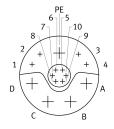
## **Servo motor** EMMT-AS-190-M-HS-R3MYB Part number: 8148371

**FESTO** 





## **Data sheet**

Feature	Value
Ambient temperature	-15 °C40 °C
Note on ambient temperature	Up to 80°C with derating of -1.5% per degree Celsius
Max. installation height	4000 m
Note on max. installation height	As of 1,000 m: only with derating of -1.0% per 100 m
Storage temperature	-20 °C70 °C
Relative air humidity	0 - 90%
Conforms to standard	IEC 60034
Temperature class as per EN 60034-1	F
Max. winding temperature	155 ℃
Rating class as per EN 60034-1	S1
Temperature monitoring	Digital motor temperature transmission via EnDat® 2.2
Motor type to EN 60034-7	IM B5 IM V1 IM V3
Mounting position	optional
Degree of protection	IP21
Note on degree of protection	IP21 for motor shaft without rotary shaft seal IP65 for motor shaft with rotary shaft seal IP67 for motor housing including connection components
Concentricity, coaxiality, axial runout to DIN SPEC 42955	N
Balance quality	G 2.5
Detent torque	<1.0% of peak torque
Bearing lifetime under nominal conditions	20000 h
Interface code, motor out	190B
Electrical connection 1, connection type	Hybrid plug
Electrical connection 1, connector system	M40x1
Electrical connection 1, number of connections/cores	15
Pollution degree	2
Note on materials	RoHS-compliant
Corrosion resistance class CRC	0 - No corrosion stress

With resistance  As per EN 60068-2-6 As per EN 60068-2-6 As per EN 60068-2-7 As per EN 60068-2-7 As per EN 60068-2-19 15 g/1 ms to EN 60068-2-17 Approval  C. Ul. us. Recognizing (UU) E mark (see declaration of conformity)  To EU EMP. Directive To EU Low Voltage Directive To EU Low Voltage Directive In accordance with EU Brief Street In Conformation of the Conformity  To Von Street Street To VK Instructions for EMC To KURSH	Feature	Value
Shock resistance    Approval   Syl1 mm to RN 60068-2-29   3 g/l 11 mm to RN 60068-2-27	LABS (PWIS) conformity	VDMA24364 zone III
15 g/11 ms to EN 60068-2-27	Vibration resistance	As per EN 60068-2-6
Approval  CE mark (see declaration of conformity)  CE mark (see declaration of conformity)  To EU EMC (Directive for the provision of conformity)  To UK and the provision of conformity)  To UK Rodr Si instructions FOM  To UK Rodr Si instructions  To UK Regulations for EMC  To UK Rodr Si instructions  To UK Regulations for EMC  To UK Rodr Si instructions  To UK Regulations for EMC  To UK Rodr Si instructions  To UK Regulations for EMC  To UK Rodr Si instructions  To UK Regulations for EMC  To UK Regulations for EMC  To UK Rodr Si instructions  To UK Regulations for EMC  Rodr V  To W Seg (FSP 5 237 200/21)  Rodr Si 24 277  Rodr Si 25 23 23 23 23 23 23 23 23 23 23 23 23 23	Shock resistance	As per EN 60068-2-29
To EU RMC Directive To EU Low Worksgo Directive In accordance with EU RoHS Directive In accordance with EU RoHS Directive In Country of the European Country of European Country of the European Country of Eu		15 g/11 ms to EN 60068-2-27
To EU tow Voltage Directive   In accordance with EU RoHS Directive	Approval	c UL us - Recognized (OL)
UKCA marking (see declaration of conformity)  In accordance with EU RoNES Directive  UKCA marking (see declaration of conformity)  TO UK (Sensitions for EMC TO UK (Self) instructions TO UK regulations for electrical equipment  TUY 968/FSP 2317.00/21  UL 5942973  Nominal operating voltage DC  680 V  Type of winding switch  Star inside  Number of pole pairs  5  Star inside  Nominal torque  59.1 Nm  Peak torque  118.3 Nm  Nominal torque  59.1 Nm  Nominal rotary speed  1200 rpm  Mas. rotational speed  Angular acceleration  100000 rad/s²  Nominal power rating of motor  7427 W  Continuous stall current  25 A  Nominal motor current  19.2 A  Peak current  41.5 A  Motor constant  3.08 Nm/A  Standstill torque constant  3.08 Nm/A  Standstill torque constant  3.56 Nm/A  Voltage constant, phase-to-phase  Phase-phase winding recistance  Phase-phase winding recistance  Phase-phase winding recistance  Phase-phase winding recistance  12.3 mH  Winding cross inductivity Ld (phase)  5.65 mH  Winding cross inductivity Ld (phase)  6.15 mH  Electric time constant  70 min  Thermal tristance  9.31 K/W  Measuring flange  450 x 450 x 30 mm, steel  Total mass moment of inertia of output  Fooduct weight  Foodout weight  Foo	CE mark (see declaration of conformity)	
UKCA marking (see declaration of conformity)  To UK instructions for EMC To UK Ro Phis Instructions To UK regulations for electrical equipment  TUV 968/FSP 2317.00/21  UL 5342973  Nominal operating voltage DC 680 V Type of winding switch Star inside Number of pole pairs 5 Standstill torque 76-7 Nm Nominal torque 76-7 Nm Nominal torque 118.3 Nm Nominal torque 1200 rpm Nominal appead 1200 rpm Nominal appead 1200 rpm Nominal appead 1200 rpm Nominal power rating of motor Agray To Nominal speed 1203 rpm Angular acceleration Nominal power rating of motor 7427 W Continuous stall current 25 A Nominal motor current 19-2 A Peak current 115.5 A Nominal motor current 19-2 A Peak current 115.5 A Nominal power and the properties of the		
