

AZEV678

40 AMP 2 POLES POWER RELAY WITH MONITORING

FEATURES

- 40 Amp /480 VAC switching capability
- Dual NO load contacts plus isolated NC monitor contact for welding monitoring
- Withstands up to 1.85kA short circuit current
- Electrical rating according to IEC61851-1: CC2/50k cycles
- Load contact gap: ≥ 3 mm
- Dielectric strength : 5 kV_{RMS}, between contacts and coil
- UL class F insulation
- UL / CUR E365652
- TÜV B088793 0020
- CQC 22002356459



CONTACTS

Arrangement load contact monitor contact	2PST-NO(2 Form A) SPST-NC(1 Form B) coupled to load contacts
Ratings (max.) Load contacts switched power switched current continuous current switched voltage monitor contact Max. switched current	(resistive load) 19200 VA 40 A 40 A 480VAC 100mA, 12VDC
UL/CUR/TÜV/CQC Approval ratings load contact	40A at 480VAC, resistive, 85°C, 6k cycles 35A at 400VAC, resistive, 85°C, 50k cycles 10A make, 40A carry, 10A break, At 480VAC, 85°C, resistive, 50k cycles
monitor contact Minimum load	10mA at 12VDC, 85°C, 50k cycles 10mA, 5VDC Note: Approvals with open vent hole only.
Contact material load contact monitor contact	AgSnO ₂ AgNi (gold plated)
Contact gap load contact monitor contact	≥ 3 mm ≥ 0.7 mm
Contact resistance initial	load contact: ≤ 10 m Ω (6VDC 20A) monitor contact: ≤ 100 m Ω (6VDC 1A)

COIL

Nominal coil DC voltages *	6, 9, 12, 24, 48
Dropout voltage	> 5% of nominal coil voltage
Holding voltage *	(35% ~80%) of nominal coil voltage (@23°C) (40% ~65%) of nominal coil voltage (@85°C)
Coil power nominal holding power at pickup voltage	(at 23 °C) 2.6 W 416 mW 1463 mW
Temperature Rise	70 K @ max. at holding voltage, 85°C
Max. temperature	Class F insulation - 155°C (311°F)

* Notes1: To avoid overheating and burning, the voltage continuously applied to the coil must be the holding voltage, which shall be applied after 500ms from the applied nominal coil voltage.

GENERAL DATA

Life Expectancy mechanical electrical	(minimum operations) 1 x 10 ⁵ See approval ratings
Operate Time	30 ms (max.) at nominal coil voltage
Release Time	10 ms (max.) at nominal coil voltage, without coil suppression
Dielectric Strength (Initial) between open load contacts between load contacts sets between coil and load contacts between load and monitor contacts between open monitor contacts between coil and monitor contacts	(at sea level for 1 min.) 3000 V _{RMS} 3000 V _{RMS} 5000 V _{RMS} 5000 V _{RMS} 1000 V _{RMS} 1000 V _{RMS}
Short circuit capacity Based on requirements of EN/IEC 62955:2018	Test sequence E: [9.11.2.3 a)]: 250VAC, I _p =1.85kA, I _t ² =4.5kA ² s (I _n ≤32A, I _{Δc} =3kA) [9.11.2.2)]: 250VAC, I _m =500A Test sequence F : [9.11.2.3 b)]: 250VAC, I _m =500A [9.11.2.3 c)]: 250VAC, I _p =1.85kA, I _t ² =4.5kA ² s (I _n ≤32A, I _{Δc} =3kA)
Surge Voltage @1.2/50 μ s	10kV coil to load contacts 6kV between load contacts 8kV monitor contacts to load contacts
Insulation Resistance	1000 M Ω (min.) at 23°C, 500 VDC, 50% RH
Temperature Range operating	(at holding coil voltage) -40°C (-40°F) to 85°C (185°F)
Vibration resistance	0.062" (1.5 mm) DA at 10–55 Hz
Shock	10 g
Enclosure protection category material group flammability	RT II, flux proof IIIa UL94 V-0
Terminals	Tinned copper alloy, P. C.
Soldering preheating soldering	(referring IEC 61760-1 wave soldering) 120°C (248°F) / ≤ 120 s 260 ± 5 °C (500 ± 9 °F) / $\leq 2 \times 5$ s
Dimensions length width height	36.5 mm (1.41") 33.8mm (1.33") 41.5 mm (1.63")
Weight	85 grams (approx.)
Compliance	RoHS, REACH
Packing unit in pcs	10 per plastic tube/ 150 per carton box

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DISCLAIMER

This product specification is to be used in conjunction with the application notes which can be downloaded from the regional ZETTLER relay websites. The specification provides an overview of the most significant part features. Any individual applications and operating conditions are not taken into consideration. It is recommended to test the product under application conditions. Responsibility for the application remains with the customer. Proper operation and service life cannot be guaranteed if the part is operated outside the specified limits.

ZETTLER GROUP

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