

N° :

Date : 22 févr. 2018

Induction motor

4P LSES 90LU 1,5kW IFT/IE3 B14 230D/380Y/400Y/415Y-460Y 50-60Hz -

Utilisation : Environment Current ; Ambiance Non corrosive ; Finition - ; Zone Non specific ; General applications ; Ambient temperature -16 +40 °C ; Maximum altitude 1000 m.

Motor characteristics : Aluminium alloy housing ; Cast iron DE endshield ; Cast iron NDE endshield.



Motor definition

| | | Application | General applications |
|----------------------------------|-------|--|--------------------------|
| Protection type | - | Main voltage (V) | 400 |
| Generation code | IFT | Connection | DY |
| Efficiency class | IE3 | Motor winding (V) | 230D/380Y/400Y/415Y-460Y |
| Number of network phases | 3 | Rated Frequency (Hz) | 50-60 |
| Number of speed | | Operation position | IM3601(IMB14) |
| Polarity | 4P | Index of protection | IP55 |
| Motor serie | LSES | Index of cooling | IC411 |
| Frame size (mm) | 90 | Insulation class | F |
| Lenght code | LU | Finish | - |
| HS rated power (kW) | 1.500 | Moment of inertia J (kg.m ²) | 0.0052400 |
| LS rated power (kW) | - | Motor weight (kg) | 20.4 |
| Rated speed (min-1) | 1452 | | |
| Maximum mechanical speed (min-1) | 11700 | | |

Common definitions

| | |
|--------------|--|
| Paint shade | RAL6000 |
| Paint system | 1a (1 polyurethane coat 20/30 microns) |

Motor mechanical interface

| | | | |
|------------------------|------------------------|------------------------------|------------------|
| Mounting flange | FT115 | Shaft material type | Steel shaft |
| Drive end shaft type | IEC STANDARD shaft end | Nuance of shaft material | - |
| Diameter DE shaft (mm) | 24j6 | Second shaft extension | - |
| Length DE shaft (mm) | 50 | Diameter NDE shaft (mm) | - |
| DE bearing mounting | Locked | Second shaft end length (mm) | - |
| DE bearing type | DE ball bearing | NDE bearing type | NDE ball bearing |
| DE bearing | 6205 | NDE bearing | 6205 |
| Code Type de graissage | Vie | | |

Motor electrical interface

| | | | |
|--------------------------------------|---------------------|--------------------------------|---|
| Connection network type | Terminal box | Cable type | - |
| Connection network material | Composite materials | Cable gland material | Cable gland not supplied, holes tapped with polyamide plugs |
| Connection network position | A | Main cable gland type | 1xM20 ; With plugs |
| Connection network orientation | up | Principal cable gland position | Right (1) |
| Connection network relative position | 0 | | |

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Motor options

| | | | |
|-------------------------------|---|------------------------------------|---------------|
| Vibration level | A (25µm ; 1.6mm/s ; 2.5m/s ²) | Cover | Plastic cover |
| Balancing type | Half-key (H) | Drip proof cover option | - |
| Impregnation type | < 95% ; -16+40°C (T) | cooling type | - |
| Winding thermal protection | - | Forced ventilation characteristics | - |
| Space heater | - | Encoder type | - |
| Draining plugs position | 6H | Encoder characteristics | - |
| Nameplate material | Aluminium nameplate | Screw material | Steel screw |
| Endshield thermal protection | - | Adaptation for vibration sensor | - |
| Reinforced winding insulation | - | | |

Motor characteristics (on mains supply)

| Main voltage (V) | Rated Frequency (Hz) | HS rated power (kW) | Rated torque (N.m) | Rated speed (min ⁻¹) | Rated current (A) | Power factor at 4/4 of the load | Power factor at 3/4 of the load | Power factor at 2/4 of the load | Efficiency at 4/4 (IEC 60 034-2-1) of the load (%) | Efficiency at 3/4 (IEC 60 034-2-1) of the load (%) | Efficiency at 2/4 (IEC 60 034-2-1) of the load (%) |
|------------------|----------------------|---------------------|--------------------|----------------------------------|-------------------|---------------------------------|---------------------------------|---------------------------------|--|--|--|
| 380 | 50 | 1.500 | 9,85 | 1445.00 | 3.25 | 0.82 | | | 85.30 | | |
| 400 | 50 | 1.500 | 9,85 | 1452 | 3.2 | 0,79 | 0,7 | 0,57 | 85.60 | 86.19 | 84.90 |
| 415 | 50 | 1.500 | 9,85 | 1456.00 | 3.20 | 0.77 | | | 85.75 | | |
| 460 | 60 | - | - | 1760.00 | 2.80 | 0.76 | | | 87.32 | | |

