

Servo drive CMMT-AS-C5-11A-P3-EC-S1

Part number: 5340823

FESTO



Data sheet

Feature	Value
Type code	CMMT-AS
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
Information on max. installation height	1% power reduction/100 m above 1000 m.
Ethernet interface, protocol	TCP/IP
Ethernet interface, function	Parameterization and commissioning
Encoder interface, function	EnDat® 2.1 encoder EnDat® 2.2 encoder Hiperface encoder Incremental encoder Nikon SIN/COS encoder
Fieldbus interface, connection technology	RJ45
Mains types	TN IT
Protection class	I
Encoder interface 2, function	Incremental encoder SIN/COS encoder
Fieldbus interface, protocol	EtherCAT
Overvoltage category	III
Synchronization interface, function	Encoder emulation A/B/Z Encoder input A/B/Z
Fieldbus interface, connection type	2x socket
Number of high-speed switching outputs	2
Number of floating switching outputs	1
Number of inputs for motor temperature sensor	1
Number of diagnostic outputs	2
Max. current of the floating switching outputs	50 mA
Max. continuous output of the external braking resistor (IEC)	1200 W
Pulse energy for braking resistor	850 Ws
Max. output current of holding brake	1.3 A
Number of high-speed logic inputs	2
System voltage to EN 61800-5-1	300 V
Max. short circuit protection of mains	10 kA

Feature	Value
Braking resistor nominal power (IEC)	58 W
Max. voltage drop from logic supply to brake output	1 V
Number of safe 2-pin inputs	2
Time resolution of high-speed logic inputs	1 µs
Max. current consumption for logic supply with parking brake	1.8 A
Max. installation height	2000 m
Time resolution of high-speed switching outputs	1 µs
Based on norm	EN 50581 EN 60204-1 EN 61508-1 EN 61508-2 EN 61508-3 EN 61508-4 EN 61508-5 EN 61508-6 EN 61508-7 EN 61800-2 EN 62061
Conforms to standard	EN 61800-3 EN 61800-5-1 EN 61800-5-2 EN ISO 13849-1
Active PFC	no
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
Mode of operation	Field-oriented regulation Position resolution 24 bit/rev. Sampling rate 16 kHz PWM with 8 or 16 KHz Vector modulation with 3rd harmonic Real-time data acquisition 2x input capture (x, v, F) 2x output trigger (x, v, F) 2x position sensor input 1x SYNC interface for encoder emulation or encoder input
Line filter	Integrated
Safety function	Safe brake control (SBC) Safe torque off (STO) Safe stop 1 (SS1)
Safety integrity level (SIL)	Safe brake control (SBC)/SIL 3/SILCL 3 Safe torque off (STO)/SIL 3/SILCL 3
Performance Level (PL)	Safe brake control (SBC)/category 3, performance level e Safe torque off (STO)/category 4, performance level e
Display	LED green/yellow/red
Control elements	Optional: CDSB operating unit
Output frequency	0 Hz ... 599 Hz
Output voltage range AC	3x (0 – input) V
Braking resistor, external	80 Ohm ... 130 Ohm
Braking resistor, integrated	130 Ohm
Diagnostic coverage	97 %
Characteristics of digital logic outputs	Freely configurable in some cases Not galvanically isolated Diagnostic outputs in some cases
Hardware fault tolerance	1
Impedance of setpoint input	70 kOhm

Feature	Value
Pulse power of braking resistor	5 kVA
Max. current of digital logic outputs	20 mA
Max. length of motor cable without ext. mains filter	50 m
Max. peak current duration	2 s
Max. DC link voltage	800 V
Nominal operating voltage AC	400 V
Input voltage range AC	200 V ... 480 V
Controller nominal power	2500 VA
Nominal voltage, logic supply DC	24 V
Nominal voltage, load supply DC	560 V
Nominal current load supply	6 A
Nominal current per phase, effective	5 A
Mains frequency	48 Hz ... 62 Hz
Nominal operating voltage phases	3-phase
SFF safe failure fraction	99 %
Peak power	7500 VA
Peak current, load supply	18 A
Peak current per phase, effective	15 A
Surge resistance	6 kV
Max. current consumption for logic supply without clamping brake	0.5 A
Max. current consumption for logic supply with clamping brake and I/O	2.5 A
Contamination level	2
Load supply permissible range	± 10 %
Permissible range of logic voltage	± 20 %
Permissible voltage fluctuations	+/- 10 %
Certificate issuing authority	German Technical Control Board (TÜV) Rheinland 01/205/5640.00/18 UL E331130
CE marking (see declaration of conformity)	As per EU EMC directive as per EU machinery directive As per EU low voltage directive As per EU RoHS directive
Storage temperature	-25 °C ... 55 °C
Relative air humidity	5 - 90 % Non-condensing
Degree of protection	IP20
Ambient temperature	0 °C ... 50 °C
Note on ambient temperature	Above an ambient temperature of 40 °C, the power must be reduced by 3%/°C.
UL-ambient temperature	0 °C ... 40 °C
Certification	RCM compliance mark German Technical Control Board (TÜV) c UL us - Listed (OL)
Product weight	2200 g
Number of analog setpoint inputs	1
Number of digital logic outputs 24 V DC	6
Number of digital logic inputs	12
Communication profile	CiA402 CoE (CANopen over EtherCAT) EoE (Ethernet over EtherCAT) FoE (File over EtherCAT)
Process interfacing	I/O mode for 256 positioning blocks Interpolated mode CSP Interpolated mode CST Interpolated mode CSV
Logic input specification	Based on IEC 61131-2, type 3
Work range of logic input	-3 V ... 30 V
Work range of setpoint input	± 10 V

Feature	Value
Operating range of analog inputs	± 10 V
Encoder interface output, characteristics	1 MHz maximum output frequency max. 16384 ppr
Encoder interface input, characteristics	1 MHz maximum output frequency max. 16384 ppr
Characteristics of setpoint inputs	Differential inputs Configurable for rotational speed Configurable for current/force
Characteristics of logic input	Freely configurable in some cases Safety inputs in some cases Not galvanically isolated
Input switching logic	PNP (positive switching)
Switching logic at outputs	PNP (positive switching)
Fieldbus coupling	EtherCAT
Type of mounting	Mounting plate, screwed on
Note on materials	Contains paint-wetting impairment substances RoHS-compliant