To UK Rolfs instructions To UK regulations for electrical equipment Certificate issuing authority UK 1947973  Nominal operating voltage DC 680 V Type of winding switch Star inside Number of pole pairs 5 Standstill torque 76.7 Nm Nominal torque 95.1 Nm Peak torque 118.3 Nm Nominal torque 95.1 Nm Nominal rotary speed 1200 rpm Max. rotational speed Angular acceleration Nominal power rating of motor 7427 W Continuous stall current Nominal power rating of motor 7427 W Continuous stall current 19.2 A Nominal motor current 19.2 A Peak current 19.2 A Nominal motor current 19.3 No Nm/A Standstill torque constant 19.5 Nm/N Notification current 19.5 Nm/N Nominal motor current 19.6 Nm/N Nominal motor current 19.8 Nm/N Nominal motor current 19.6 Nm/N Nominal motor current 19.8 Nm/N Nominal motor current	UKCA marking (see declaration of conformity)	
Certificate issuing authority  Nominal operating voltage DC  660 V  Type of winding switch  Star inside  Nominal operating voltage DC  76,7 Nm  Nominal torque  118,3 Nm  Nominal torque  80,1 Nm  Nominal torque  118,3 Nm  Nominal torque  1200 rpm  Max. rotational speed  Angular acceleration  100000 rad/s²  Nominal power rating of motor  74,27 W  Continuous stall current  25 A  Nominal motor current  19,2 A  Peak current  41,5 A  Motor constant  3,08 Nm/A  Standstill torque constant  3,08 Nm/A  Standstill torque constant  Voltage constant, phase-to-phase  215,2 m/min  Phase-phase winding inductance  123,3 mH  Winding longitudinal inductivity Ld (phase)  Winding ross inductivity Ld (phase)  5,65 mH  Winding constant  10,0 Nm  Thermal time constant  70 min  Thermal time constant  70 min  Thermal resistance  0,31 K/W  Measuring flange  40,64 x 4,50 x 30 mm, steel  Total mass moment of inertia of output  Thermal seidance  160 kgcm²  Product weight  70 mostory and such with Load  800 N  Permissible radial shaft load  800 Poperating voltage  5 V  700 Fortor position sensor, absolute detectable revolutions  4096  Rotor position sensor, absolute detectable revolutions  4096  Rotor position sensor, position values per revolution  540 V  801 Star Star Star Star Star Star Star Star		To UK RoHS instructions
Nominal operating voltage DC 680 V Type of winding switch Star inside Number of pole pairs 5 5 Standstill torque 76.7 Nm Nominal torque 95.1 Nm Nominal torque 118.3 Nm Nominal power atting of motor 74.27 W Continuous stall current 125 A Nominal motor current 125 A Nominal motor current 19.2 A Peak current 19.2 A Peak current 15.5 Nm/A Nominal motor current 19.2 A Peak current 15.5 Nm/A Nominal motor current 19.2 A Peak current 15.5 Nm/A Nominal motor current 15.5 Nm/A Standstill torque constant 15.6 Nm/A Voltage constant, phase-to-phase 121.5. m/vmin Phase-phase winding resistance 12.3 m/vmin Phase-phase winding inductance 12.3 m/vmin Phase-phase winding inductivity ug (phase) 6.15 m/vm Hemal resistance 0.31 K/W Measuring flange 450 x 450 x 30 mm, steel Total mass moment of inertia of output 100 kgcm² Permissible axial shaft load 500 N Permissible axial shaft load 500 N Permissible axial shaft load 500 N Permissible asial shaft load 500 N Permissible asial shaft load 500 N Permissible asial shaft load 500 N Permissible assor, asbolute detectable revolutions 4096 Rotor position sensor, manufacturer designation 100 poperating voltage 5 V rotor position sensor, pentoder measuring principle 100 inductive 100 poperating voltage 5 V rotor position sensor, pentoder measuring principle 100 rotor position sensor, pentoder measurenent 15 242 R8 15 V		
Type of winding switch         Star inside           Number of pole pairs         5           Standsfill torque         76.7 Nm           Nominal torque         59.1 Nm           Peak torque         118.3 Nm           Nominal rotary speed         1200 rpm           Max. rotational speed         2163 rpm           Angular acceleration         100000 rad/s²           Nominal power rating of motor         7427 W           Continuous stall current         25 A           Nominal motor current         19.2 A           Peak current         41.5 A           Motor constant         3.08 Nm/A           Standsfill torque constant         3.56 Nm/A           Voltage constant, phase-to-phase         215.2 mVmin           Phase-phase winding resistance         0.285 Ohm           Phase-phase winding inductance         12.3 mH           Winding cross inductivity (4 phase)         5.55 mH           Winding cross inductivity (4 phase)         5.55 mH           Electric time constant         39.6 ms           Thermal time constant         70 min           Thermal time constant         70 min           Thermal time constant         70 min           Thermal resistance         0,31 K/W	Certificate issuing authority	
