

Power relay F7

Operating conditions

Test	Relevant standard	Testing as per	Dimension	Comments
Temperature range, storage	-40 °C to 155 °C			
Climatic cycling with condensation	EN ISO 6988		6 cycles	Storage 8/16 h
Temperature cycling	IEC 68-2-14	Nb	10 cycles	- 40/+ 85 °C (5 °C per min.)
Damp heat	IEC 68-2-30	Db, Variant 1	6 cycles	Upper air temperature 55 °C
	IEC 68-2-3	Ca	56 days	
Corrosive gas	IEC 68-2-42	10 ± 2 cm ³ /m ³ SO ₂	10 days	
	IEC 68-2-43	1 ± 0.3 cm ³ /m ³ H ₂ S	10 days	
Vibration resistance	IEC 68-2-6 (sine sweep)		10-500 Hz min.18 g	No change in the switching state > 10 µs
Shock resistance	IEC 68-2-27 (half sine pulse form)		min. 30 g 6 ms	
Load dump	ISO 7637-1 (12 V)	Test pulse 5	Vs =+ 86.5 V	
	ISO 7637-2 (24 V)	Test pulse 5	Vs =+ 200 V	
Jump start	24 V for 5 minutes conducting nominal current at 23 °C			
Drop test	Capable of meeting specifications after 1.0 m (3.28 foot) drop onto concrete			
Flammability	UL94-HB or better (meets FMVSS 302) ¹⁾			
Overload current ²⁾	95 A, 1800 s			
	140 A, 5 s			
	245 A, 0.5 s			
	420 A, 0.1 s			

¹⁾ FMVSS: Federal Motor Vehicle Safety Standard.

²⁾ Current and time are compatible with circuit protection by a typical 70 A automotive fuse. Relay will make, carry and break the specified current.

Ordering information (Production in Europe, Asia and south America)

Part numbers (see table below for coil data)		Contact arrangement	Contact material	Enclosure	Special features
Relay part number	Tyco order number				
12 V Plug-in relays					
V23134-J0052-D642	7-1393303-3	1 Form A	AgNi0.15	Dust cover	
V23134-J1052-D642	1393304-9	1 Form A	AgNi0.15	Dust cover	Bracket
V23134-J0052-X429	1-1414147-0	1 Form A	AgNi0.15	Dust cover	Resistor
V23134-J0052-X439	1-1414286-0	1 Form A	AgSnO2	Dust cover	Diode
V23134-J0052-X461	1-1414469-0	1 Form A	AgSnO2	Dust cover	14.5mm load terminals, resistor
12 V PCB relays					
V23134-J0052-X455	1-1414478-0	1 Form A	AgNi0.15	Dust cover	Resistor
24 V Plug-in relays					
V23134-J0053-D642	9-1393303-7	1 Form A	AgNi0.15	Dust cover	
V23134-J1053-D642	1-1393304-1	1 Form A	AgNi0.15	Dust cover	Bracket
V23134-J0056-X408	1393304-5	1 Form A	AgSnO2	Dust cover	Contact gap > 0.8mm, resistor

Coil versions

Coil data for F7	Rated coil voltage (V)	Coil resistance +/- 10% (Ω)	Must operate voltage (V)	Must release voltage (V)	Allowable overdrive ¹⁾ voltage (V)	
					at 23 °C	at 85 °C
V23134-**052****	12	91	7.2	1.6	23	18
V23134-**053****	24	332	14.4	3.2	44	34
V23134-**056**** ²⁾	24	223	16.0	4.0	38	30

¹⁾ Allowable overdrive is stated with no load applied and minimum coil resistance.

²⁾ Resistance value including 1200 Ω parallel resistor.

Standard delivery packs (orders in multiples of delivery pack)

Power relay F7:	Plug-in version:	210 pieces
	Plug-in version with bracket:	208 pieces
	PCB version:	200 pieces