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

Part number: 8084004
★ Core product range
Product to be discontinued

Type to be discontinued. Available until 2024. See Support Portal for alternative products.



**FESTO**

# Data sheet

| Feature | Value |
|---|---|
| Mounting type | Mounting plate, bolted<br>with top-hat rail |
| Assembly position | Free convection<br>Vertical |
| Product weight | 350 g |
| Display | LED green/yellow/red |
| Authorization | RCM Mark<br>c UL us - Listed (OL) |
| KC mark | KC-EMV |
| CE symbol (see declaration of conformity) | according to EU-EMV guideline<br>according to EU machines guideline<br>in accordance with EU RoHS directive |
| UKCA marking (see declaration of conformity) | To UK instructions for EMC<br>To UK instructions for machines<br>To UK RoHS instructions |
| Certificate issuing department | TÜV Rheinland 01/205/5696.00/19<br>UL E331130<br>TÜV Rh. UK 01/205U/5696.00/22 |
| Storage temperature | -25 ... 55 °C |
| Ambient temperature | 0 ... 50 °C |
| Note on ambient temperature | Observe derating with regard to mounting clearance and output current |
| Relative air humidity | 5 - 90 %<br>non-condensing |
| Max. installation height | 2,000 m |
| Protection class | IP20 |
| Safety class | III |
| Overvoltage category | I |
| Degree of contamination | 2 |
| Materials note | Conforms to RoHS |
| PWIS conformity | VDMA24364 zone III |
| Nominal voltage, load supply DC | 24 ... 48 V |
| Permissible range, load supply | -15 % / +15 % |
| Max. intermediate circuit voltage, DC | 60 V |
| Nominal DC voltage, logic power supply | 24 V |
| Permissible range, logic voltage | ± 15 % |
| Current consumption, logic power supply without clamping brake | 1 A |
| Current consumption for logic supply with locking brake | 2 A |
| Output voltage range AC | 0 V up to input voltage |
| Nominal output current | 8 A |
| Effective nominal current per phase | 8 A |
| Effective peak current per phase | 10 A |
| Max. peak current duration | 3 s |
| Nominal controller power | 300 W |

| Feature | Value |
| --- | --- |
| Peak power | 400 W |
| Output frequency | 0 ... 20,000 Hz |
| Max. length of motor cable without external  mains filter | 25 m |
| Max. output current of holding brake | 1 A |
| Max. voltage drop from logic supply to brake output | 1 V |
| Controller operating mode | Cascade controller<br>P position controller<br>PI speed controller<br>PI current regulator for F or M<br>Profile operation with record and direct mode<br>Interpolated mode via fieldbus<br>Synchronised operating modes<br>Homing<br>Setting-up<br>Autotuning<br>Open-loop operation |
| Operating mode | Field-oriented closed-loop control<br>Position resolution 24 bit/U<br>Sampling rate 20 kHz<br>Pulse-width modulation with 20 kHz<br>Real-time data acquisition<br>2x Input-Capture (x, v, F)<br>2x Output-Trigger (x, v, F)<br>1x position sensor input |
| Adjustable current reduction | Using software |
| Protective function | I²t monitoring<br>Temperature monitoring<br>Current monitoring<br>Voltage failure detection<br>Drag error monitoring<br>Software end-position detection |
| Nominal current adjustment | Using software |
| Ethernet interface, function | Parameterisation and commissioning |
| Ethernet interface, protocol | TCP/IP |
| Fieldbus interface, protocol | PROFINET IRT<br>PROFINET RT |
| Fieldbus coupling | PROFINET |
| Communications profile | PROFIdrive |
| Process interface | AC1: Adj.-Speed Drives<br>AC3: Drive w. Positioning Func<br>AC4: Synchr. Servo Application |
| Fieldbus interface, transmission rate | 100 Mbit/s |
| Fieldbus interface, type of connection | 2x socket |
| Fieldbus interface, connection technology | RJ45 |
| Encoder interface, function | BiSS-C<br>Incremental encoder |
| Number of digital logic inputs | 6 |
| Input circuit logic | NPN (negative switching)<br>PNP (positive-switching) |
| Logic input characteristics | Freely configurable to a given extent<br>Safety inputs in some cases<br>Not electrically isolated |
| Specification, logic input | Based on IEC 61131-2, type 3 |
| Logic input working range | -3 ... 30 V |
| Number of high-speed logic inputs | 2 |
| Time resolution of high-speed logic inputs | 1 µs |
| Number of 24 V DC digital logic outputs | 2 |
| Switching logic, outputs | NPN (negative switching)<br>PNP (positive-switching) |
| Digital logic output characteristics | configurable<br>Not electrically isolated |

| Feature | Value |
| --- | --- |
| Max. current, digital logic outputs | 100 mA |
| Number of high-speed switching outputs | 2 |
| Time resolution of high-speed switching outputs | 1 µs |
| Number of floating switching outputs | 1 |
| Max. current of the floating switching outputs | 100 mA |
| Safety function | Safe torque off (STO)<br>Safe stop 1 (SS1-time controlled) |
| Safety Integrity Level (SIL) | STO / SIL 2 / SILCL 2 (EC motor without diagnostics)<br>STO / SIL 3 / SILCL 3 (stepper motor/EC motor with diagnostics) |
| Performance level (PL) | STO / cat. 3 PLd (EC motor without diagnostics)<br>STO / cat. 3, PLe (stepper motor/EC motor with diagnostics) |
| Diagnostic coverage | STO: 87% (EC motor without diagnostics)<br>STO / 90% (stepper motor)<br>STO: 92% (EC motor with diagnostics) |
| Hardware fault tolerance | 1 |
| Proof test interval | STO / 20 a (stepper motor/EC motor without diagnostics) |
| Number of safe 2-pin inputs | 1 |
| Number of diagnostic outputs | 1 |