High Current Relay 150

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

F132_fcw2b

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

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	12VDC/24VDC
Max. switching voltage	depends on load parameters[A)]
Rated current, cable 25mm²	130A at 85°C
Limiting continuous current	
23°C, load cable 16mm²	130A
85°C, load cable 16mm²	120A
125°C, load cable 16mm²	60A
23°C, load cable 25mm²	180A
85°C, load cable 25mm²	130A
125°C, load cable 25mm²	70A
Limiting making current, load current max. 3s on, make/break ratio 1:10	300A
Limiting breaking current	300A
Contact material	$AgSnO_2$
Min. recommended contact load[4)]	1A at 5VDC
Initial voltage drop, typ. at 100A	70mV
Frequency of operation, with/without load	6 ops./min
Operate/release time typ. at nominal voltage	25/8ms
Electrical endurance form A contact (NO), resistive load, cyclic temperature:+23°C	>5x10⁴ cycles at 300A, 13.5VDC
Mechanical endurance	>10⁷ ops.

A) Please contact TE relay application engineer.

Coil Data

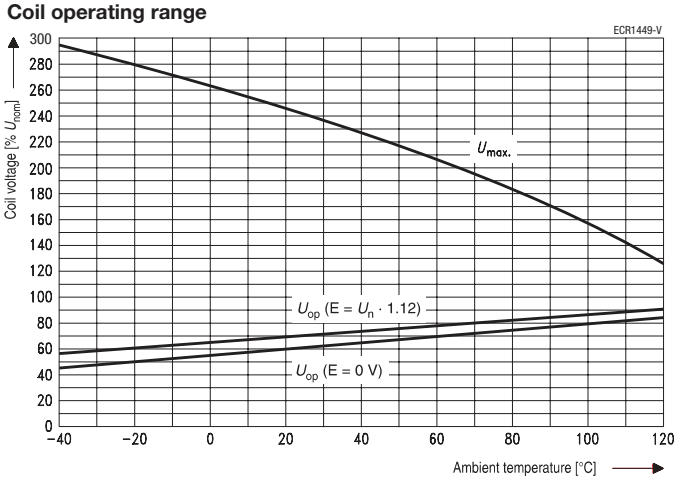
Rated coil voltage	12/24VDC
Rated coil power	3.3W[1)]
Max. coil temperature	155°C

Coil versions, DC coil[1)]

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil power W
001	12	7.2	1.2	37	3.9
002	24	14.4	2.4	141	4.1

1) With resistor.
All figures are given for coil without preenergization, at ambient temperature +23°C.

Coil operating range



Does not take into account the temperature rise due to the contact current
E = pre-energization

Insulation Data

Initial dielectric strength between contact and coil	1000VAC_{rms}
Load dump test	
ISO 7637-1 (12VDC), test pulse 5	Vs=+86.5VDC
ISO 7637-2 (24VDC), test pulse 5	Vs=+200VDC

High Current Relay 150 (Continued)

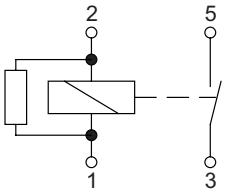
Other Data	
EU RoHS/ELV compliance	compliant
Ambient temperature	-40°C to +125°C
Dry heat, IEC 60068-2-2	500h at 100°C
Damp heat constant,	
IEC 60068-2-3 (78), Ca	500h, 40°C, 93% RH
Degree of protection	
dustproof:	IP54 (IEC 60529), RT I (IEC 61810)
sealed:	sealing in accordance with IEC 68
immersion 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 200Hz >5g[2)]
Shock resistance (functional)	
IEC 60068-2-27 (half sine)	6ms >20g[2)]
Drop test, free fall	
IEC 60068-2-32	1m onto concrete

Other Data (continued)	
Terminal type	screw
Cover retention	
pull force	500N
push force	500N
Terminal retention	
pull force	150N
push force	150N
resistance to bending	20N
force applied to side	20N
torque	5Nm
Weight	approx. 220g (7.8oz)
Packaging unit	50 pcs.

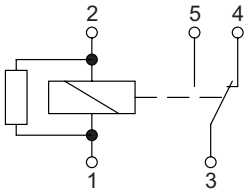
2) No change in the switching state >10µs.

