

E-T-A Smart Power Relay E-1048-8D. Compact and versatile



Technical information

E-T-A Smart Power Relay E-1048-8D.

The Smart Power Relay E-1048-8D (DICE version) is an attractive alternative to electro-mechanical DC relays and blade fuses. It combines the functions of an electronic relay with integral overcurrent protection for DC 12 V and DC 24 V supply voltages. The ENTRY version offers a short-circuit proof switching output while the ENTRYprotect version provides a

short-circuit proof switching output plus defined overload disconnection of loads such as motors, signal lamps etc. with a common connection to minus.

Due to its extremely low power requirements the E-1048-8D is ideally suited to applications in battery-buffered electrical systems. The 4-pin version is compatible with standard

automotive relay sockets – providing a further advantage for the smart power relay in existing applications.

Technical data

Rated voltage U_N	DC 12 V/24 V (9...32 V)
Current rating range I_N	1 A/2 A/3 A/5 A/7.5 A/10 A/15 A/20 A/25 A/30 A (50 A under preparation)
Load output	Power MOSFET, plus switching (HSS)
Induced current consumption I_0 (OFF condition)	< 1 mA
Switching point (only ENTRYprotect)	typically $1.3 \times I_N$ after typically 200 ms
Trip time (only ENTRYprotect)	typically 200 ms with switch-on onto overload and/or load increase on duty
Current limitation	$I_N = 1 \text{ A} \dots 10 \text{ A}$: typically 75 A $I_N = 15 \text{ A} \dots 30 \text{ A}$: typically 350 A
Control voltage I_{N+} (against minus)	0...5 V = "OFF" / 8.5...32 V = "ON"
Control current I_E	typically 1 mA at 12 V typically 5 mA at 24 V
Ambient temperature	-40...+85 °C (80 °C at $I_N = 25 \dots 30 \text{ A}$)
Vibration	6 g eff. (10 Hz...2000 Hz)
Shock	25 g / 11 ms
Mounting	in automotive relay sockets (4-pole)



E-T-A Smart Power Relay E-1048-D

Features and benefits

- two functions in a single unit:
electronic relay plus electronic overcurrent protection
- wear-free switching of motors and loads
- CE marking, e1 logo according to EMC directive and vehicles directive
- extremely low power consumption