Motor characteristics (on mains supply) 400 V 50 Hz

| | | | |
|---|-------|---------------------------------|-------|
| Starting torque (N.m) | 28.57 | Id / In | 7.65 |
| Average starting torque (N.m) | | Id | 24.48 |
| Maximum torque (N.m) | 36,45 | Maximum current (A) | |
| Unload maximum starting frequency (d/h) | - | No-load current (A) | 0.00 |
| Rotor locked time (cold) (s) | | Acoustic pressure level (dB(A)) | 51 |

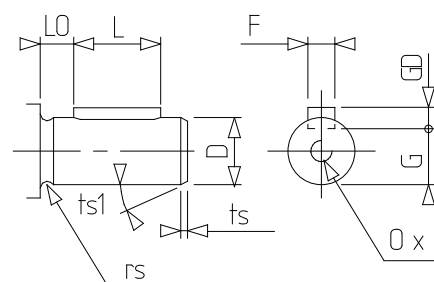
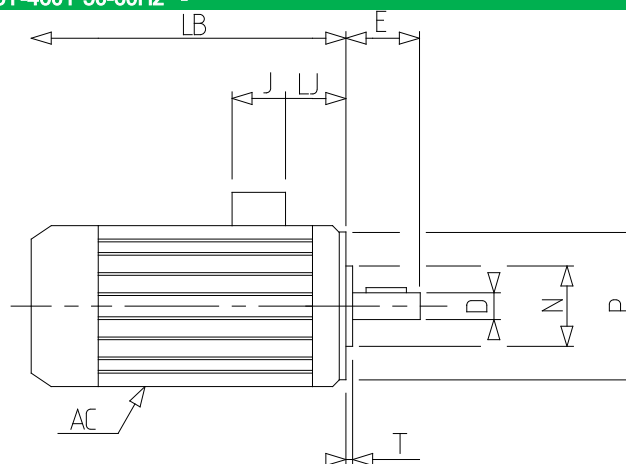
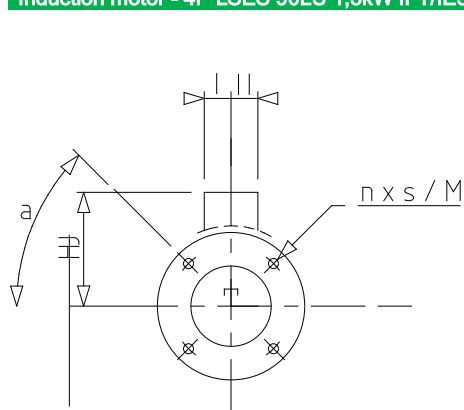
Motor characteristics (supplied via drives)

| Main voltage (V) | Nominal frequency (Hz) | Pn (kW) | Nn (min ⁻¹) | In (A) | Cos Phi | Mn @ f/10 (N.m) | Mn @ f/5 (N.m) | Mn @ f/3 (N.m) | Mn @ f/2 (N.m) | Mn (N.m) | Mn @ fx1.7 (N.m) | Mn @ fx2 (N.m) |
|------------------|------------------------|---------|-------------------------|--------|---------|-----------------|----------------|----------------|----------------|----------|------------------|----------------|
| 400 Y | 50 | 1.5 | 1452 | 3.31 | 0.79 | 0.00 | 8.87 | 9.85 | 9.85 | 9.850 | 5.66 | 0.00 |
| 400 D | 87 | 2.61 | 2515 | 5.76 | 0.79 | 0.00 | 8.87 | 9.85 | 9.85 | 9.850 | 0.00 | 0.00 |

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| | |
|------------|--------|
| a | 45 |
| AC | 189.00 |
| D | 24j6 |
| E | 50 |
| F | 8 |
| G | 20 |
| GD | 7 |
| HJ | 135.0 |
| I | 43 |
| II | 43 |
| J | 86 |
| L | 40 |
| LA | 0 |
| LB | 276.0 |
| LJ | 26.0 |
| LO | 6 |
| M | 115 |
| N | 95 |
| n | 4 |
| O | M8 |
| P | 140 |
| p | 19 |
| rs | 0.5 |
| S | M8 |
| T | 3 |
| ts | 2 |
| ts1 | 20 |