Terminal Assignment

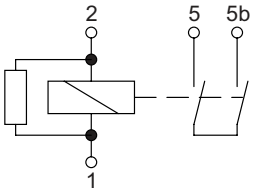
NOR
1 form A, 1 NO with resistor



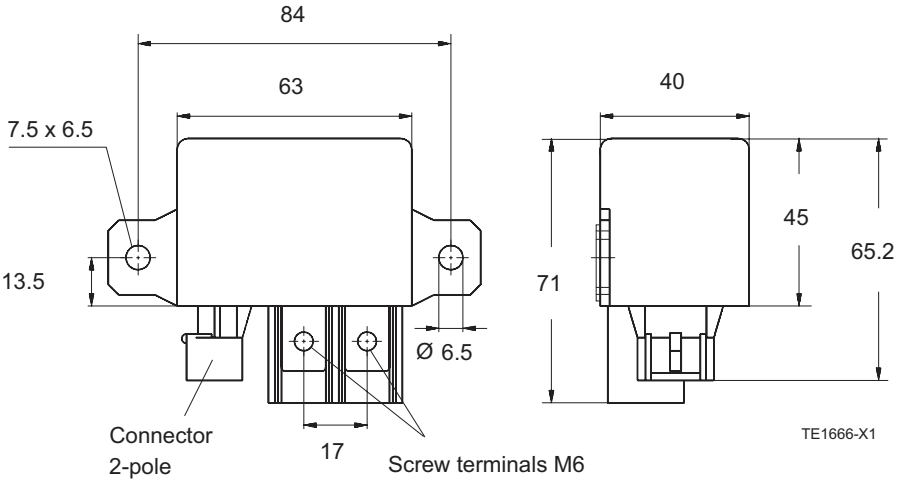
COR
1 form C, 1 CO with resistor



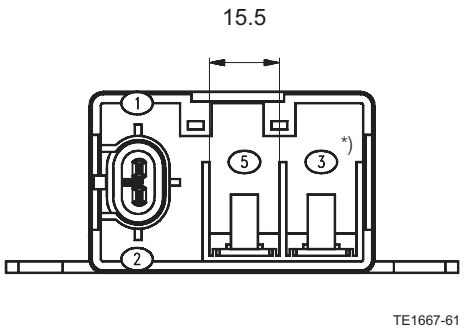
NOBRR
1 form X, 1 NO DM with resistor



Dimensions
NO and NO DM version



View of the terminals
Bottom view



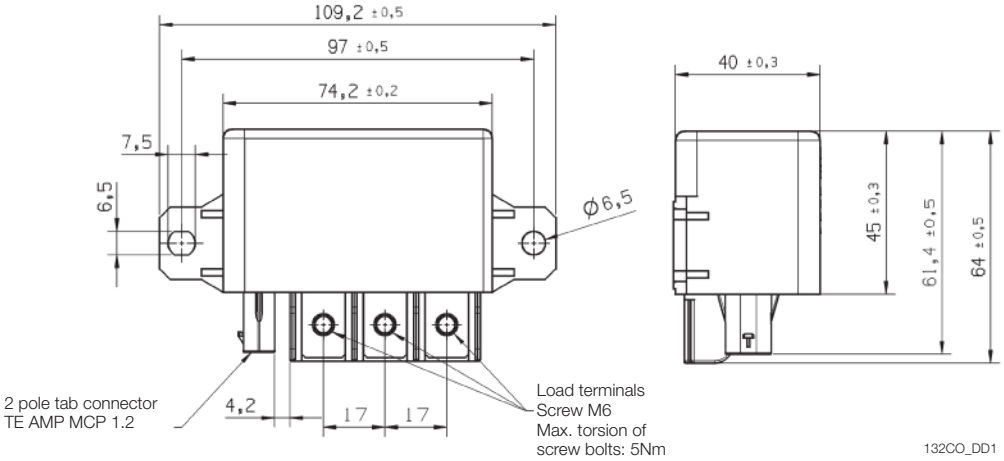
*) Alternatively 5b for form X, 1 NO DM with resistor.

Connector Information
AMP SUPERSEAL 1.5 SERIES
Coil side
- Receptacle connector 282080-1
- Single wire seal 281934-2
- Contact 282110-1

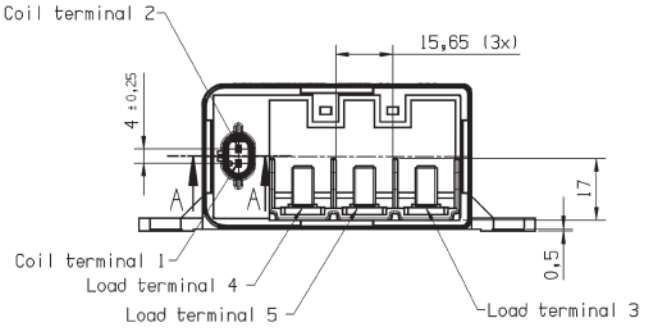
Load side
Cable lug M6, maximum cable section 25 mm²

High Current Relay 150 (Continued)

Dimensions
CO version



View of the terminals
Bottom view



Product code structure — Typical product code: **V23132 -A2 001 -A 2 00**

Type
V23132 High Current Relay 150

Contact arrangement

A2	1 form A, 1 NO	**D2**	1 form B, 1 NC
B2	1 form X, 1 NO DM	**E2**	1 form C, 1 CO

Coil

001	12VDC	**002**	24VDC

Protection class

A	IP54	**B**	IP67

Contact material
2 $AgSnO_2$

Standard version
00 Standard

Product code	Arrangement	Coil	Circuit	Coil suppr.	Protect.	Contact mat.	Terminals	Part number
V23132-A2001-A200	1 form A, 1 NO	12VDC	NOR	Resistor	IP54	AgSnO2	Screw	1393315-2
V23132-A2001-A200-EV-USBX*)								7-1414968-8*)
V23132-A2001-B200					IP67			1416010-1
V23132-A2001-B200-EV-USBX*)								2-1414939-2*)
V23132-B2002-A200	1 form X, 1 NO DM	24VDC	NOBRR		IP54			1393315-9
V23132-B2002-B200					IP67			1-1393315-1
V23132-B2002-B200-EV-USBX*)								5-1414968-1*)
V23132-D2001-B200	1 form B, 1 NC	12VDC	NCR					on request
V23132-E2001-A200	1 form C, 1 CO	12VDC	COR		IP54			9-1415001-5

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