


# servo drive CMMT-ST-C8-1C-EC-S0

Part number: 8084005

FESTO



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## Datasheet product reliability

The information in this "Product reliability data sheet" is based on products being used as intended. This includes complying with all specifications in data sheets, catalogues, user documentation and the general operating conditions. The user alone is responsible for determining whether a product is suitable for a particular application.

Feature	Value
Well-tried component <sup>1)</sup>	No
CE mark (see declaration of conformity)	To EU EMC Directive To EU Machinery Directive To EU RoHS Directive
Safety function <sup>2)</sup>	Safe torque off (STO) Safe stop 1 time controlled (SS1-t)
Performance Level (PL) <sup>3)</sup>	STO / Cat. 3, PLd (EC motor without diagnostics) STO / Cat. 3, PL e (stepper motor/EC motor with diagnostics)
Safety Integrity Level (SIL) <sup>4)</sup>	STO / SIL 2 / SILCL 2 (EC motor without diagnostics) STO / SIL 3 / SILCL 3 (stepper motor/EC motor with diagnostics)
Certified for safety functions to ISO 13849 (PL) <sup>5)</sup>	Product can be used in SRP/CS up to category 3, PL e
Certified for safety function to ISO 13849 and IEC 61508 (SIL) <sup>6)</sup>	Up to Safety Integrity Level 3 high demand mode
Certificate issuing authority	TÜV Rheinland UK Ltd. 01/205U/5696.00/22 TÜV Rheinland 01/205/5696.00/19 UL E331130
Mean number of annual operations nop (assumed) <sup>7)</sup>	> 100.000.000
Mean time to dangerous failure (MTTF <sub>d</sub> ) <sup>8)</sup>	STO / >1600 (EC- motor) STO / >2000 (stepper motor)
Hardware fault tolerance	1
Duration of use Tm	20 Year
Vibration resistance	Transport application test with severity level 1 in accordance with FN942017-4 and EN 60068-2-6 To EN 61800-2 To EN 61800-5-1: frequency 10-57 Hz, amplitude 0,075 mm; frequency 57-150 Hz, 1 g
Shock resistance	Shock test with severity level 1 in accordance with FN 942017-5 and EN 60068-2-27 To EN 61800-2
Max. positive test pulse with 0 signal	1.000 µs
Max. negative test pulse with 1 signal	1.000 µs

1) The product is a well-tried product for a safety-related application according to ISO 13849-1. The relevant basic and well-tried safety principles according ISO 13849-2 for this product are fulfilled. The suitability of the product for a precise application must be verified and confirmed by the user.

2) Further measures can be necessary for realization of the mentioned safety function. For these measures refer to the relevant documentation.

- 3) Further measures can be necessary to fulfil the stated Performance Level (PL). For these measures refer to the relevant documentation.
- 4) Further measures can be necessary to fulfil the stated Safety Integrity Level (SIL). For these measures refer to the relevant documentation.
- 5) Further measures can be necessary to fulfil the stated Performance Level (PL). For these measures refer to the relevant documentation.
- 6) Further measures can be necessary to fulfil the stated Safety Integrity Level (SIL). For these measures refer to the relevant documentation.
- 7) The probability of failure is based on this mean number of annual operations (nop).
- 8) The ascertainment of the  $MTTF_d$  value is generally based on the IEC 61709 "Electric components - Reliability - Reference conditions for failure rates and stress models for conversion" respectively on the SN 29500.