Number of pole pairs  Standstill torque  76.7 Nm  Nominal rorque  59.1 Nm  Peak torque  118.3 Nm  Nominal rortary speed  1200 rpm  Angular acceleration  Nominal power rating of motor  7427 W  Continuous stall current  25 A  Nominal power rating of motor  7427 W  Continuous stall current  25 A  Nominal power rating of motor  41.5 A  Motor constant  50.8 Nm/A  Motor constant  51.5 A  Motor constant  52.6 Nm/A  Motor posting inductance  12.3 mH  Winding longitudinal inductivity Lf (phase)  Winding longitudinal inductivity Lf (phase)  Electric time constant  70 min  Thermal time constant  70 min  Thermal resistance  0.31 K/W  Measuring flange  450 x 450 x 30 mm, steel  150 N N  Permissible axial shaft load  Permissible axial shaft load  Permissible axial shaft load  Permissible axial shaft load  Permissible radial shaft load  Rotor position sensor, manufacturer designation  rotor position sensor, encoder measuring principle  rotor position sensor, DC operating voltage  rotor position sensor, position values per revolution  10 pb lit  Pordating voltage DC for brake  24 V	Nominal operating voltage DC	680 V
Standstill torque	Type of winding switch	Star inside
Nominal torque 59.1 Nm Peak torque 118.3 Nm Nominal rotary speed 1200 rpm Max. rotational speed 2163 rpm Angular acceleration 100000 rad/s² Nominal power rating of motor 7a.27 W Continuous stall current 92.4 Nominal motor current 19.2 A Peak current 41.5 A Nominal motor current 30.8 Nm/A Standstill torque constant 3.08 Nm/A Standstill torque constant 3.08 Nm/A Standstill torque constant 3.56 Nm/A Voltage constant, phase-to-phase 215.2 m/min Phase-phase winding resistance 9.285 Ohm Phase-phase winding inductance 12.3 mH Winding longitudinal inductivity Ld (phase) 5.65 mH Winding longitudinal inductivity Ld (phase) 5.65 mH Winding cross inductivity Lq (phase) 6.15 mH Electric time constant 70 min Thermal time constant 70 min Thermal time constant 70 min Thermal resistance 0.31 K/W Measuring flange 450 x 450 x 30 mm, steel 101 along moment of inertia of output 100 kgcm² Product weight 50600 g Permissible axial shaft load 500 N Permissible axial shaft load 2530 N Rotor position sensor, absolute detectable revolution Absolute multi-turn safety encoder rotor position sensor, annufacturer designation EQ 1331 Rotor position sensor, cencoder measuring principle Inductive 100 kgcm² Rotor position sensor, corporating voltage 75 V rotor position sensor, DC operating voltage 75 V rotor position sensor, position values per revolution 524288 Rotor position sensor, position values per revolution 10 bit rotor position sensor, position values per revolution 10 bit rotor position sensor, position values per revolution 10 bit rotor position sensor, position values per revolution 10 bit rotor position sensor, position values per revolution 10 bit rotor position sensor, position values per revolution 10 bit rotor position sensor, position values per revolution 10 bit rotor position sensor, position values per revolution 10 bit rotor position sensor, position values per revolution 10 bit rotor position sensor, position values per revolution 10 bit rotor position sensor, position values per revolution 115 km	Number of pole pairs	5
Peak torque         118.3 Nm           Nominal rotary speed         1200 rpm           Angular acceleration         1000000 rad/s²           Nominal power rating of motor         7427 W           Continuous stall current         25 A           Nominal power rating of motor         25 A           Continuous stall current         19.2 A           Peak current         41.5 A           Motor constant         3.08 Nm/A           Standstill torque constant         3.08 Nm/A           Voltage constant, phase-to-phase         215.2 m/vmin           Phase-phase winding resistance         0.285 0hm           Phase-phase winding resistance         0.285 0hm           Phase-phase winding inductance         12.3 mH           Winding cross inductivity Lq (phase)         6.15 mH           Electric time constant         39.6 ms           Thermal time constant         70 min           Thermal time constant         70 min           Thermal resistance         0.31 K/W           Measuring flange         450 x 450 x 30 mm, steel           Total mass moment of inertia of output         160 kgcm²           Product weight         50600 g           Permissible axial shaft load         253 0 N           Rotor position sensor	Standstill torque	76.7 Nm
Nominal rotary speed  1200 rpm  Max. rotational speed  2163 rpm  Angular acceleration  100000 rad/s²  Nominal power rating of motor  Continuous stall current  25 A  Nominal motor current  19.2 A  Peak current  41.5 A  Motor constant  Standstill torque constant  3.08 Nm/A  Standstill torque constant  3.56 Nm/A  Voltage constant, phase-to-phase  215.2 m/Vmin  Phase-phase winding resistance  Phase-phase winding resistance  Phase-phase winding inductance  12.3 mH  Winding longitudinal inductivity Ld (phase)  Winding cross inductivity Ld (phase)  5.65 mH  Winding cross inductivity Ld (phase)  6.15 mH  Electric time constant  70 min  Thermal time constant  70 min  Thermal time constant  Thermal time constant  70 min  Thermal resistance  0.31 k/W  Measuring flange  450 x 450 x 30 mm, steel  Total mass moment of inertia of output  160 kgcm²  Permissible radial shaft load  500 N  Permissible radial sha	Nominal torque	59.1 Nm
