RM699B
Slimline Interface Relays

RM699B
for PCB mounting
or plug-in sockets

- Cover width only 5,0 mm
- Sealed for soldering and cleaning
- Applications: for PLC's, industrial machinery, time relays, counters, temperature adjusters, measurement instruments, office equipment, etc.

E105728

RM699B SPDT DC coil / 6A rated current

Part Number	Coil Voltage DC	Coil Type	Coil Resistance at 20°C in Ω	Coil Operating Range min. (at 20°C)	Coil Operating Range max. (at 55°C)
► **RM699BV-3011-85-1005**	5	DC	147	3.75	7.5
► **RM699BV-3011-85-1012**	12	DC	848	9.0	18.0
► **RM699BV-3011-85-1024**	24	DC	3390	18.0	36.0
► **RM699BV-3011-85-1048**	48	DC	10600	36.0	72.0
► **RM699BV-3011-85-1060**	60	DC	20500	45.0	90.0

RM699B SPDT gold plated contacts DC coil / 0.05A rated current

Part Number	Coil Voltage DC	Coil Type	Coil Resistance at 20°C in Ω	Coil Operating Range min. (at 20°C)	Coil Operating Range max. (at 55°C)
RM699BV-3211-85-1005	5	DC	147	3.75	7.5
RM699BV-3211-85-1012	12	DC	848	9.0	18.0
RM699BV-3211-85-1024	24	DC	3390	18.0	36.0
RM699BV-3211-85-1048	48	DC	10600	36.0	72.0
RM699BV-3211-85-1060	60	DC	20500	45.0	90.0

Contact Data		RM699B	
Number and type of contacts		**SPDT**	**SPDT**
Contact material		**$AgSnO_2$**	**$AgSnO_2$ / Au 3µm**
Max. switching voltage		400 V AC / 250 V DC	30V AC / 36 V DC
Min. switching voltage		10 V	5V
Rated load	AC1	6 A / 250 V AC	0.05 A / 30V AC
	DC1	6 A / 24 V DC; 0.15 A / 250 V DC	0.05 A / 36 V DC
Min. switching current		100 mA	10mA
Max. inrush current		10 A 20 ms	0.1 A 20 ms
Rated current		**6A**	**0.05 A**
Max. breaking capacity	AC1	1500 VA	1.2 VA
Min. breaking capacity		1 W	0.05 W
Contact resistance		≤ 100 mΩ 100 mA. 24 V	≤ 30 mΩ 10 mA. 5 V
Max. operating frequency			
• at rated load	AC1	360 cycles/hour	360 cycles/hour
• no load		72000 cycles/hour	72000 cycles/hour
Coil Data			
Rated voltage	DC	5 ... 60 V	
Must release voltage		DC: ≥ 0.05 U_n	
Operating range of supply voltage		see table above	
Rated power consumption	DC	0.17 W 5 ... 24 V; 0.217 W 48. 60 V	
Insulation			
Insulation rated voltage		250 V AC	
Overvoltage category		III	
Dielectric strength			
• between coil and contacts		4 000 V AC type of insulation: reinforced	
• contact clearance		1 000 V AC type of clearance: micro-disconnection	
Contact - coil distance			
• clearance		≥ 6 mm	
• creepage		≥ 8 mm	
General data			
Operating / release time (typical values)		8 ms / 4 ms	
Electrical life (number of cycles)			
• resistive AC1		the SPST (1 NO) and SPST (1 NC) contact loaded (bilateral load): see Fig. 1 the SPST (1 NO) contact loaded: > 3 x 10^4; 6 A. 250 V AC	
Mechanical life (cycles)		> 10^7	
Dimensions (L x W x H)		28 x 5 x 15 mm	
Weight		6 g	
Ambient temperature			
• storage		-40...+85 °C	
• operating		-40...+85 °C	
Cover protection category		IP 64 PN-EN 60529	
Environmental protection		RTIII PN-EN 116000-3	
Shock resistance		5 g	
Vibration resistance		5 g 10...55 Hz	
Solder bath temperature		max. 260 °C	
Soldering time		max. 5 s	

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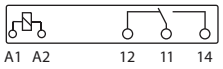
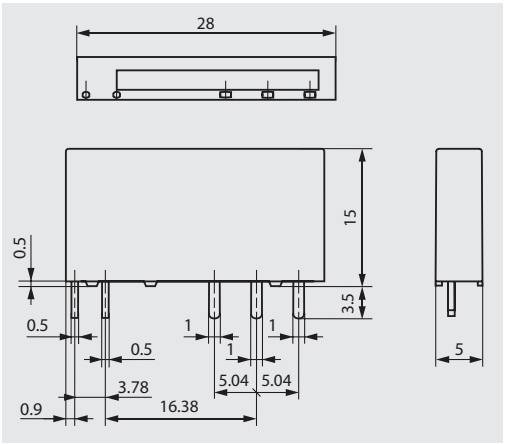
CONNECTION DIAGRAMS

