

Shrouded Power Relay F7 A

- Pin assignment similar to ISO 7588 part 1
- Customized versions on request
 - Integrated components (e.g. resistor, diode)
 - Customized marking/color
 - Special cover with bracket

Typical applications

Cross carline up to 70A for example: ABS control, blower fans, cooling fan, energy management, engine control, fuel pump, heated front screen, ignition, lamps: front, rear, fog light, main switch/supply relay, wiper control.



F136_fw1_bw

Contact Data	
Contact arrangement	1 form A, 1 NO
Rated voltage	12VDC
Limiting continuous current	
23°C	70A
85°C	50A
125°C	30A
Limiting making current ¹⁾	240A
Limiting breaking current	70A
Limiting short-time current	
overload current, ISO 8820-3 ²⁾	1.35 x 50A, 1800s 2.00 x 50A, 5s 3.50 x 50A, 0.5s 6.00 x 50A, 0.1s
Jump start test, ISO 16750-1	24VDC for 5min, conducting nominal current at 23°C
Contact material	Silver based
Min. recommended contact load ³⁾	1A at 5VDC
Initial voltage drop, form A (NO) contact at 10A, typ./max.	15/300mV
Frequency of operation at nominal load	6 ops./min (0.1Hz)
Operate/release time typ.	8.5/4ms ⁴⁾
Electrical endurance	>2x10 ⁵ ops.
resistive load, NO contact	50A, 14VDC

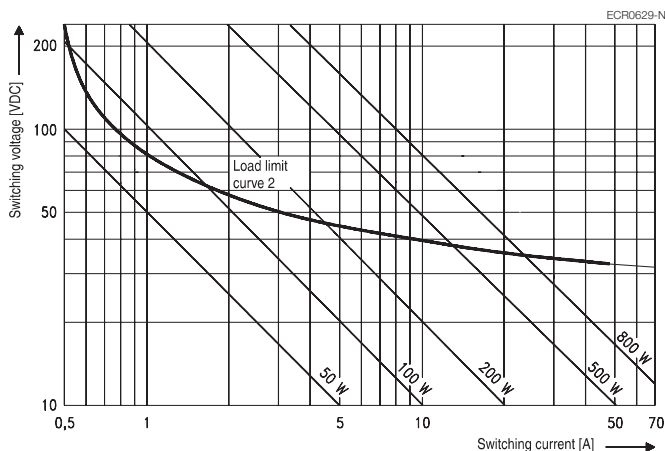
Contact Data (continued)	
Mechanical endurance	>1x10 ⁷ ops.
<ol style="list-style-type: none"> 1) The values apply to a resistive or inductive load with suitable spark suppression and at maximum 14VDC for 12VDC or 28VDC for 24VDC load voltages. For a load current duration of maximum 3s for a make/break ratio of 1:10. 2) Current and time are compatible with circuit protection by a typical automotive fuse. Relay will make, carry and break the specified current. 3) See chapter Diagnostics of Relays in our Application Notes or consult the internet at http://relays.te.com/appnotes/ 4) For unsuppressed relay coil. A low resistive suppression device in parallel to the relay coil increases the release time and reduces the lifetime caused by increased erosion and/or higher risk of contact tack welding. 	

Coil Data					
Rated coil voltage	12VDC				
Coil versions, DC coil					
Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance ⁵⁾ Ω±10%	Rated coil power ⁵⁾ W
004	12	7.2	1.6	90	1.6

5) Without components in parallel.

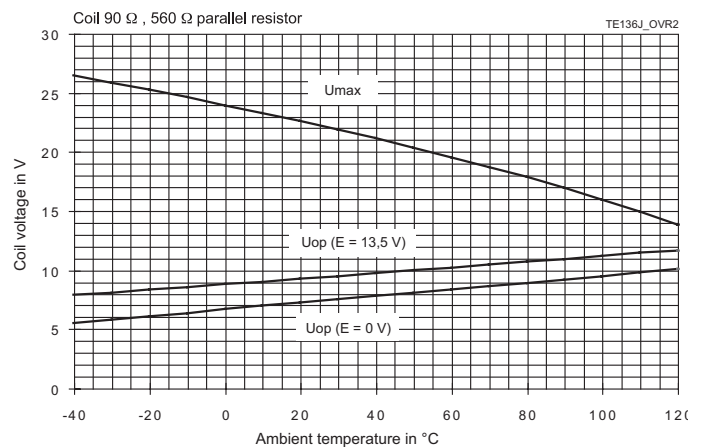
All figures are given for coil without pre-energization, at ambient temperature +23°C.

