Servo drive
CMMT-AS-C4-3A-PN-S1

Part number: 5340815



Data sheet

Feature	Value
Type code	CMMT-AS
Fieldbus interface, function	Bus connection, incoming/forwarding PROFINET slave
Fieldbus interface, transmission rate	100 Mbit/s
KC characters	KC EMC
Mounting position	Free convection Vertical
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	TT TN IT
Protection class	I
Encoder interface 2, function	Incremental encoder SIN/COS encoder
Fieldbus interface, protocol	PROFINET IRT PROFINET RT
Overvoltage category	III
Synchronization interface, function	Encoder emulation A/B/Z Encoder input A/B/Z Pulse/direction signals CLK/DIR CW/CCW counting signals
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)	350 W
Pulse energy for braking resistor	230 Ws
Max. output current of holding brake	1 A
Number of high-speed logic inputs	2

Feature	Value
System voltage to EN 61800-5-1	300 V
Max. short circuit protection of mains	100 kA
Braking resistor nominal power (IEC)	23 W
Max. voltage drop from logic supply to brake output	0.8 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	1.5 A
Time resolution of high-speed switching outputs	1 µs
Max. installation height	2000 m
Conforms to standard	EN 61800-3 EN 61800-5-1 EN 61800-5-2 EN ISO 13849-1
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
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	67 Ohm ... 100 Ohm
Braking resistor, integrated	100 Ohm
Diagnostic coverage	97 %
Characteristics of digital logic outputs	Freely configurable in some cases Not galvanically isolated Diagnostic outputs in some cases

Feature	Value
Hardware fault tolerance	1
Impedance of setpoint input	70 kOhm
Pulse power of braking resistor	1.6 kVA
Max. current of digital logic outputs	20 mA
Max. length of motor cable without ext. mains filter	25 m
Max. peak current duration	2 s
Max. DC link voltage	395 V
Nominal operating voltage AC	230 V
Input voltage range AC	100 V ... 230 V
Controller nominal power	700 VA
Nominal voltage, logic supply DC	24 V
Nominal voltage, load supply DC	320 V
Nominal current load supply	5.6 A
Nominal current per phase, effective	4 A
Mains frequency	48 Hz ... 62 Hz
Nominal operating voltage phases	1-phase
SFF safe failure fraction	99 %
Peak power	2000 VA
Peak current, load supply	16.8 A
Peak current per phase, effective	12 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	2.3 A
Contamination level	2
Load supply permissible range	-20 %/+15 %
Permissible range of logic voltage	± 20 %
Permissible voltage fluctuations	-20 % / +15 %
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	1400 g
Number of analog setpoint inputs	1
Number of digital logic outputs 24 V DC	6
Number of digital logic inputs	12
Communication profile	PROFIdrive PROFIenergy
Process interfacing	AC1: Adjustable-Speed Drives AC3: drives with positioning function AC4: Synchronous Servo Application
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	PROFINET
Type of mounting	Mounting plate, screwed on
Note on materials	Contains paint-wetting impairment substances RoHS-compliant