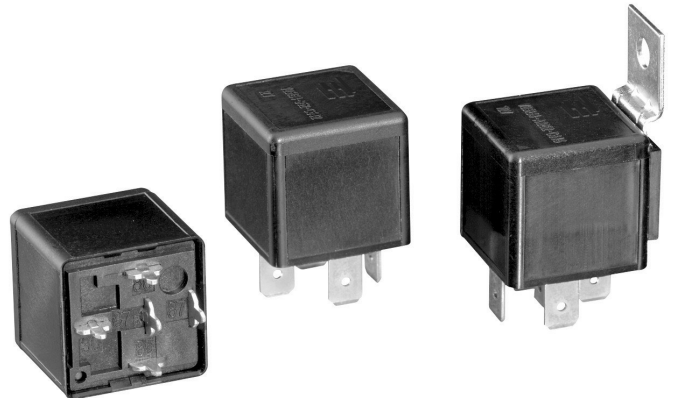


Power Relay F4

- Pin assignment similar to ISO 7588 part 1
- Plug-in or PCB terminals

Customized versions on request

- 48VDC version on request
- Integrated components (e.g. resistor, diode)
- Customized marking/color
- Special covers (e.g. notches, release features, brackets)
- Various contact arrangements and materials
- For latching (bistable) version refer to Power Relay F7 A Latching
- For shrouded/weatherproof dust cover versions refer to Shrouded Power Relay F4 A and F4



Typical applications

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

Contact Data

Contact arrangement	1 form A, 1 NO/1 NO (2x87)	1 form U, 2 NO	1 form C, 1 CO
Rated voltage	12VDC/24VDC	12VDC/24VDC	12VDC/24VDC
Maximum switching voltage	16VDC/32VDC	16VDC/32VDC	16VDC/32VDC
Limiting continuous current	NO	NO	NO/NC
23°C	60A	2x32A	60/45A
85°C	40A	2x25A	40/30A
125°C	17A	2x11A	17/12A
Limiting short-time current overload current	1.35 x 40A, 900s	1.35 x 40A, 900s	1.35 x 40A/30A, 900s
ISO 8820-3 ¹⁾ (2015)	2.00 x 40A, 60s 3.50 x 40A, 7s 6.00 x 40A, 1s	2.00 x 40A, 60s 3.50 x 40A, 7s 6.00 x 40A, 1s	2.00 x 40A/30A, 60s 3.50 x 40A/30A, 7s 6.00 x 40A/30A, 1s
Contact material	silver alloy	silver alloy	silver alloy
Min. contact load ²⁾	1A 5VDC	1A 5VDC	1A 5VDC
Initial voltage drop			
NO contact at 10A, typ./max.	15mV/200mV	2x15mV/200mV	15mV/200mV
NC contact at 10A, typ./max.			20mV/250mV
Operate time ³⁾	typ. 7ms	typ. 7ms	typ. 7ms
Release time ³⁾	typ. 2ms	typ. 2ms	typ. 2ms
Mechanical endurance	>1x10 ⁶ ops.	>1x10 ⁶ ops.	>1x10 ⁶ ops.

Electrical Endurance 12VDC Coil

Load voltage/ coil voltage	Load type		Load current				On / off ratio	Electrical endurance ⁴⁾	
			1 form A NO	1 form U 2 NO	1 form C ⁵⁾			Coil suppression ⁶⁾	
					NO	NC		Resistor	Diode
14VDC	resistive	make	40A	2x25A	40A	30A	1s/1s	>1x10 ⁵ ops.	on request
break		40A	2x25A	40A	30A				

Electrical Endurance 24VDC Coil

28VDC	resistive	make	20A	2x20A	20A	10A	2s/2s	>1x10 ⁵ ops.	on request
break		20A	2x20A	20A	10A				

All tests performed with cyclic temperature.

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

2) See Definitions for automotive relays <https://relays.te.com/definitions/> and chapter Diagnostics of Relays in our Application Notes at <https://relays.te.com/appnotes/>

3) At rated voltage and 23°C for a relay coil with suppression resistor. A suppression diode will influence the switching behaviour and reduce the service life.

4) According Weibull.

5) NO & NC contacts tested independently.

6) Any diode or pn-junction parallel to the coil (internal or external) will significantly decrease the electrical lifetime, especially when used for inductive loads.