



Explosion-protected motors

Product overview

SENSE EXPERIENCE
EXPERIENCE VISION



Explosion-protected motors

Product overview



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 additional plate with data for inverter duty | x | x | x | x | 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.

SENSE EXPERIENCE
EXPERIENCE VISION | www.vem-group.com