
RM302024	3 form C	Without	Plain cover	DC coil	24VDC	8-1393149-9
RM302524	3 CO contacts	test button	quick c. 4.8mm	AC coil	24VAC	5-1393146-3
RM302615	10 A				115VAC	5-1393146-4
RM302730					230VAC	5-1419150-3
RM303024			Mounting brackets	DC coil	24VDC	6-1393148-4
RM303615			quick c. 4.8mm	AC coil	115VAC	5-1393146-5
RM303730					230VAC	5-1393146-7
RM307024			PCB version	DC coil	24VDC	7-1393148-2
RM307730				AC coil	230VAC	5-1393146-9
RM332024		With	Plain cover	DC coil	24VDC	9-1393149-2
RM332524		test button	quick c. 4.8mm	AC coil	24VAC	9-1393149-3
RM332730					230VAC	9-1393149-4
RM333024			Mount. br. QC4.8	DC coil	24VDC	9-1393149-6
RM335730			Mount. br. QC6.3	AC coil	230VAC	6-1393107-1
RM338730			DIN horizontal		230VAC	7-1393148-7
RM339730			DIN vertical		230VAC	6-1393107-2
RM702024	3 form C	Without	Plain cover	DC coil	24VDC	8-1393146-5
RM702524	3 CO contacts	test button	quick c. 4.8mm	AC coil	24VAC	1393844-9
RM702615	16 A				115VAC	1-1393844-0
RM702730					230VAC	1-1393844-1
RM703024			Mounting brackets	DC coil	24VDC	1-1393844-2
RM703524			quick c. 4.8mm	AC coil	24VAC	9-1393146-1
RM703615					115VAC	9-1393146-2
RM703730					230VAC	9-1393146-4
RM705024			Mounting brackets	DC coil	24VDC	9-1393146-6
RM705524			quick c. 6.3mm	AC coil	24VAC	9-1393146-7
RM705615					115VAC	1-1393844-4
RM705730					230VAC	1-1393844-5
RM707024			PCB version	DC coil	24VDC	9-1393146-8
RM707524				AC coil	24VAC	1393147-1
RM707730					230VAC	1393147-2
RM708024			DIN horizontal	DC coil	24VDC	1393147-4
RM708730			quick c. 6.3mm	AC coil	230VAC	1-1419136-0
RM709024			DIN vertical	DC coil	24VDC	2-1393149-2
RM709730				AC coil	230VAC	1393147-5
RM732024		With	Plain cover	DC coil	24VDC	1-1393844-7
RM732524		test button	quick c. 4.8mm	AC coil	24VAC	1-1393147-0
RM732615					115VAC	1-1393147-1
RM732730					230VAC	1-1393844-8
RM733730			Mount.br. QC 4.8		230VAC	1-1393147-5
RM735024			Mounting brackets	DC coil	24VDC	3-1393149-6
RM735524			quick c. 6.3mm	AC coil	24VAC	3-1393149-7
RM735730					230VAC	4-1393149-1
RM737730			PCB version		230VAC	2-1393147-0
RM738024			DIN-snap-on	DC coil	24VDC	2-1393844-0
RM738730			horizontal	AC coil	230VAC	2-1393147-2
RM739024			DIN-snap-on	DC coil	24VDC	4-1393149-5
RM739730			vertical	AC coil	230VAC	2-1393844-2

Datasheets and product specification
according to IEC 61810-1 and to be used
only together with the 'Definitions' section.

Datasheets and product data is subject to the
terms of the disclaimer and all chapters of
the 'Definitions' section, available at
http://relays.te.com/definitions

Datasheets, product data, 'Definitions' sec-
tion, application notes and all specifications
are subject to change.

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
RM723024	16A	AgNi		Mounting brackets	DC-coil	24VDC	3-1415546-3
				quick c. 6.3 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	Plain cover	DC-coil	12VDC	3-1415546-9
RM772024		AgNi	test button	4.8 mm terminal	DC-coil	24VDC	5-1415544-7
RM772060		AgNi			DC-coil	60VDC	2-1415545-1
RM772730		AgNi			AC-coil	230VAC	4-1415546-0
RM772900		AgNi			AC-coil	400VAC	4-1415546-1
RM778024		AgNi		DIN-snap-on	DC-coil	24VDC	4-1415546-2
				horizontal			
RM779730		AgNi		DIN-snap-on	AC-coil	230VAC	4-1415546-3
				vertical			

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[TE Connectivity](#):
  [RM207615](#)