

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

Part number: 8084005

**FESTO**



## Data sheet

Feature	Value
Type code	CMMT-ST
Fieldbus interface, function	Bus connection, incoming/forwarding EtherCAT® slave
Fieldbus interface, transmission rate	100 Mbit/s
Mounting position	Free convection Vertical
KC characters	KC EMC
Ethernet interface, protocol	TCP/IP
Ethernet interface, function	Parameterization and commissioning
Encoder interface, function	BiSS-C Incremental encoder
Fieldbus interface, connection technology	RJ45
Protection class	III
Proof test interval	STO / 20 a (stepper motor/EC-motor without diagnostics) STO / 0.25 a (EC motor with diagnostics)
Fieldbus interface, protocol	EtherCAT
Overvoltage category	I
Fieldbus interface, connection type	2x socket
Number of high-speed switching outputs	2
Number of floating switching outputs	1
Number of diagnostic outputs	1
Max. current of the floating switching outputs	100 mA
Max. output current of holding brake	1 A
Number of high-speed logic inputs	2
Max. voltage drop from logic supply to brake output	1 V
Number of safe 2-pin inputs	1
Time resolution of high-speed logic inputs	1 µs
Max. current consumption for logic supply with parking brake	2 A
Max. installation height	2000 m
Time resolution of high-speed switching outputs	1 µs
Diagnostic coverage	STO: 87% (EC motor without diagnostics) STO / 90% (stepper motor) STO: 92% (EC motor with diagnostics)

Feature	Value
Controller operating mode	Cascade control P position controller PI speed controller PI current regulator for F or M Profile operation with block mode and direct mode Interpolating mode via fieldbus Synchronous operating modes Reference travel Setup mode Autotuning Open-loop operation
Mode of operation	Field-oriented regulation Position resolution 24 bit/rev. 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	Via software
Protective function	I <sup>2</sup> t monitoring Temperature monitoring Current monitoring Voltage failure detection Contouring error monitoring Software end position detection
Safety function	Safe torque off (STO) Safe stop 1 with time control (SS1-t)
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, PLc (stepper motor/EC motor with diagnostics)
Display	LED green/yellow/red
Nominal current setting	Via software
Output frequency	0 Hz ... 20000 Hz
Output voltage range AC	0 V up to input voltage
Characteristics of digital logic outputs	Configurable Not galvanically isolated
Hardware fault tolerance	1
Max. current of digital logic outputs	100 mA
Max. length of motor cable without ext. mains filter	25 m
Max. peak current duration	3 s
Max. DC link voltage	60 V
Nominal output current	8 A
Controller nominal power	300 VA
Nominal voltage, logic supply DC	24 V
Nominal voltage, load supply DC	24 V ... 48 V
Nominal current per phase, effective	8 A
Peak power	400 VA
Peak current per phase, effective	10 A
Max. current consumption for logic supply without clamping brake	1 A
Contamination level	2
Load supply permissible range	-15% / +15%
Permissible range of logic voltage	± 15 %
Certificate issuing authority	German Technical Control Board (TÜV) Rheinland 01/205/5696.00/19 UL E331130
CE marking (see declaration of conformity)	As per EU EMC directive as per EU machinery directive As per EU RoHS directive
Storage temperature	-25 °C ... 55 °C

Feature	Value
Relative air humidity	5 - 90 % Non-condensing
Degree of protection	IP20
Ambient temperature	0 °C ... 50 °C
Note on ambient temperature	Observe derating with regard to assembly distance and output current.
Certification	RCM compliance mark c UL us - Listed (OL)
Product weight	350 g
Number of digital logic outputs 24 V DC	2
Number of digital logic inputs	6
Communication profile	CiA402 CoE (CANopen over EtherCAT) EoE (Ethernet over EtherCAT) FoE (File over EtherCAT)
Process interfacing	Interpolated mode CSP Interpolated mode CST Interpolated mode CSV Interpolated mode CSV
Logic input specification	Based on IEC 61131-2, type 3
Work range of logic input	-3 V ... 30 V
Characteristics of logic input	Freely configurable in some cases Safety inputs in some cases Not galvanically isolated
Input switching logic	NPN (negative switching) PNP (positive switching)
Switching logic at outputs	NPN (negative switching) PNP (positive switching)
Type of mounting	Mounting plate, screwed on With H-rail
Note on materials	Contains paint-wetting impairment substances RoHS-compliant