Max. rotational speed         2163 rpm           Angular acceleration         100000 rad/s³           Nominal power rating of motor         7427 W           Continuous stall current         25 A           Nominal motor current         19.2 A           Peak current         41.5 A           Motor constant         3.08 Nm/A           Standstill torque constant         3.56 Nm/A           Voltage constant, phase-to-phase         215.2 mVmin           Phase-phase winding resistance         0.285 Ohm           Phase-phase winding inductance         12.3 mH           Winding longitudinal inductivity Ld (phase)         5.65 mH           Winding longitudinal inductivity Ld (phase)         5.65 mH           Winding cross inductivity Ld (phase)         6.15 mH           Electric time constant         70 min           Thermal resistance         0.31 K/W           Measuring flange         450 x 450 x 30 mm, steel           Total mass moment of inertia of output         160 kgcm²           Product weight         50600 g           Permissible radial shaft load         500 N           Permissible radial shaft load         500 N           Rotor position sensor, manufacturer designation         601 1331           rotor position sensor, absolute detect	Peak torque	118.3 Nm
Angular acceleration 100000 rad/s² Nominal power rating of motor 7427 W Continuous stall current 25 A Nominal motor current 19.2 A Peak current 41.5 A Motor constant 3.08 Nm/A Standsfill torque constant 3.08 Nm/A Voltage constant, phase-to-phase 215.2 mVmin Phase-phase winding resistance 0.285 Ohm Phase-phase winding inductance 12.3 mH Winding constitudinal inductivity Ld (phase) 5.65 mH Winding cross inductivity Lq (phase) 6.15 mH Electric time constant 70 min Thermal time constant 70 min Thermal resistance 0.31 K/W Measuring flange 450 x 450 x 30 mm, steel 70 total mass moment of inertia of output 160 kgcm² Product weight 50600 g Permissible axial shaft load 500 N Permissible radial shaft load 530 N Permissible radial shaft load 530 N Permissible radial shaft load 500 N Permissible necoder interface EnDargo 2 Rotor position sensor, absolute detectable revolutions 4096 Rotor position sensor, absolute detectable revolutions 4096 Rotor position sensor, absolute detectable revolutions 524288 Rotor position sensor, poceparating voltage 5 V rotor position sensor, poceparating voltage 5 V rotor position sensor, poceparating voltage 750 Poceparating voltage 750 Forest 750 For	Nominal rotary speed	1200 rpm
Nominal power rating of motor Continuous stall current 25 A Nominal motor current 25 A Nominal motor current 25 A Nominal motor current 41.5 A Motor constant 3.08 Nm/A Standstill torque constant 3.08 Nm/A Standstill torque constant 3.08 Nm/A Voltage constant, phase-to-phase 215.2 m/min Phase-phase winding resistance 0.285 Ohm Phase-phase winding inductance 12.3 mH Winding longitudinal inductivity Ld (phase) 8.65 mH Winding roros inductivity Lq (phase) 8.15 mH Electric time constant 70 min Thermal tesistance 0.31 K/W Measuring flange 450 x 450 x 30 mm, steel Total mass moment of inertia of output 160 kgcm² Product weight 50600 g Permissible axial shaft load 500 N Permissible axial shaft load 500 N Permissible axial shaft load 500 N Permissible nessor, manufacturer designation rotor position sensor, absolute detectable revolutions 4096 Rotor position sensor, absolute detectable revolutions Rotor position sensor, DC operating voltage 150 V rotor position sensor, DC operating voltage 150 V rotor position sensor, DC operating voltage 150 V rotor position sensor, poceparating voltage 150 V rotor position sensor, poceparating voltage 150 V rotor position sensor, poceparating voltage 150 P rotor position sensor, poceparating voltage 151 P rotor position sensor, position values per revolution 1524288 Rotor position sensor, system accuracy of angle measurement 151 P rotor position sensor, system accuracy of angle measurement 151 P rotor position sensor, system accuracy of angle measurement 152 P rotor position sensor, system accuracy of angle measurement 152 P rotor position sens	Max. rotational speed	2163 rpm
Continuous stall current    19.2 A	Angular acceleration	100000 rad/s <sup>2</sup>
Nominal motor current  19.2 A  Peak current  41.5 A  Motor constant  3.08 Nm/A  Standstill torque constant  3.56 Nm/A  Voltage constant, phase-to-phase  215.2 mVmin  Phase-phase winding resistance  0.285 Ohm  Phase-phase winding inductance  12.3 mH  Winding longitudinal inductivity Ld (phase)  5.65 mH  Winding cross inductivity Ld (phase)  6.15 mH  Electric time constant  70 min  Thermal tresistance  0.31 k/W  Measuring flange  450 x 450 x 30 mm, steel  Total mass moment of inertia of output  100 kgcm²  Product weight  Product weight  Permissible axial shaft load  2530 N  Rotor position sensor, absolute detectable revolutions  Rotor position sensor, anaufacturer designation  rotor position sensor, absolute detectable revolutions  Rotor position sensor, absolute measuring principle  Inductive  rotor position sensor, DC operating voltage range  70 voltor position sensor, DC operating voltage range  70 voltor position sensor, position values per revolution  524288  Rotor position sensor, essor, system accuracy of angle measurement  Proter brake yellow position sensor, system accuracy of angle measurement  Final mass more of the position sensor, system accuracy of angle measurement  19 bit  Totor position sensor, system accuracy of angle measurement  Final minute on the position sensor of the position sensor, system accuracy of angle measurement  19 bit  Totor position sensor, system accuracy of angle measurement  Final minute on the position sensor o	Nominal power rating of motor	7427 W
