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HIGH CURRENT RELAY 150

Automotive Relays for High Current Devices

- Limiting continuous current 130 A at 85 °C
- Current switching ability up to 300 A
- Suitable for voltage levels up to 24 VDC
- Heat, moisture, and vibration resistant
- Minimal contact resistance
- Dust-proof and sealed versions

TYPICAL APPLICATIONS

Engine control, glow plug, heated front screen, preheating systems (e.g. for diesel engines, catalytic converters), switches for loading ramps, start/stop.

Coil Operating Range



Does not take into account the temperature rise due to the contact current $\mathsf{E} = \mathsf{pre}\text{-}\mathsf{energisation}$



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High Current Relay 150 Automotive Relays

Contact Data	
Contact Arrangement	1 Form A, 1 NO 1 Form B, 1 NC 1 Form C, 1 CO 1 Form X, 1 NO DM
Rated Voltage Max. Switching Voltage	12 VDC/24 VDC Depends on Load Parameters ^{a)}
Rated Current, Cable 25 mm ² Limiting Continuous Current 23 °C, Load Cable 16 mm ² 85 °C, Load Cable 16 mm ² 125 °C, Load Cable 16 mm ² 23 °C, Load Cable 25 mm ² 85 °C, Load Cable 25 mm ² 125 °C, Load Cable 25 mm ² Limiting Making Current, Load Current Max. 3s on, Make/Break Ratio 1:10 Limiting Breaking Current	130 A at 85 °C 130 A 120 A 60 A 180 A 130 A 70 A 300 A 300 A
Contact Material Min. Recommended Contact Load ⁴⁾ Initial Voltage Drop, Typ. at 100 A	AgSnO ₂ 1 A at 5 VDC 70 mV
Frequency of Operation, With/Without Load	6 ops./min.
Operate/Release Time Typ. at Nominal Voltage	25/8 ms
Electrical Endurance Form A Contact (NO), Resistive Load, Cyclic Temperature: +23 °C	>5x10 ⁴ Cycles at 300 A, 13.5 VDC
Mechanical Endurance	>10 ⁷ ops.

A) Please contact TE relay application engineer.

Insulation Data	
Initial Dielectric Strength Between Contact and Coil	1000 VAC rms
Load Dump Test ISO 7637-1 (12 VDC), Test Pulse 5 ISO 7637-2 (24 VDC), Test Pulse 5	Vs = +86.5 VDC Vs = +200 VDC

Coil Da	ta						
Rated Coil Voltage 12/24 VDC							
Rated Coil Power 3.3 w ¹⁾							
Max. Coil	Temperature		155 °C				
Coil Vers	sions, DC Coi	1)					
Coil Code	Rated Voltage VDC	Operate Voltage VDC	Release Voltage VDC	Coil Resistance Ω ±10%	Rated Coil Power w		
001 002	12 24	7.2 14.4	1.2 2.4	37 141	3.9 4.1		

1) With resistor.

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





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Automotive Relays

Other Data	
EU RoHS/ELV Compliance	Compliant
Ambient Temperature	-40 °C to +125 °C
Dry Heat, IEC 60068-2-2	500 h at 100 °C
Damp Heat Constant,	
IEC 60068-2-3 (78), Ca	500 h, 40 °C, 93% RH
Degree of Protection	
Dustproof:	IP54 (IEC 60529), RT I (IEC 61810)
Sealed:	sealing in accordance with IEC 68
Immersion Cleanable:	IP67 (IEC 60529), RT III (IEC 61810)
Corrosive Gas	
IEC 60068-2-42	10 days
IEC 60068-2-43	10 days
Vibration Resistance (Functional)	
IEC 60068-2-6 (Sine Sweep)	10 to 200 Hz >5 g ₂₎
Shock Resistance (Functional)	
IEC 60068-2-27 (Half Sine)	6 ms >20 g 2)
Drop Test, Free Fall	
IEC 60068-2-32	1 m onto concrete

Other Data	
Terminal Type	Screw
Cover Retention	
Pull Force	500 N
Push Force	500 N
Terminal Retention	
Pull Force	150 N
Push Force	150 N
Resistance to Bending	20 N
Force Applied to Side	20 N
Torque	5 Nm
Weight	Approx. 220 g (7.8 oz)

2) No change in the switching state >10 μs.

TERMINAL ASSESSMENT



1 Form X, 1 NO DM With Resistor



View of the Terminals



TE1667-61

*) Alternatively 5 b for form X, 1 NO DM with resistor.

Connector Information AMP SUPERSEAL 1.5 SERIES Coil side - Receptacle connector 282080-1 - Single wire seal 281934-2 - Contact 282110-1 Load side Cable lug M6, maximum cable section 25 $\mathrm{mm^2}$

ELECTRICAL HARNESSING & COMPONENTS

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DIMENSIONS

CO Version



View of the Terminals Bottom View





Product Code Structure			Typical Product Code	V23132	-A2	001	- A	2	00	
Туре	V23132	High Current Relay 15	0		1					
Contact Arrangement	A2 B2	1 Form A, 1 NO 1 Form X, 1 NO DM	D2 E2	1 Form B, 1 NC 1 Form C, 1 CO						
Coil	001	12 VDC	002	24 VDC						
Protection Class	Α	IP54	в	IP67						
Contact Material	2	AgSnO ₂								
Standard Version	00	Standard								

Product Code	Arrangement	Coil	Circuit	Coil Suppr.	Protect.	Contact Mat.	Terminals	OE Number	TAE Part No.
V23132-A2001-A200	1 Form A, 1 NO	12 VDC	NOR	Resistor	IP54	AgSnO ₂	Screw	1393315-2	ТВА
V23132-A2001-B200					IP67			1416010-1	T180017648
V23132-B2002-A200	1 Form X, 1 NO DM	24 VDC	NOBRR		IP54			1393315-9	T180017652
V23132-B2002-B200					IP67			1-1393315-1	ТВА
V23132-D2001-B200	1 Form B, 1 NC	12 VDC	NCR					on request	ТВА
V23132-E2001-A200	1 Form C, 1 CO	12 VDC	COR		IP54			9-1415001-5	ТВА

Other types on request. This list represents the most common types and does not show all variants covered by this datasheet.



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Eastern Cape - Port Elizabeth **T:** +27 (0)82 450 6596

Free State - Bloemfontein **T:** +27 (0)63 257 0505

Gauteng - Bedfordview (FleetTech) T: +27 (0)10 329 0932 Gauteng - Jet Park (HQ) T: +27 (0)11 823 5650 KwaZulu Natal - Pinetown

T: +27 (0)31 303 4129 *Mpumalanga - Middelburg*

trading@trysome.cc • www.trysome.co.za • PO Box 13677, Witfield 1467

T: +27 (0)13 692 8132

Northern Cape - Kathu T: +27 (0)53 723 3415 North West - Rustenburg

T: +27 (0)14 596 5257 *Western Cape - Cape Town*

T: +27 (0)21 945 1453

Botswana - Gaborone T: +267 399 4150 Mozambique - Tete

T: +258 252 20666 *Zambia - Kitwe*

T: +26 (0)21 222 5338



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