Integrated motor
EMCA-EC-67-M-1TM-DIO

Part number: 8061198



Data sheet

Feature	Value
KC characters	KC EMC
Type code	EMCA
Controller operating mode	PWM MOSFET power output stage Cascade controller with P position controller PI speed controller PI current regulator
Rotor position sensor	Absolute encoder, multi-turn
Rotor position sensor measuring principle	Magnetic
Protective function	I²t monitoring Temperature monitoring Current monitoring Voltage failure detection Contouring error monitoring Software end position detection
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	3300 1/min
Nominal rotary speed	3150 1/min
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	150 W
DC nominal voltage	24 V
Nominal current	7.2 A
Parameterization interface	Ethernet
Protocol	Modbus® TCP
SFF safe failure fraction	›90 %

Feature	Value
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	200 W
Peak current	10.3 A
Permissible voltage fluctuations	+/- 20 %
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
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.
Certification	RCM compliance mark c UL us - Recognized (OL)
Rotor mass moment of inertia	0.301 kgcm²
Nominal torque	0.45 Nm
Peak torque	0.91 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	2285 g
Number of digital logic outputs 24 V DC	4
Number of digital logic inputs	11
Communication profile	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, Modbus® TCP
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