Peak current 41.5 A  Motor constant 3.08 Nm/A  Standstill torque constant 3.56 Nm/A  Voltage constant, phase-to-phase 215.2 mVmin  Phase-phase winding resistance 0.285 Ohm  Phase-phase winding inductance 12.3 mH  Winding longitudinal inductivity Ld (phase) 5.65 mH  Winding rorss inductivity Lq (phase) 6.15 mH  Electric time constant 70 min  Thermal time constant 70 min  Thermal resistance 0.31 K/W  Measuring flange 450 x 450 x 30 mm, steel  Total mass moment of inertia of output 160 kgcm²  Product weight 50600 g  Permissible axial shaft load 500 N  Permissible radial shaft load 2530 N  Rotor position sensor, absolute detectable revolutions 4096  Rotor position sensor, absolute detectable revolutions 4096  Rotor position sensor, absolute detectable revolutions 4096  Rotor position sensor, pocerating voltage 5 V  rotor position sensor, DC operating voltage 7 SV  rotor position sensor, position values per revolution 524288  Rotor position sensor, system accuracy of angle measurement 524 V  Departing voltage DC for brake 24 V	Continuous stall current	25 A
Motor constant  3.08 Nm/A  Standstill torque constant  3.56 Nm/A  Voltage constant, phase-to-phase  215.2 m/min  Phase-phase winding resistance  0.285 Ohm  Phase-phase winding inductance  12.3 mH  Winding longitudinal inductivity Ld (phase)  Winding tors inductivity Lq (phase)  Electric time constant  70 min  Thermal time constant  70 min  Thermal resistance  0.31 K/W  Measuring flange  450 x 450 x 30 mm, steel  Total mass moment of inertia of output  160 kgcm²  Permissible axial shaft load  500 N  Permissible axial shaft load  2530 N  Rotor position sensor, absolute detectable revolutions  Rotor position sensor, absolute detectable revolutions  Rotor position sensor, encoder measuring principle rotor position sensor, DC operating voltage  rotor position sensor, DC operating voltage  Rotor position sensor, position values per revolution  524 288  Rotor position sensor, system accuracy of angle measurement  65 arcsec65 arcsec  Brake holding torque  0 perating voltage DC for brake	Nominal motor current	19.2 A
Standstill torque constant Voltage constant, phase-to-phase 215.2 mVmin Phase-phase winding resistance 0.285 Ohm Phase-phase winding inductance Winding longitudinal inductivity Ld (phase) Winding longitudinal inductivity Ld (phase) 6.15 mH Electric time constant 39.6 ms Thermal time constant 70 min Thermal time constant Thermal resistance 0.31 K/W Measuring flange 450 x 450 x 30 mm, steel Total mass moment of inertia of output 160 kgcm² Product weight 50600 g Permissible axial shaft load 500 N Permissible radial shaft load 2530 N Rotor position sensor Absolute multi-turn safety encoder rotor position sensor, manufacturer designation EQI 1331 rotor position sensor, absolute detectable revolutions Rotor position sensor, encoder measuring principle Inductive rotor position sensor, DC operating voltage 5V rotor position sensor, DC operating voltage range 3.6 V14 V rotor position sensor, position values per revolution 524288 Brotor position sensor, system accuracy of angle measurement 626 arcsec65 arcsec 63 Brake holding torque 0 perating voltage DC for brake	Peak current	41.5 A
Voltage constant, phase-to-phase 215.2 m/min Phase-phase winding resistance 0.285 0 hm Phase-phase winding inductance 12.3 mH Winding longitudinal inductivity Ld (phase) 5.65 mH Winding cross inductivity Ld (phase) 6.15 mH Electric time constant 70 min Thermal time constant 70 min Thermal resistance 0.31 K/W Measuring flange 450 x 450 x 30 mm, steel Total mass moment of inertia of output 160 kgcm² Product weight 50600 g Permissible axial shaft load 500 N Permissible radial shaft load 2530 N Rotor position sensor, manufacturer designation EQI 1331 rotor position sensor, absolute detectable revolutions 4096 Rotor position sensor, encoder measuring principle Inductive 150 kg. 14 V rotor position sensor, DC operating voltage 5 V rotor position sensor, DC operating voltage ange 3.6 V14 V rotor position sensor, system accuracy of angle measurement 65 arcsec65 arcsec Brake holding torque 115 Nm Operating voltage DC for brake 24 V	Motor constant	3.08 Nm/A
