

Integrated motor EMCA-EC-67-S-1TE-EC

Part number: 8069729

FESTO



Data sheet

Feature	Value
Type code	EMCA
Controller operating mode	PWM MOSFET power output stage Cascade controller with P position controller PI speed controller PI current regulator
Configuration support	ESI file
Minimum cycle time	2 ms
Rotor position sensor	Absolute encoder, single-turn
Rotor position sensor measuring principle	Magnetic
Protective function	I ² t monitoring Temperature monitoring Current monitoring Voltage failure detection Contouring error monitoring Software end position detection
Topologies	Star Ring Line
Additional functions	CoE (CSP only) Distributed clocks Emergency message Variable PDO mapping
Safety function	Safe torque off (STO)
Safety integrity level (SIL)	Safe torque off (STO)/SIL 2
Performance Level (PL)	Safe torque off (STO)/category 3, performance level d
Display	LED
Max. rotational speed	3500 1/min
Nominal rotary speed	3100 1/min
Baud rate	10/100 Mbit/s (full/half)
Braking resistor, external	6 Ohm
Diagnostic coverage	90 %
Characteristics of digital logic outputs	Freely configurable in some cases Not galvanically isolated
Hardware fault tolerance	1
Max. current of digital logic outputs	100 mA
Max. positive test pulse with 0 signal	10000 µs
Max. negative test pulse on 1 signal	600 µs
Motor nominal power	120 W
DC nominal voltage	24 V

Feature	Value
Nominal current	6.9 A
Parameterization interface	Ethernet
Protocol	EtherCAT
SFF safe failure fraction	>90 %
Absolute encoder operating time	With external battery: max. 6 months Note: the maximum service life of the battery depends its state of charge, the ambient temperature and ageing effects. Without external battery: 3 days (worst case) up to a maximum of 7 days (best case) Note: Maximum storage time depends on the charge state of the internal capacitor, ambient temperature and ageing effects.
Max. number of positioning sets	64
Rotor position sensor resolution	12 bit
Motor peak power	158 W
Peak current	10.2 A
Permissible voltage fluctuations	+/- 20 %
Certification	RCM compliance mark c UL us - Recognized (OL)
KC characters	KC EMC
Certificate issuing authority	German Technical Control Board (TÜV) 01/205/5514.00/16 UL E331130
CE marking (see declaration of conformity)	As per EU EMC directive as per EU machinery directive
Vibration resistance	Transport application test with severity level 2 as per FN 942017-4 and EN 60068-2-6
Shock resistance	Shock test with severity level 2 as per FN 942017-5 and EN 60068-2-27
Storage temperature	-25 °C ... 70 °C
Media redundancy	Ring redundancy
Relative air humidity	0 - 95 % Non-condensing
Degree of protection	IP54
Ambient temperature	0 °C ... 50 °C
Note on ambient temperature	Above an ambient temperature of 20 °C, the power must be reduced by 1.75% per °C.
Rotor mass moment of inertia	0.175 kgcm ²
Nominal torque	0.37 Nm
Peak torque	0.85 Nm
Permissible axial shaft load	60 N
Permissible radial shaft load	100 N
PFH	1.0E-9
PFD	1.86E-5
Proof test interval	20 y
Product weight	1900 g
Number of digital logic outputs 24 V DC	2
Number of digital logic inputs	2
Communication profile	CiA402 FHPP
Logic input specification	Based on IEC 61131-2
Work range of logic input	24 V
Characteristics of logic input	Galvanically connected to logic potential
Ethernet, supported protocols	TCP/IP
Input switching logic	PNP (positive switching)
Switching logic at outputs	PNP (positive switching)
Type of mounting	Screwed tightly With through-hole
Note on materials	Contains paint-wetting impairment substances RoHS-compliant