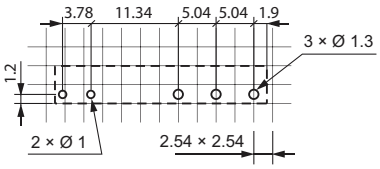


SPDT

DIMENSIONS

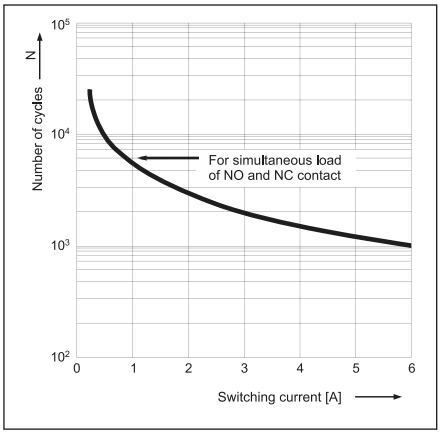


PIN OUTS

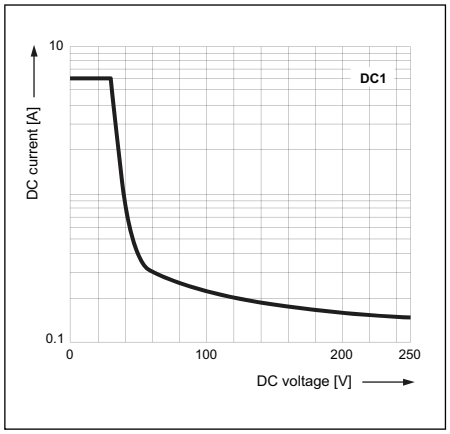


LOAD CHARTS

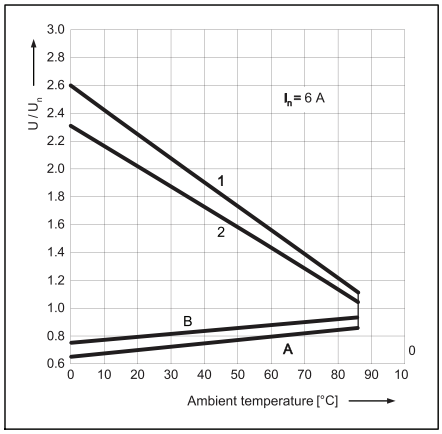
Electrical life at AC resistive current. Switching frequency: 360 cycles/hour Fig. 1



Max. DC resistive load breaking capacity Fig. 2



Coil operating range - DC Fig. 3



Description of Fig. 3
A - relations between make voltage and ambient temperature at no load on contacts. Coil temperature and ambient temperature are equal before coil energizing. Make voltage is not higher than the value read on Y axis (multiplication of rated voltage).
B - relations between make voltage and ambient temperature after initial coil heating up with 1.1 U_n, at continues load of In on contacts. Make voltage is not higher than the value read on Y axis (multiplication of rated voltage).
1. 2 - values on Y axis represent allowed overvoltage on coil at certain ambient temperature and contact load: 1 - no load; 2 - rated load

Socket Ordering Codes

Part Number Screw Clamp Terminals	Part Number Spring Clamp Terminals	Rated input voltage Un	Power of input circuit
PI6W-1PS-6VDC	PI6WB-1PS-6VDC	5 VDC	0.3 W
PI6W-1PS-12/24VDC	PI6WB-1PS-12/24VDC	12/24 VDC	0.2 W
PI6W-1PS-36VDC	PI6WB-1PS-36VDC	36 VDC	0.3 W
PI6W-1PS-48VDC	PI6WB-1PS-48VDC	48 VDC	0.4 W
PI6W-1PS-60VDC	PI6WB-1PS-60VDC	60 VDC	0.5 W
PI6W-1PS-24VAC/DC	PI6WB-1PS-24VAC/DC	24 VAC/DC	0.5VA / 0.4W
PI6W-1PS-42VAC/DC	PI6WB-1PS-42VAC/DC	42 VAC/DC	0.5VA / 0.4W
PI6W-1PS-115VAC/DC	PI6WB-1PS-115VAC/DC	115 VAC/DC	1.2VA / 1.2W
PI6W-1PS-230VAC/DC	PI6WB-1PS-230VAC/DC	230 VAC/DC	1.2VA / 1.2W

For relay socket combinations see pages 96-97 (screw clamp terminals) and pages 100-101 (spring clamp terminals).

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