Phase-phase winding resistance Phase-phase winding inductance 12.3 mH Winding longitudinal inductivity Ld (phase) 5.65 mH Winding cross inductivity Lq (phase) 6.15 mH Electric time constant 70 min Thermal time constant 70 min Thermal resistance 0.31 K/W Measuring flange 450 x 450 x 30 mm, steel Total mass moment of inertia of output 160 kgcm² Product weight 50600 g Permissible axial shaft load 500 N Permissible radial shaft load 2530 N Rotor position sensor Absolute multi-turn safety encoder rotor position sensor, manufacturer designation EQI 1331 rotor position sensor, absolute detectable revolutions 4096 Rotor position encoder interface EnDat® 22 Rotor position sensor, encoder measuring principle Inductive rotor position sensor, DC operating voltage 5 V rotor position sensor, DC operating voltage range 3.6 V14 V rotor position sensor, system accuracy of angle measurement Brake holding torque 115 Nm Operating voltage DC for brake	Standstill torque constant	3.56 Nm/A
Phase-phase winding inductance  12.3 mH  Winding longitudinal inductivity Ld (phase)  5.65 mH  Winding cross inductivity Lq (phase)  6.15 mH  Electric time constant  70 min  Thermal time constant  70 min  Thermal resistance  0.31 K/W  Measuring flange  450 x 450 x 30 mm, steel  Total mass moment of inertia of output  160 kgcm²  Product weight  50600 g  Permissible axial shaft load  500 N  Permissible radial shaft load  800 N  Rotor position sensor  Absolute multi-turn safety encoder  rotor position sensor, absolute detectable revolutions  Rotor position encoder interface  EnDat® 22  Rotor position sensor, encoder measuring principle  rotor position sensor, DC operating voltage  50 V  rotor position sensor, DC operating voltage  50 V  rotor position sensor, DC operating voltage  70 V  70 voltage BC for brake  115 Nm  24 V	Voltage constant, phase-to-phase	215.2 mVmin
Winding longitudinal inductivity Ld (phase)  S.65 mH  Winding cross inductivity Lq (phase)  Electric time constant  Thermal time constant  To min  Thermal resistance  0.31 K/W  Measuring flange  450 x 450 x 30 mm, steel  Total mass moment of inertia of output  160 kgcm²  Product weight  50600 g  Permissible axial shaft load  Soo N  Permissible radial shaft load  Rotor position sensor  rotor position sensor, manufacturer designation  rotor position sensor, absolute detectable revolutions  Rotor position sensor, encoder measuring principle  rotor position sensor, DC operating voltage  rotor position sensor, DC operating voltage  Rotor position sensor, position values per revolution  Rotor position transducer resolution  19 bit  rotor position sensor, system accuracy of angle measurement  Brake holding torque  Operating voltage DC for brake  54 V	Phase-phase winding resistance	0.285 Ohm
Winding cross inductivity Lq (phase)  Electric time constant  Thermal time constant  To min  Thermal resistance  0.31 K/W  Measuring flange  450 x 450 x 30 mm, steel  Total mass moment of inertia of output  160 kgcm²  Product weight  50600 g  Permissible axial shaft load  500 N  Permissible radial shaft load  2530 N  Rotor position sensor  Absolute multi-turn safety encoder  rotor position sensor, manufacturer designation  EQI 1331  rotor position encoder interface  EnDat® 22  Rotor position sensor, encoder measuring principle  rotor position sensor, DC operating voltage  5 V  rotor position sensor, DC operating voltage  5 V  rotor position sensor, position values per revolution  524288  Rotor position transducer resolution  19 bit  rotor position sensor, system accuracy of angle measurement  Brake holding torque  Operating voltage DC for brake	Phase-phase winding inductance	12.3 mH
Electric time constant Thermal time constant Thermal time constant Thermal resistance O.31 K/W Measuring flange 450 x 450 x 30 mm, steel Total mass moment of inertia of output 160 kgcm² Product weight 50600 g Permissible axial shaft load 500 N Permissible radial shaft load Rotor position sensor Absolute multi-turn safety encoder rotor position sensor, absolute detectable revolutions Rotor position sensor, absolute detectable revolutions Rotor position sensor, absolute measuring principle Inductive rotor position sensor, DC operating voltage SV rotor position sensor, DC operating voltage SV rotor position sensor, position values per revolution 524288 Rotor position transducer resolution 19 bit rotor position sensor, system accuracy of angle measurement Brake holding torque Operating voltage DC for brake	Winding longitudinal inductivity Ld (phase)	5.65 mH
Thermal time constant Thermal resistance O.31 K/W  Measuring flange 450 x 450 x 30 mm, steel  Total mass moment of inertia of output 160 kgcm²  Product weight 50600 g  Permissible axial shaft load 500 N  Permissible radial shaft load 2530 N  Rotor position sensor Absolute multi-turn safety encoder rotor position sensor, manufacturer designation EQI 1331 rotor position sensor, absolute detectable revolutions 4096 Rotor position sensor, encoder measuring principle Inductive rotor position sensor, DC operating voltage rotor position sensor, DC operating voltage range 3.6 V14 V rotor position sensor, position values per revolution 19 bit rotor position sensor, system accuracy of angle measurement Brake holding torque 115 Nm  Operating voltage DC for brake	Winding cross inductivity Lq (phase)	6.15 mH
