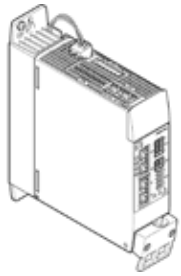
servo drive
CMMT-AS-C2-3A-PN-S1

Part number: 5340814
☆ Core product range



Data sheet

Feature	Value
Mounting type	Mounting plate, bolted
Assembly position	Free convection Vertical
Product weight	1,300 g
Display	LED green/yellow/red
Control elements	Optional: control unit CDSB
Conforms to standard	EN 61800-3 EN 61800-5-1 EN 61800-5-2 EN ISO 13849-1
Based on the standard	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
Authorisation	RCM Mark TÜV 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 to EU directive low-voltage devices in accordance with EU RoHS directive
Certificate issuing department	TÜV Rheinland 01/205/5640.00/18 UL E331130
Storage temperature	-25 ... 55 °C
Ambient temperature	0 ... 50 °C
Note on ambient temperature	Power must be reduced by 3%/°C at ambient temperatures above 40°C.
UL ambient temperature	0 ... 40 °C
Relative air humidity	5 - 90 % non-condensing
Max. installation height	2,000 m
Note on max. installation height	From 1000 m, power reduction by 1% per 100 m
Protection class	IP20
Safety class	I
Overvoltage category	III
Degree of contamination	2
Surge strength	6 kV
Materials note	Contains PWIS substances Conforms to RoHS

Feature	Value
Nominal operating voltage, phases	Single-phase
Nominal operating voltage, AC	230 V
Permissible voltage fluctuation	-20 % / +15 %
Input voltage range AC	100 ... 230 V
Line frequency	48 ... 62 Hz
Nominal current, load supply	2.8 A
Peak current, load supply	8.4 A
Active PFC	No
Mains filter	Integrated
System voltage to EN 61800-5-1	300 V
Max. short circuit protection of the mains	100 kA
Mains types	TT TN IT
Nominal voltage, load supply DC	320 V
Permissible range, load supply	-20 %/+15 %
Max. intermediate circuit voltage, DC	395 V
Braking resistor, integrated	100 Ohm
Braking resistance pulse power	1.6 kW
Pulse energy for braking resistor	230 Ws
Nominal power braking resistor (IEC)	23 W
Braking resistor, external	100 ... 160 Ohm
Max. continuous output of the external braking resistor (IEC)	180 W
Nominal DC voltage, logic power supply	24 V
Permissible range, logic voltage	± 20 %
Current consumption, logic power supply without clamping brake	0.5 A
Current consumption for logic supply with locking brake	1.5 A
Max. current consumption for logic supply, holding brake and I/O	2.3 A
Output voltage range AC	3x (0 – Input) V
Effective nominal current per phase	2 A
Effective peak current per phase	6 A
Max. peak current duration	2 s
Nominal controller power	350 W
Peak power	1,000 W
Output frequency	0 ... 599 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	0.8 V
Number of inputs for motor temperature sensor	1
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
Operating mode	Field-oriented closed-loop control Position resolution 24 bit/U Sampling rate 16 kHz PWM at 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 encoder input 1x SYNC interface for encoder emulation or encoder input
Ethernet interface, function	Parameterisation and commissioning
Ethernet interface, protocol	TCP/IP

Feature	Value
Fieldbus interface, protocol	PROFINET IRT PROFINET RT
Fieldbus coupling	PROFINET
Communications profile	PROFIdrive PROFIenergy
Process interface	AC1: Adj.-Speed Drives AC4: Synchr. Servo Application AC3: Drive w. Positioning Func
Fieldbus interface, transmission rate	100 Mbit/s
Fieldbus interface, type of connection	2x socket
Fieldbus interface, connection technology	RJ45
Encoder interface, function	ENDAT 2.1 encoder ENDAT 2.2 encoder Hiperface encoder Incremental encoder Nikon SIN/COS encoder
Encoder interface 2, function	Incremental encoder SIN/COS encoder
Synchronisation interface, function	Encoder emulation A/B/Z Encoder input A/B/Z Pulse/direction signals CLK/DIR Counting signals CW/CCW
Encoder interface output, characteristics	1 MHz maximum output frequency max. 16384 ppr
Encoder interface input, characteristics	1 MHz maximum output frequency max. 16384 ppr
Number of digital logic inputs	12
Input circuit logic	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	6
Switching logic, outputs	PNP (positive-switching)
Digital logic output characteristics	Freely configurable to a given extent Not electrically isolated Diagnostics outputs in some cases
Max. current, digital logic outputs	20 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	50 mA
Number of analogue setpoint inputs	1
Setpoint input characteristics	Differential inputs Can be configured for speed in RPM Configurable for current/force
Setpoint input working range	± 10 V
Operating range Analogue inputs	± 10 V
Setpoint input impedance	70 kOhm
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
Diagnostic coverage	97 %

Feature	Value
SFF Safe Failure Fraction	99 %
Hardware fault tolerance	1
Number of safe 2-pin inputs	2
Number of diagnostic outputs	2