

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

Part number: 8084005

☆ Core product range

**FESTO**



## Data sheet

Feature	Value
Mounting type	Mounting plate, bolted with top-hat rail
Assembly position	Free convection Vertical
Product weight	350 g
Display	LED green/yellow/red
Authorisation	RCM Mark c UL us - Listed (OL)
KC mark	KC-EMV
CE mark (see declaration of conformity)	to EU directive for EMC to EU directive for machinery in accordance with EU RoHS directive
Certificate issuing department	TÜV Rheinland 01/205/5696.00/19 UL E331130
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 % non-condensing
Max. installation height	2,000 m
Protection class	IP20
Safety class	III
Overvoltage category	I
Degree of contamination	2
Materials note	Contains PWIS substances Conforms to RoHS
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
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 P position controller

Feature	Value
	PI speed controller PI current regulator for F or M Profile operation with record and direct mode Interpolated mode via fieldbus Synchronised operating modes Homing Setting-up Autotuning Open-loop operation
Operating mode	Field-oriented closed-loop control Position resolution 24 bit/U Sampling rate 20 kHz Pulse-width modulation with 20 kHz Real-time data acquisition 2x Input-Capture (x, v, F) 2x Output-Trigger (x, v, F) 1x position sensor input
Adjustable current reduction	Using software
Protective function	I <sup>2</sup> t monitoring Temperature monitoring Current monitoring Voltage failure detection Drag error monitoring Software end-position detection
Nominal current adjustment	Using software
Ethernet interface, function	Parameterisation and commissioning
Ethernet interface, protocol	TCP/IP
Fieldbus interface, protocol	EtherCAT
Communications profile	CiA402 CoE (CANopen over EtherCAT) EoE (Ethernet over EtherCAT) FoE (File over EtherCAT)
Process interface	Interpolated Mode CSP Interpolated Mode CSV Interpolated Mode CST I/O mode for 256 position sets
Fieldbus interface, transmission rate	100 Mbit/s
Fieldbus interface, type of connection	2x socket
Fieldbus interface, connection technology	RJ45
Encoder interface, function	BiSS-C Incremental encoder
Number of digital logic inputs	6
Input circuit logic	NPN (negative switching) PNP (positive-switching)
Logic input characteristics	Freely configurable to a given extent Safety inputs in some cases 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) PNP (positive-switching)
Digital logic output characteristics	configurable Not electrically isolated
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

Feature	Value
Safety function	Safe torque off (STO) Safe stop 1 (SS1-time controlled)
Safety Integrity Level (SIL)	STO / SIL 2 / SILCL 2 (EC motor without diagnostics) STO / SIL 3 / SILCL 3 (stepper motor/EC motor with diagnostics)
Performance level (PL)	STO / cat. 3 PLd (EC motor without diagnostics) STO / cat. 3, PLe (stepper motor/EC motor with diagnostics)
Diagnostic coverage	STO: 87% (EC motor without diagnostics) STO / 90% (stepper motor) STO: 92% (EC motor with diagnostics)
Hardware fault tolerance	1
Proof test interval	STO / 20 a (stepper motor/EC motor without diagnostics) STO / 0.25 a (EC motor with diagnostics)
Number of safe 2-pin inputs	1
Number of diagnostic outputs	1