Thermal resistance  0.31 K/W  Measuring flange  450 x 450 x 30 mm, steel  Total mass moment of inertia of output  160 kgcm²  Product weight  50600 g  Permissible axial shaft load  Permissible radial shaft load  2530 N  Rotor position sensor  Absolute multi-turn safety encoder  rotor position sensor, manufacturer designation  EQI 1331  rotor position sensor, absolute detectable revolutions  4096  Rotor position sensor, encoder interface  EnDat® 22  Rotor position sensor, DC operating voltage  rotor position sensor, DC operating voltage  so V  rotor position sensor, DC operating voltage range  3.6 V14 V  rotor position sensor, position values per revolution  19 bit  rotor position sensor, system accuracy of angle measurement  65 arcsec65 arcsec  Brake holding torque  Operating voltage DC for brake	Electric time constant	39.6 ms
Measuring flange  450 x 450 x 30 mm, steel  Total mass moment of inertia of output  160 kgcm²  Product weight  50600 g  Permissible axial shaft load  Permissible radial shaft load  Rotor position sensor  Absolute multi-turn safety encoder  rotor position sensor, manufacturer designation  EQI 1331  rotor position sensor, absolute detectable revolutions  4096  Rotor position encoder interface  EnDat® 22  Rotor position sensor, encoder measuring principle  Inductive  rotor position sensor, DC operating voltage  5 V  rotor position sensor, DC operating voltage range  3.6 V14 V  rotor position sensor, position values per revolution  524288  Rotor position transducer resolution  19 bit  rotor position sensor, system accuracy of angle measurement  -65 arcsec65 arcsec  Brake holding torque  115 Nm  Operating voltage DC for brake	Thermal time constant	70 min
Total mass moment of inertia of output  Product weight  50600 g  Permissible axial shaft load  500 N  Permissible radial shaft load  2530 N  Rotor position sensor  Absolute multi-turn safety encoder  rotor position sensor, manufacturer designation  EQI 1331  rotor position sensor, absolute detectable revolutions  Rotor position encoder interface  EnDat® 22  Rotor position sensor, encoder measuring principle  Inductive  rotor position sensor, DC operating voltage  rotor position sensor, position values per revolution  524288  Rotor position transducer resolution  19 bit  rotor position sensor, system accuracy of angle measurement  65 arcsec65 arcsec  Brake holding torque  Operating voltage DC for brake	Thermal resistance	0.31 K/W
Product weight 50600 g  Permissible axial shaft load 500 N  Permissible radial shaft load 2530 N  Rotor position sensor Absolute multi-turn safety encoder  rotor position sensor, manufacturer designation EQI 1331  rotor position sensor, absolute detectable revolutions 4096  Rotor position encoder interface EnDat® 22  Rotor position sensor, encoder measuring principle Inductive  rotor position sensor, DC operating voltage 5 V  rotor position sensor, DC operating voltage ange 3.6 V14 V  rotor position sensor, position values per revolution 524288  Rotor position transducer resolution 19 bit  rotor position sensor, system accuracy of angle measurement -65 arcsec65 arcsec  Brake holding torque 115 Nm  Operating voltage DC for brake 24 V	Measuring flange	450 x 450 x 30 mm, steel
Permissible axial shaft load  Permissible radial shaft load  Rotor position sensor  Absolute multi-turn safety encoder  Fell 1331  Fotor position sensor, manufacturer designation  Fell 1331  Fotor position sensor, absolute detectable revolutions  Rotor position encoder interface  Fen Dat® 22  Rotor position sensor, encoder measuring principle  Fotor position sensor, DC operating voltage  Fotor position sensor, DC operating voltage  Fotor position sensor, position values per revolution  Fotor position transducer resolution  Fotor position sensor, system accuracy of angle measurement  Fotor position sensor, system accuracy of angle sensor system accuracy of an	Total mass moment of inertia of output	160 kgcm²
Permissible radial shaft load  Rotor position sensor  Absolute multi-turn safety encoder  rotor position sensor, manufacturer designation  rotor position sensor, absolute detectable revolutions  Rotor position encoder interface  EnDat® 22  Rotor position sensor, encoder measuring principle  rotor position sensor, DC operating voltage  rotor position sensor, DC operating voltage  rotor position sensor, DC operating voltage range  3.6 V14 V  rotor position transducer resolution  19 bit  rotor position sensor, system accuracy of angle measurement  65 arcsec65 arcsec  Brake holding torque  Operating voltage DC for brake  24 V	Product weight	50600 g
Rotor position sensor rotor position sensor, manufacturer designation rotor position sensor, absolute detectable revolutions Rotor position encoder interface Rotor position sensor, encoder measuring principle Inductive rotor position sensor, DC operating voltage rotor position sensor, DC operating voltage range rotor position sensor, position values per revolution Sensor, position transducer resolution 19 bit rotor position sensor, system accuracy of angle measurement Brake holding torque 115 Nm Operating voltage DC for brake 24 V	Permissible axial shaft load	500 N
