

Pluggable Module - Switching Relay

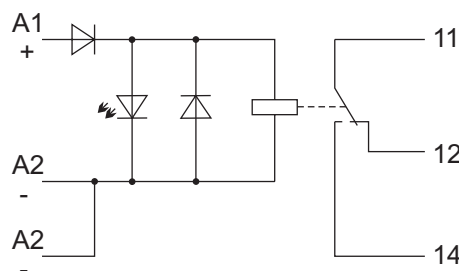
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Front-entry , 1 changeover contact

Preliminary data sheet



Similar photo



Description	Item-No.	Pack.-unit pcs																																																									
Switching relay for medium switching power	286-304/004-000	1																																																									
<ul style="list-style-type: none"> Relay module with miniature switching relay 1 changeover contact. Extended input voltage and temperature range for railway applications. Modules can be assembled without derating. Installation on terminal block for pluggable module. Mounting: Not suited for overhead installation. <p>The relay modules meet the requirements for an extended input voltage and temperature range in accordance with DIN EN 50155 / VDE 0115 part 200, "Railway applications. Electronical traction equipment".</p> <p>They can be used on vehicles operated with alternating current having a supply from the catenary via a transformer with battery charger and battery. The constant deviation from the operating voltage can, in this case, vary between -30 % and +25 %.</p> <p>The temperature range extended to 70 °C corresponds to the maximum air temperature range in inner rooms of vehicles and housings located unprotected in the open air.</p>	<p>Technical Data</p> <table border="1"> <tr><td>Input nominal voltage U_N</td><td>DC 24 V</td></tr> <tr><td>Input voltage range</td><td>$U_N -30 \% \dots +25 \%$</td></tr> <tr><td>Current input at U_N</td><td></td></tr> <tr><td>(coil -25 °C)</td><td>16.3 mA</td></tr> <tr><td>(coil +25 °C)</td><td>14.5 mA</td></tr> <tr><td>(coil +70 °C)</td><td>13.2 mA</td></tr> <tr><td>Contact material</td><td>AgSnO₂</td></tr> <tr><td>Max. switching voltage</td><td>AC 250 V</td></tr> <tr><td>Max. continuous current</td><td>3 A</td></tr> <tr><td>Max. breaking power</td><td></td></tr> <tr><td>(resistive)</td><td>750 VA</td></tr> <tr><td>(resistive)</td><td>DC see load limiting value graph</td></tr> <tr><td>Recommended min. load</td><td>100 mA at AC/DC 12 V</td></tr> <tr><td></td><td>10 mA at AC/DC 120/230 V</td></tr> <tr><td>Max. operating frequency</td><td></td></tr> <tr><td>with / without load</td><td>6 min⁻¹ / 20 s⁻¹</td></tr> <tr><td>Pull-in/dropout/bounce time_{typ}</td><td>5 ms / 6 ms / 5 ms</td></tr> <tr><td>Operating at normal rating</td><td>100 % continuous duty</td></tr> <tr><td>Dielectric strength</td><td></td></tr> <tr><td>contact/ coil</td><td>4 kV</td></tr> <tr><td>open contact</td><td>1 kV</td></tr> <tr><td>Nominal voltage acc. to VDE 0110 Part1/ 4.97</td><td></td></tr> <tr><td>IEC 60664-1</td><td>250 V / 4 kV / 3</td></tr> <tr><td>Mechanical life</td><td>2 x 10⁷ switching operations</td></tr> <tr><td>at max.load (resistive)</td><td>3 x 10⁵ switching operations</td></tr> <tr><td>Ambient operating temperature</td><td>-25 °C...+70 °C</td></tr> <tr><td>Storage temperature</td><td>-40 °C...+70 °C</td></tr> <tr><td>Module dimensions (W x H)</td><td>(15 x 82,5*) mm / (0.591 x3.25*) in</td></tr> <tr><td></td><td>* from upper edge of DIN 35 rail</td></tr> </table>	Input nominal voltage U_N	DC 24 V	Input voltage range	$U_N -30 \% \dots +25 \%$	Current input at U_N		(coil -25 °C)	16.3 mA	(coil +25 °C)	14.5 mA	(coil +70 °C)	13.2 mA	Contact material	AgSnO ₂	Max. switching voltage	AC 250 V	Max. continuous current	3 A	Max. breaking power		(resistive)	750 VA	(resistive)	DC see load limiting value graph	Recommended min. load	100 mA at AC/DC 12 V		10 mA at AC/DC 120/230 V	Max. operating frequency		with / without load	6 min ⁻¹ / 20 s ⁻¹	Pull-in/dropout/bounce time _{typ}	5 ms / 6 ms / 5 ms	Operating at normal rating	100 % continuous duty	Dielectric strength		contact/ coil	4 kV	open contact	1 kV	Nominal voltage acc. to VDE 0110 Part1/ 4.97		IEC 60664-1	250 V / 4 kV / 3	Mechanical life	2 x 10 ⁷ switching operations	at max.load (resistive)	3 x 10 ⁵ switching operations	Ambient operating temperature	-25 °C...+70 °C	Storage temperature	-40 °C...+70 °C	Module dimensions (W x H)	(15 x 82,5*) mm / (0.591 x3.25*) in		* from upper edge of DIN 35 rail
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<p>DC-Load limiting value graph</p> <p>Note: Inductive loads have to be attenuated by an appropriate protective circuit in order to protect relay coils and contacts!</p>	Standards / prescriptions	DIN VDE 0115 Part 200 DIN VDE 0160 and IEC 60255 DIN VDE 0435 (corresponding parts) DIN EN 50155 DIN EN 61373, Class B for NO
	Accessories	
	Terminal block	280-609
	Dimensions (W x D)	(17 x 73) mm / (0.669 x 2.874) in