

Shrouded Power Relay F4 A

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

Typical applications

Cross carline up to 40A for example: ABS control, blower fans, cooling fan, energy management, engine control, fuel pump, heated front screen, lamps: front, rear, fog light, main switch/supply relay, wiper control.

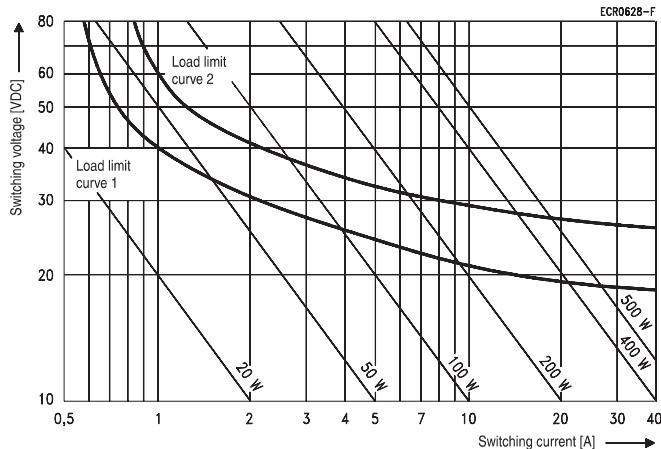


F136_fcw3c_bw

Contact Data

Contact arrangement	1 form A, 1 NO	1 form C, 1 CO
Rated voltage	12VDC	12VDC
Limiting continuous current 23°C, form A/form B	NO	NO/NC
85°C, form A/form B	60A	60/45A
125°C, form A/form B	40A	40/30A
Limiting making current ¹⁾ form A/form B	17A	17/12A
Limiting breaking current, form A/form B	120A	120/45A
Limiting short-time current overload current, ISO 8820-3 ²⁾	60A	60/40A
	1.35 x 40A, 1800s 2.00 x 40A, 5s 3.50 x 40A, 0.5s 6.00 x 40A, 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 at 10A, form A (NO), typ./max.	15/200mV	15/200mV
form B (NC), typ./max.	-	20/250mV
Frequency of operation at nominal load	6 ops./min (0.1Hz)	
Operate/release time typ.	7/2ms ⁴⁾	
Electrical endurance resistive load, NO contact	>1x10 ⁵ ops 40A, 14 VDC	>1x10 ⁵ ops 40A, 14 VDC

Max. DC load breaking capacity

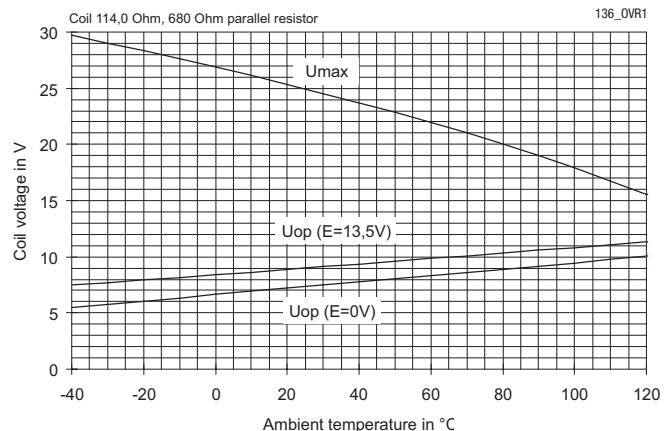


Load limit curve 1: arc extinguishes during transit time (changeover contact).

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 F4 A (Continued)
Insulation Data

Initial dielectric strength	
between open contacts	500V _{rms}
between contact and coil	500V _{rms}
between adjacent contacts	500V _{rms}
Load dump test	
ISO 7637-1 (12VDC), test pulse 5	V _s =+86.5VDC
ISO 7637-2 (24VDC), test pulse 5	V _s =+200VDC

Other Data (continued)

Terminal type	plug-in, QC
Cover retention	
pull force	150N
push force	200N
Terminal retention	
pull force	100N
push force	100N
Weight	approx. 60g (2.1oz)
Packaging unit	108 pcs.

6) Refers to used materials.

7) No change in the switching state >10µs. Valid for NC contacts, NO contact values significantly higher.

Other Data

EU RoHS/ELV compliance	compliant
Protection to heat and fire according UL94	HB or better ⁶⁾
Ambient temperature	-40 to 125°C
Climatic cycling with condensation	
EN ISO 6988	6 cycles, storage 8/16h
Temperature cycling	
IEC 60068-2-14, Nb	10 cycles, -40/+85°C (5°C/min)
Damp heat cyclic	
IEC 60068-2-30, Db, Variant 1	6 cycles, upper air temp. 55°C
Damp heat constant, IEC 60068-2-3, Ca	56 days
Category of environmental protection,	
IEC 61810	RT III – sealed
Degree of protection, IEC 60529	
IP67 (sealed)	
only with special connector	
Corrosive gas	
IEC 60068-2-42	10±2cm ³ /m ³ SO ₂ , 10 days
IEC 60068-2-43	1±0.3cm ³ /m ³ H ₂ S, 10 days
Vibration resistance (functional)	
IEC 60068-2-6 (sine sweep)	10 to 500Hz, min. 5g ⁷⁾
Shock resistance (functional)	
IEC 60068-2-27 (half sine)	11ms, min. 20g ⁷⁾
Drop test, free fall, IEC 60068-2-32	1m onto concrete

