

Servo drive CMMT-ST-C8-1C-MP-S0

Part number: 8163946

FESTO



 General operating condition

Data sheet

Feature	Value
Type of mounting	Mounting plate, attached with screws With H-rail
Mounting position	Free convection Vertical
Product weight	350 g
Display	Green/yellow/red LED
Approval	RCM trademark c UL us listed (OL)
KC mark	KC-EMV
CE mark (see declaration of conformity)	To EU EMC Directive To EC Machinery Directive In accordance with EU RoHS Directive
CE marking (see declaration of conformity)	To UK instructions for EMC To UK regulations for machines To UK RoHS instructions
Certificate issuing authority	German Technical Control Board (TÜV) Rheinland 01/205/5696.00/19 German Technical Control Board (TÜV) Rheinland UK Ltd. 01/205U/5696.00/22 UL E331130
Storage temperature	-25 °C ... 55 °C
Ambient temperature	0 °C ... 50 °C
Note on ambient temperature	Observe the derating regarding the mounting clearance and output current.
Relative air humidity	5 - 90% Non-condensing
Max. installation height	2000 m
Degree of protection	IP20
Protection class	III
Overtoltage category	I
Pollution degree	2
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364 zone III
Nominal voltage load voltage DC	24 V ... 48 V
Permissible range for load power supply	-15%/+15%
Max. intermediate circuit voltage DC	60 V
Brake resistor, external	6 Ohm
Max. continuous output of the external braking resistor (IEC)	490 W
Nominal voltage for logic power supply DC	24 V
Permissible range for logic voltage	± 15 %

Feature	Value
Current consumption of logic power supply without clamping brake	1 A
Current consumption for logic supply with parking brake	2 A
Output voltage class AC	0 V up to input voltage
Nominal output current	8 A
Nominal current per phase, effective	8 A
Peak current per phase, effective	20 A
Max. peak current duration	3 s
Controller nominal output	300 VA
Maximum output	800 VA
Output frequency	0 Hz ... 20000 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 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 of drive unit	Field-oriented closed-loop control Position resolution 24 bit/rev Real-time data acquisition 2x input capture (x, v, F) 2x output trigger (x, v, F) 1x position encoder input Sampling rate 16 or 20 kHz PWM with 16 or 20 KHz
Adjustable current reduction	Via software
Protective function	I ² t monitoring Temperature monitoring Current monitoring Voltage failure detection Following error monitoring Software end-position detection
Nominal current setting	Via software
Ethernet interface, function	Parameterisation and commissioning
Ethernet interface, protocol	TCP/IP
Field bus, protocol	EtherCAT® EtherNet/IP PROFINET IRT
Fieldbus interface, function	Bus connection incoming/outgoing EtherCAT® slave PROFINET slave Fieldbus
Fieldbus link	EtherCAT EtherNet/IP Modbus/TCP PROFINET
Communication profile	CiA402 CoE (CANopen over EtherCAT®) EoE (Ethernet over EtherCAT®) FoE (File over EtherCAT®) PROFIdrive
Process interfacing	I/O mode for 256 positioning records Interpolated mode CSP Interpolated mode CST Interpolated mode CSV
Field bus interface, transmission rate	100 Mbit/s

Feature	Value
Field bus, connection type	2x socket
Field bus, connection system	RJ45
Encoder interface, function	BiSS-C Incremental encoder
Number of digital logic inputs	6
Switching logic for inputs	PNP (positive switching)
Features of logic input	Freely configurable in some cases Safety inputs in some cases Not galvanically isolated
Specification logic input	Based on IEC 61131-2, type 3
Working range of logic input	-3 V ... 30 V
Number of high-speed logic inputs	2
Time resolution of high-speed logic inputs	1 µs
Number of digital logic outputs 24 V DC	2
Switching logic for outputs	PNP (positive switching)
Features of digital logic outputs	Not galvanically 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
Safety function	Safe torque off (STO) Safe stop 1 time controlled (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, PLe (stepper motor/EC motor with diagnostics)
Diagnostic coverage	STO / medium (EC motor without diagnostics) STO / medium (stepper motor) STO / low (EC motor without diagnostics)
SFF Safe Failure Fraction	99 %
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