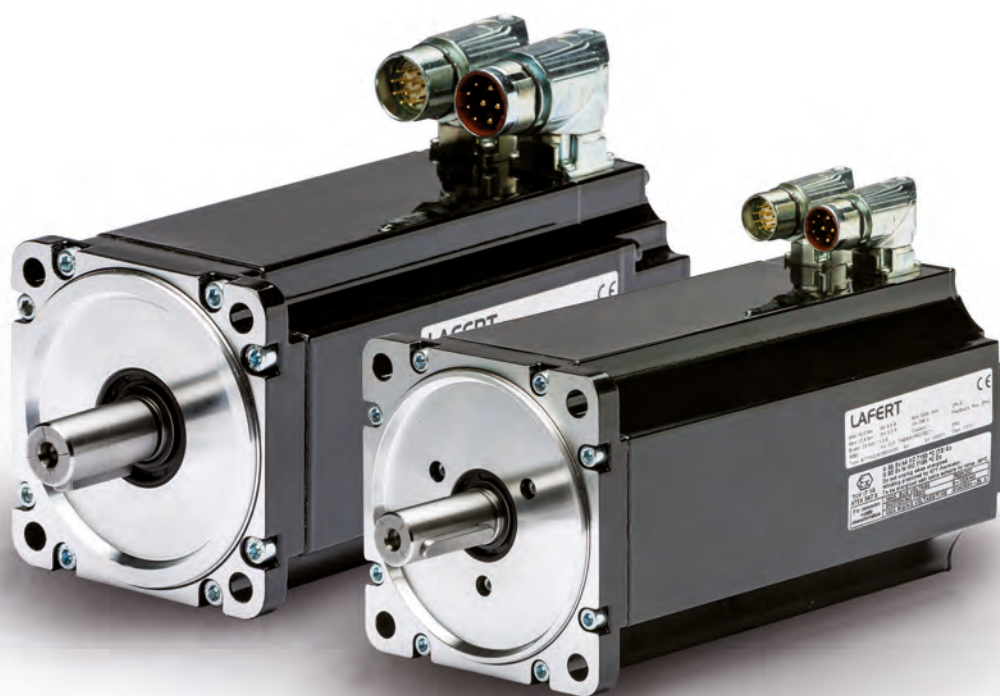


SERVO MOTORS

BRUSHLESS SERVO MOTORS
ATEX - ZONE 2 AND 22



BROCHURE 2017



Brushless Servo Motors and Torque Motors in compliance with **Explosive Atmospheres Directive 94/9/EC – ATEX** of the European Parliament and the Council of 23 March 1994 on the approximation of the laws of the Member States, concerning equipment and protective system intended for use in potentially explosive atmospheres and also in compliance with Standard EN 60079-0:2012, EN 60079-15:2010 and EN 60079-31:2014.

The motors are suitable for “normal” working mode with protection level “increased” in ATEX category 3G for Gas and 3D for Dust.



STANDARDS

EN 60079-0: 2012	Explosive atmospheres Part 0: Equipment – General requirements
EN 60079-15: 2010	Explosive atmospheres Part 15: Equipment protection by type of protection “n”
EN 60079-31: 2014	Explosive atmospheres Part 31: Equipment dust ignition protection by enclosure “t”

TARGET APPLICATION – Zone 2 and 22

- Paintings Robots
- Printing Machines
- Plastic Manufacturing
- Chemical, Petrochemical and Pharmaceutical Industry
- Waste Treatment Plants
- Food Facilities with non conductive dust
- Industrial Plants with conductive dust

MARKING

• II 3G Ex nA IIC T155°C (T3) Gc

The protection method applied for the zone 2 (Gas) is “not sparking nA” which lead to a protection level EPL Gc.

- II = surface industry
- 3G = category 3, Gas for installation in zone 2:
explosive atmospheres for maximum 10 hours/year
- Ex nA = protection mode not sparking
- IIC = type of allowed gas
- T155°C = maximum external and internal temperature of the motor
- Gc = equipment protection level

• II 3D Ex tc IIIC T135°C Dc

The protection method applied for the zone 22 (Dust) is “by enclosure tc” which lead to a protection level EPL Dc.
The maximum surface motor temperature is 135 °C.