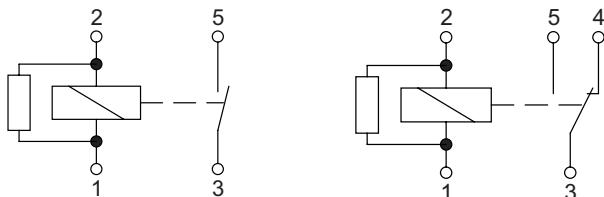
Accessories

For fitting connectors please contact us via online Support Center

Terminal Assignment

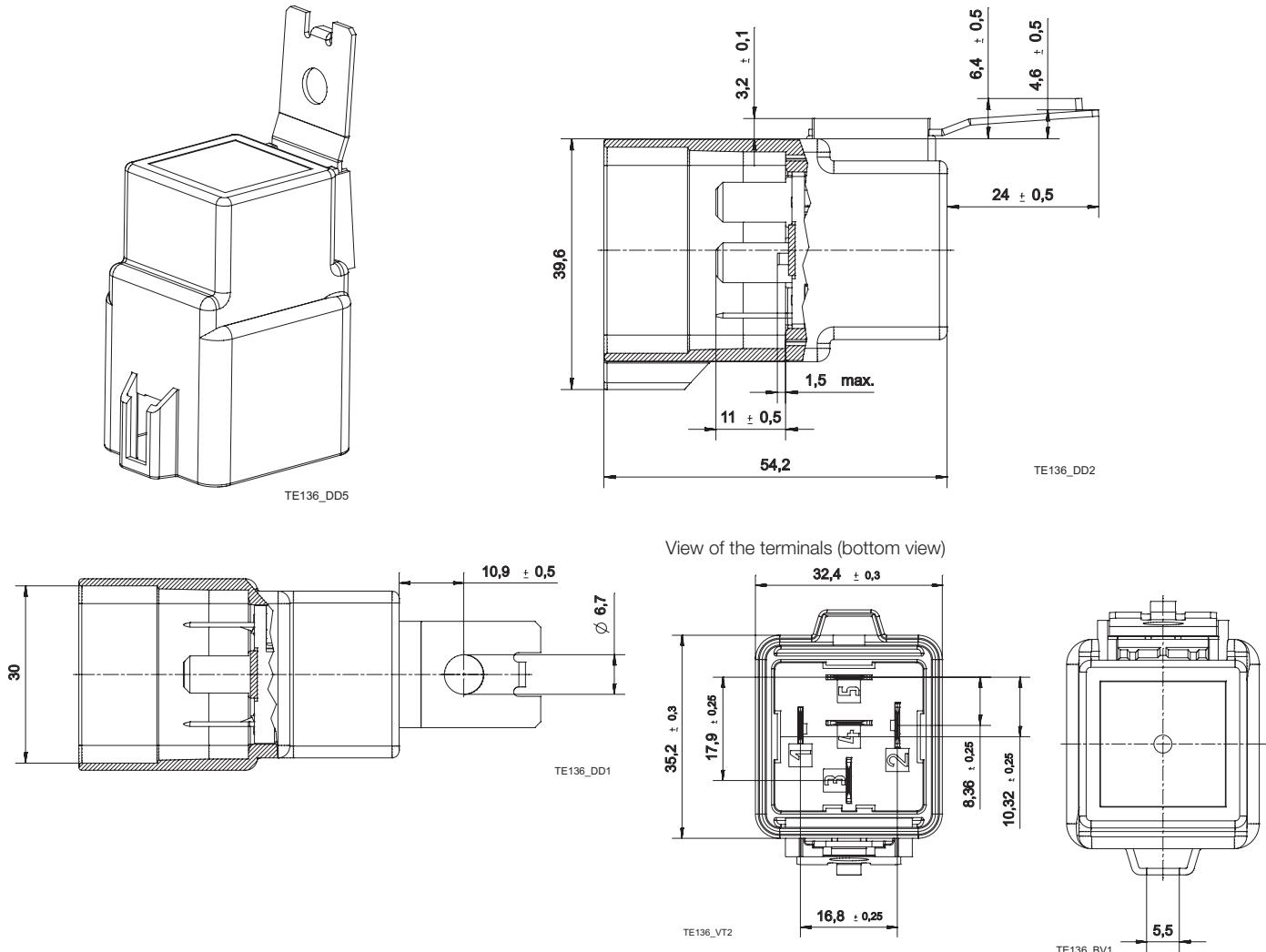
NOR
1 form A, NO with resistor

COR
1 form C, CO with resistor



Shrouded Power Relay F4 A (Continued)

Dimensions



Product code structure

Type	V23136	Power Relay F4 A	Typical product code	V23136	-A	1	001	-X057
Contact arrangement	A	1 form C, 1 CO	B	1 form A, 1 NO				
Cover	1	Bracket at terminal 3						
Coil	001	12VDC						
Terminal/arrangement	Xnnn	Customized (nnn: version number)						

Product code	Arrangement	Cover	Coil suppr.	Circuit ¹⁾	Coil	Cont. material	Terminals	Part number
V23136-A1001-X057	1 Form C, 1 CO	Shrouded	Resistor 680Ω	COR	12VDC	Silver based	Plug-in, QC	1-1414552-0
V23136-B1001-X051	1 Form A, 1 NO			NOR				1-1414121-0

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.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[TE Connectivity:](#)

[V23136A1001X057](#)