Max. DC load breaking capacity



Load limit curve 1: arc extinguishes during transit time (changeover contact).
Load limit curve 2: safe shutdown, no stationary arc (make contact).
Load limit curves measured with low inductive resistors verified for 1000 switching events.

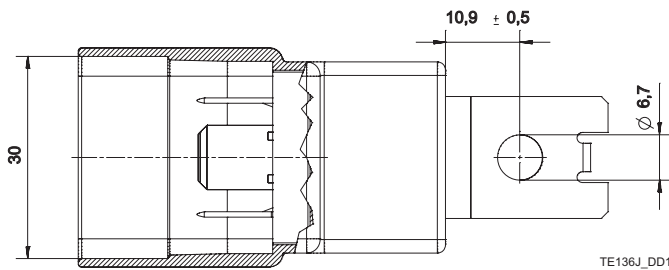
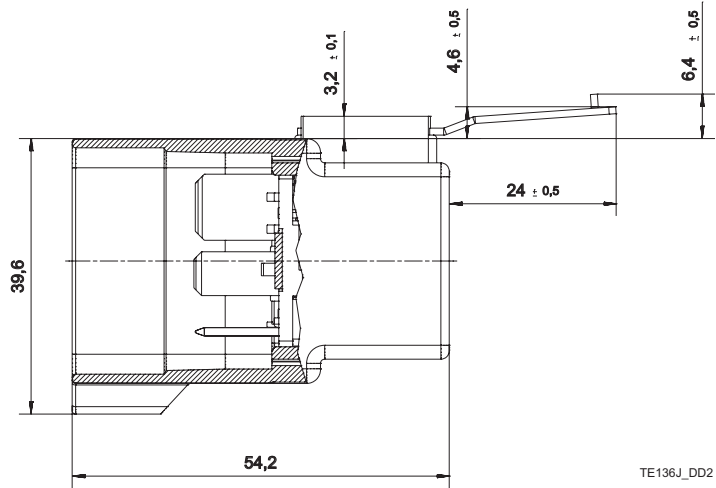
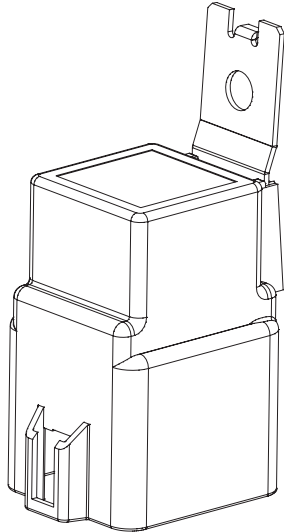
Coil operating range



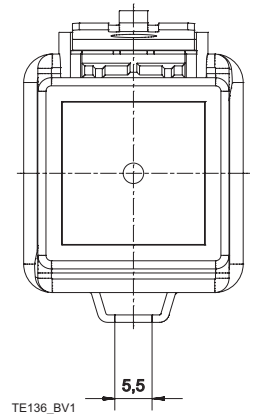
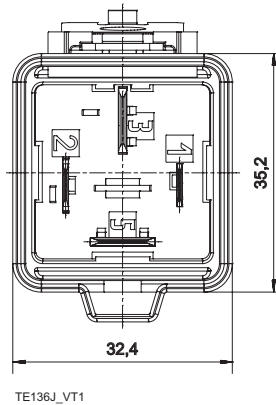
Does not take into account the temperature rise due to the contact current
E = pre-energization.

Shrouded Power Relay F7 A (Continued)

Dimensions



View of the terminals (bottom view)



Product code structure

Typical product code **V23136 -J 1 004 -X050**

Type V23136 Power Relay F7 A								
Contact arrangement J 1 form A, 1 NO								
Cover 1 Bracket at terminal 30 ISO								
Coil 004 12VDC								
Terminal/arrangement X050 Customized: resistor 560Ω								

Product code	Arrangement	Cover	Coil suppr.	Circuit ¹⁾	Coil	Contact material	Terminals	Part number
V23136-J1004-X050	1 Form A, 1 NO	Standard	Resistor 560Ω	NOR	12VDC	Silver based	Plug-in, QC	1-1414122-0

1) See terminal assignment diagrams.

Other types on request.

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