rotor position sensor, manufacturer designation  rotor position sensor, absolute detectable revolutions  Rotor position encoder interface  Rotor position sensor, encoder measuring principle  Inductive  rotor position sensor, DC operating voltage  rotor position sensor, DC operating voltage range  rotor position sensor, position values per revolution  S24288  Rotor position transducer resolution  19 bit  rotor position sensor, system accuracy of angle measurement  -65 arcsec65 arcsec  Brake holding torque  115 Nm  Operating voltage DC for brake	Permissible radial shaft load	2530 N
rotor position sensor, absolute detectable revolutions  Rotor position encoder interface  EnDat® 22  Rotor position sensor, encoder measuring principle Inductive  rotor position sensor, DC operating voltage  rotor position sensor, DC operating voltage range  3.6 V14 V  rotor position sensor, position values per revolution  524288  Rotor position transducer resolution  19 bit  rotor position sensor, system accuracy of angle measurement  -65 arcsec65 arcsec  Brake holding torque  115 Nm  Operating voltage DC for brake  24 V	Rotor position sensor	Absolute multi-turn safety encoder
Rotor position encoder interface  Rotor position sensor, encoder measuring principle Inductive  rotor position sensor, DC operating voltage rotor position sensor, DC operating voltage range 3.6 V14 V  rotor position sensor, position values per revolution 524288  Rotor position transducer resolution 19 bit  rotor position sensor, system accuracy of angle measurement -65 arcsec65 arcsec  Brake holding torque 115 Nm  Operating voltage DC for brake 24 V	rotor position sensor, manufacturer designation	EQI 1331
Rotor position sensor, encoder measuring principle rotor position sensor, DC operating voltage rotor position sensor, DC operating voltage range rotor position sensor, position values per revolution  524288 Rotor position transducer resolution 19 bit rotor position sensor, system accuracy of angle measurement -65 arcsec65 arcsec  Brake holding torque 115 Nm Operating voltage DC for brake 24 V	rotor position sensor, absolute detectable revolutions	4096
rotor position sensor, DC operating voltage rotor position sensor, DC operating voltage range 3.6 V14 V rotor position sensor, position values per revolution 524288 Rotor position transducer resolution 19 bit rotor position sensor, system accuracy of angle measurement -65 arcsec65 arcsec Brake holding torque 115 Nm Operating voltage DC for brake 24 V	Rotor position encoder interface	EnDat® 22
rotor position sensor, DC operating voltage range 3.6 V14 V rotor position sensor, position values per revolution 524288  Rotor position transducer resolution 19 bit rotor position sensor, system accuracy of angle measurement -65 arcsec65 arcsec  Brake holding torque 115 Nm  Operating voltage DC for brake 24 V	Rotor position sensor, encoder measuring principle	Inductive
rotor position sensor, position values per revolution 524288  Rotor position transducer resolution 19 bit rotor position sensor, system accuracy of angle measurement -65 arcsec65 arcsec  Brake holding torque 115 Nm  Operating voltage DC for brake 24 V	rotor position sensor, DC operating voltage	5 V
Rotor position transducer resolution 19 bit rotor position sensor, system accuracy of angle measurement -65 arcsec65 arcsec  Brake holding torque 115 Nm  Operating voltage DC for brake 24 V	rotor position sensor, DC operating voltage range	3.6 V14 V
rotor position sensor, system accuracy of angle measurement -65 arcsec65 arcsec  Brake holding torque 115 Nm  Operating voltage DC for brake 24 V	rotor position sensor, position values per revolution	524288
Brake holding torque 115 Nm Operating voltage DC for brake 24 V	Rotor position transducer resolution	19 bit
Operating voltage DC for brake 24 V	rotor position sensor, system accuracy of angle measurement	-65 arcsec65 arcsec
	Brake holding torque	115 Nm
Brake current consumption 2.08 A	Operating voltage DC for brake	24 V
	Brake current consumption	2.08 A

Feature	Value
Power consumption, brake	50 W
Brake separation time	190 ms
Brake closing time	65 ms
DC brake response delay	12 ms
Mass moment of inertia of brake	50 kgcm <sup>2</sup>
Switching cycles holding brake	5 million idle actuations (without friction work!)
Safety device	Safety device
Maximum SIL	Safety integrity level 2
Safety sub-functions up to SIL2	Reliable recording and transmission of single-turn position data
Maximum PL and category	Performance Level d, Category 3
Safety sub-function up to PL d, Cat. 3	Reliable recording and transmission of single-turn position data
PFHd, subcomponent	15 x 10E-9, encoder
Duration of use Tm, subcomponent	20 years, rotor position sensor
Mean time to failure (MTTF), subcomponent	190 years, rotor position sensor
Energy efficiency	ENEFF (CN) / Class 1