- II = surface industry
- 3D = category 3, Dust for installation in zone 22:
explosive atmospheres for maximum 10 hours/year
- Ex tc = protection mode by enclosure
- IIIC = type of allowed dust
- T135°C = maximum external surface temperature of the motor
- Dc = equipment protection level



 TUV IT 15 ATEX 047 X	II 3G Ex nA IIC T155 °C (T3) Gc
	II 3D Ex tc IIIC T135 °C Dc
	Do not unplug when energized.
	Winding protected by KTY thermistor.
	To be energized with cable suitable for temp. 90°C.
For converter supply characteristic:	MAX. BUS VOLTAGE 750[VDC]
	SWITCHING FREQ. 8-16[KHz]
	MAX RISING VOLTAGE/TIME IEC60034-25, A

ELECTRICAL DATA ATEX SERVO MOTORS

Type	Stall torque M_o Nm	Rated speed				
		n 1/min				
		1500	2000	3000	4500	6000
B28.D2Q	0.23	-	-	-	-	0.22
B28.D5Q	0.44	-	-	0.43	-	0.42
B28.D7Q	0.64	-	-	0.63	-	0.61
B28.01Q	0.84	-	-	0.83	-	0.80
B28.E2Q	1.04	-	-	1.02	-	0.96
B36.D6Q	0.6	-	-	0.5	-	0.5
B36.E2Q	1.1	-	-	1.0	-	0.9
B36.E8Q	1.7	-	-	1.5	-	1.3
B36.F4Q	2.2	-	-	1.9	-	1.7
B36.03Q	2.7	-	-	2.4	-	2.0
B56.E3Q	1.3	-	-	1.1	-	1.0
B56.F6Q	2.4	-	-	2.1	-	1.7
B56.G5Q	3.2	-	-	2.6	-	2.0
B56.H5Q	4.2	-	-	3.4	-	2.3
B63.04Q	4.0	-	-	3.5	3.1	2.6
B63.06Q	5.8	-	-	4.9	4.2	3.5
B63.08Q	7.4	-	-	6.1	5.3	4.2
B63.10Q	9.2	-	-	7.6	6.4	4.9
B71.04Q	4.6	-	4.2	4.0	3.6	-
B71.08Q	8.6	-	7.7	7.2	6.2	-
B71.12Q	11.7	-	10.2	9.4	7.7	-
B71.16Q	15.3	-	13.2	11.9	9.3	-
B71.20Q	18.4	-	15.4	13.7	10.1	-
B71.26Q	24.4	-	18.8	16.0	12.3	-
B71.29Q	27.4	-	20.5	16.5	-	-
B71.32Q	30.0	-	21.5	17.0	-	-
B71.35Q	33.2	-	23.3	18.0	-	-
B71.38Q	36.5	-	25.6	19.5	-	-
B10.20J	18.0	-	15.4	14.2	-	-
B10.28J	26.0	-	21.7	19.5	-	-
B10.36J	34.0	-	27.4	23.9	-	-
B10.42J	41.5	-	32.9	28.0	-	-
B10.56J	50.5	-	36.3	29.0	-	-
B10.68J	63.5	-	44.6	34.1	-	-
B10.80J	76.5	-	52.6	38.8	-	-
B13.42I	42.0	35.5	32.5	27.5	-	-
B13.58I	58.0	47.0	43.0	33.9	-	-
B13.73I	73.0	58.5	53.5	39.2	-	-
B13.81I	81.0	65.0	59.5	41.3	-	-
B13.98I	98.0	75.5	67.0	42.4	-	-
B13.C2I	110.0	92.5	80.4	46.9	-	-

Type	Stall torque M_o Nm	Rated speed		
		n 1/min		
		300	500	1000
B16.50P	50.0	48.0	45.0	39.0
B16.C0P	99.0	91.3	87.6	77.0
B16.C5P	142.0	126.6	119.8	99.0
B16.B0P	182.0	160.3	150.0	117.3

Motor performances with winding overtemperature 105°C, motor coupled to metal plate, resolver feedback.
In case of different transducer's rating temperature the motor performances could change.

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