

Explosion-protected motors

Product overview

SENSE EXPERIENCE
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Explosion-protected motors

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Technical data in overview

Motor range	Size 56 to 450 low voltage
Power range	Up to 650 kW
Number of poles	2 – 8, other numbers and pole-changing motors upon request
Efficiency class	IE1, IE2, IE3 according to EN 60034-30
Voltage	Low voltage and voltage range acc. to IEC 60038
Duty type	S1 DOL and S9 inverter duty
Degree of protection	IP 55, IP 65
Cooling	IC 411, IC 416
Mounting	IM B3, IM B35, IM B5 and derived types to EN 60034-7
Regulations	IEC, EN, optional VIK
Labelling	VIK: Second name plate in terminal box For Ex nA, Ex e and Ex t, specifications for converter-fed operation on the name plate
Stator frame	Cast iron
Terminal box	Cast iron
Fan cover	Sheet steel
Regreasing	Life time up to size 315 M, from 315 MX regreasing nipple
Bearing	Ball bearing C3
Winding protection	PTC thermistor as additional protection. Sole protection upon request
Vibration intensity	A (Vibration intensity B optional)
Balancing	Half key
Ex-protection	Ex nA, Ex e, Ex d/de, Ex tb, Ex tc
Noise level	≤77 dBA + 3 dBA tolerance
Painting	Normal paint finish „moderate“, special paint finish „worldwide“, others by request
Cable entry	With metric metallic ATEX-cable glands according to VEM catalogue
Ambient temperatures	- 55 °C to + 60 °C Ex d/de - 40 °C to + 55 °C Ex nA and Ex tc A22 - 40 °C to + 55 °C Ex tb A21 - 40 °C to + 55 °C Ex e (size < 132, -20 °C – +55 °C)
Options	– SPM nipple from size 132 (stainless steel) – regreasing system from size 160 – additional terminal box from size 132 – anti condensation heating from size 132 – 60 Hz, special voltage – terminal box right or left hand side – mounting from ex certified brakes, encoders and external fans – low noise version for 2-pole motors from size 132 – special bearing for high axial/radial forces

Explosion-protected motors are used
in the chemical, oil and gas industries.

Ex protection		Ex nA	Ex e	Ex tc	Ex tb	Ex d/de
Motor range	Size up to	400	355	400	355	450
Power range	Max. for 4-pole	650	275	650	400	630
Number of poles	2 – 8-pole	x	x	x	x	x
Efficiency class	IE2 acc. EN 60034-30	x	x	x	x	x
Voltage	Low voltage and voltage range acc. IEC 60038	x	x	x	x	x
Duty	S1 DOL and S9 inverter duty (< 420 V)	x	x ²⁾	x	x ¹⁾	x
Degree of protection	IP55	x	x	x ³⁾	IP 65	x
Cooling	IC 411	x	x	x	x	x
Mounting	IM B3	x	x	x	x	x
Regulations	IEC, EN	x	x	x	x	x
Labelling	Second plate in terminal box	x	x	x	x	x
	additional plate with data for inverter duty	x	x ²⁾	x	x ¹⁾	x
Stator frame	Cast iron	x	x	x	x	x
Terminal box	Cast iron	x	x	x	x	x
Fan cover	Zinc-plated (not for Ex d(e))	x	x	x	x	-
Regreasing	Life time up to 315 M, from 315 MX with regreasing nipple	x	x	x	x	x
Bearing	Ball bearings C3	x	x	x	x	x
Winding protection	PTC as additional protection	x	x ⁴⁾	x	x	-
Winding protection	PTC as only protection	-	x ⁴⁾	-	-	x
Balancing	Half key	x	x	x	x	x
Noise level	≤ 77 dBA + tolerance	x	x	x	x	x

¹⁾ Ex-certificate including the inverter necessary, ²⁾ in S9: special series, ³⁾ IP 65 for conductive dust, ⁴⁾ for inverter duty as only protection



For detailed information
please visit our website.