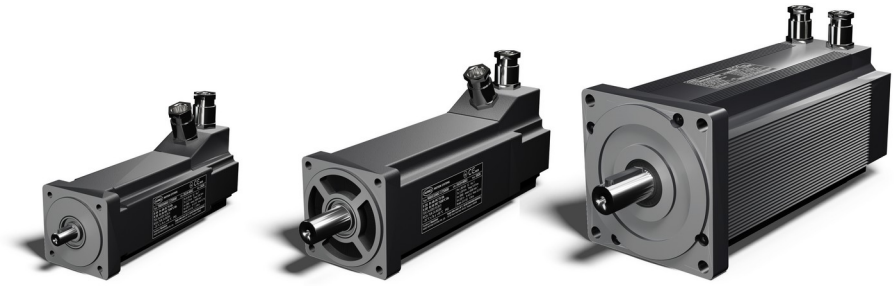
DX Series

Explosion-Proof AC Servo Motors

Flameproof permanent-magnet AC servo motors for positioning and speed control in explosive gas and dust atmospheres — Zone 1, 2, 21 and 22.



KEY FEATURES

- Flameproof aluminium enclosure “db” with dust ignition protection by enclosure “tb”
- Gas group IIC (includes hydrogen and acetylene) and dust group IIIC (conductive dust)
- Stator, rotor, feedback device and optional holding brake all inside the flameproof enclosure
- Resolver feedback as standard; SICK SKM36 HIPERFACE multiturn absolute encoder (no battery) as option
- Optional spring-applied holding brake
- PTC triple sensor thermal protection to DIN VDE V 0898-1-401
- Continuous duty S1; natural cooling, no fan
- Two cable entries with certified Ex d cable glands fitted as standard
- IEC square flange, mounting IM B5; degree of protection IP65

WHY AUREX

- **Fast response —** your enquiry goes directly to our engineering team for quick technical answers and quotations.
- **Configured to your application —** feedback device, holding brake, shaft and flange interface, cable glands and pre-assembled cables configured to order.

EXPLOSION PROTECTION

II 2 G Ex db IIC T5 / T4 Gb

II 2 D Ex tb IIIC T100 °C / T130 °C Db

IP65 Ta −20 °C … +40 °C

CE 0035

CERTIFICATION

ATEX: TÜV Rheinland, Notified Body 0035

IECEx: TÜV Rheinland (ExCB)

EU-type examination certificate
TÜV 24 ATEX 9139 X

IECEx certificate of conformity
IECEx TUR 24.0029X

ATEX quality assurance notification
01 220 2509006

“X”: special conditions for safe use, see technical manual BA-DX-EN-V7.0, Section 4.4.

FRAME SIZES AND TYPES

Frame	Types	Rated power	Gas	Dust
DX70	70DX040C	0.40 kW	II 2 G Ex db IIC T5 Gb	II 2 D Ex tb IIIC T100 °C Db
DX90	90DX100C	1.00 kW	II 2 G Ex db IIC T5 Gb	II 2 D Ex tb IIIC T100 °C Db
DX130	130DX150C · 130DX260C · 130DX380C	1.50 · 2.60 · 3.80 kW	II 2 G Ex db IIC T4 Gb	II 2 D Ex tb IIIC T130 °C Db

Rated data, general characteristics and type code: see page 2.

APPLICATIONS

Chemical and petrochemical plants · Pharmaceutical production · Paint and coating plants · Energy and process installations

RATED DATA

	70DX040C	90DX100C	130DX150C	130DX260C	130DX380C
Frame size	DX70	DX90	DX130	DX130	DX130
Rated power Pn (kW)	0.40	1.00	1.50	2.60	3.80
Rated torque Tn (N·m)	1.27	3.18	6	10	15
Max. torque Tmax (N·m)	3.81	9.9	18	25	30
Rated speed nn (min⁻¹)	3000	3000	2500	2500	2500
Max. speed nmax (min⁻¹)	5000	4500	2800	2800	2800
Rated voltage Un (V AC)	220	220	220	380	380
Rated current In (Arms)	2.9	4.5	6.0	5.9	7.4
Max. current Imax (Arms)	8.7	13.5	18	17.8	22.5
Voltage constant Ke (Vrms/krpm)	29.6	46	65	115	125
Rotor inertia J, without / with brake (×10⁻⁴ kg·m²)	0.487 / 0.52	1.81 / 2.10	12.6 / 13.8	19.4 / 20.6	27.7 / 28.9
Mass (kg)	2.4	4.4	12	14	15
Overall length incl. shaft (mm)	240.2	298.5	289.5	319.5	341.5
Temperature class gas / dust	T5 / T100 °C	T5 / T100 °C	T4 / T130 °C	T4 / T130 °C	T4 / T130 °C

Values at rated voltage, Ta = 40 °C, altitude ≤ 1000 m, flange mounted on a metal machine frame, with a compatible servo drive. Torque–speed characteristics and dimension drawings on request.

GENERAL CHARACTERISTICS

Item	Value
Duty type	S1 to IEC 60034-1
Cooling	IC 410, natural convection, no fan
Insulation system	Class F (155 °C)
Degree of protection	IP65 to IEC 60034-5
Mounting	IM B5; IM V1 and IM V3 permitted
Balance quality	Half key, ISO 21940-11 G2.5
Ambient temperature	−20 °C … +40 °C
Altitude	≤ 1000 m without derating

WHERE THE DX SERIES MAY BE USED

Zone	Category	DX
Gas, Zone 0	1G	not permitted
Gas, Zone 1	2G	permitted
Gas, Zone 2	3G	permitted
Dust, Zone 20	1D	not permitted
Dust, Zone 21	2D	permitted
Dust, Zone 22	3D	permitted

FEEDBACK DEVICE

Code	Device
R	Brushless resolver — standard, all frames
E	SICK SKM36, HIPERFACE, multiturn absolute, no battery — option, all frames

HOLDING BRAKE (OPTION)

	DX70	DX90	DX130
Supply voltage	24 V DC	24 V DC	24 V DC
Holding torque	1.3 N·m	4 N·m	16 N·m
Rated power	11 W	14 W	16 W

TYPE CODE

90 DX 100 C – 0 T5 R 00 example: 90DX100C-0T5R00

Pos.	Element	Values
①	Frame size	70 = 70 mm square, 90 = 85 mm square, 130 = 130 mm square
②	Series	DX = explosion-proof servo motor series
③	Rated power code	Three digits ≈ Pn (kW) × 100: 040, 100, 150, 260, 380
④	Design letter	Depends on motor length and inertia
⑤	Holding brake	0 = without brake; 1 = with brake
⑥	Temperature class	T5 (DX70, DX90) or T4 (DX130)
⑦	Feedback device	R = resolver (standard); E = mechanical multiturn absolute encoder; Q = other
⑧	Custom number	00 = standard; E 01 = SICK SKM36, HIPERFACE; others assigned by the manufacturer

ORDERING INFORMATION

- Complete type code and quantity
- Supply voltage, drive make and type
- Cable glands, pre-assembled cables and lengths, where required
- Zone, gas or dust group and temperature class of the installation
- Special ambient conditions — low temperature, high vibration, aggressive atmosphere, altitude > 1000 m
- Technical manual, EU declaration of conformity and certificates available on request

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