

Data sheet for three-phase Squirrel-Cage-Motors INNOMOTICS



Motor type : 1CV3315B

INNOMOTICS SD - 315 L - IM V1 - 4p

|                  |                 |           |
|------------------|-----------------|-----------|
| Client order no. | Item-No.        | Offer no. |
| Order no.        | Consignment no. | Project   |

|         |           |
|---------|-----------|
| Remarks | Safe Area |
|         | -/-       |

| U                                                   | Δ / Y | f        | P      | P    | I      | n       | M      | η <sup>3)</sup> |                                                  |                        | cosφ <sup>3)</sup> |      |      | I <sub>A</sub> /I <sub>N</sub> | M <sub>A</sub> /M <sub>N</sub> | M <sub>K</sub> /M <sub>N</sub> | IE-CL |
|-----------------------------------------------------|-------|----------|--------|------|--------|---------|--------|-----------------|--------------------------------------------------|------------------------|--------------------|------|------|--------------------------------|--------------------------------|--------------------------------|-------|
| [V]                                                 |       | [Hz]     | [kW]   | [hp] | [A]    | [1/min] | [Nm]   | 4/4             | 3/4                                              | 2/4                    | 4/4                | 3/4  | 2/4  | I <sub>I</sub> /I <sub>N</sub> | T <sub>I</sub> /T <sub>N</sub> | T <sub>B</sub> /T <sub>N</sub> |       |
| DOL duty (S1) - 155(F) to 130(B)                    |       |          |        |      |        |         |        |                 |                                                  |                        |                    |      |      |                                |                                |                                |       |
| 400                                                 | Δ     | 50       | 200.00 | -/-  | 340.00 | 1488    | 1280.0 | 96.0            | 96.3                                             | 96.1                   | 0.88               | 0.86 | 0.79 | 7.4                            | 3.2                            | 3.0                            | IE3   |
| 690                                                 | Y     | 50       | 200.00 | -/-  | 198.00 | 1488    | 1280.0 | 96.0            | 96.3                                             | 96.1                   | 0.88               | 0.86 | 0.79 | 7.4                            | 3.2                            | 3.0                            | IE3   |
| 460                                                 | Δ     | 60       | 230.00 | -/-  | 345.00 | 1788    | 1230.0 | 95.4            | 95.6                                             | 95.3                   | 0.88               | 0.86 | 0.80 | 7.5                            | 3.1                            | 2.8                            | IE2   |
| 460                                                 | Δ     | 60       | 200.00 | -/-  | 300.00 | 1791    | 1070.0 | 96.2            | 96.2                                             | 95.5                   | 0.87               | 0.84 | 0.75 | 8.7                            | 3.5                            | 3.2                            | IE3   |
| IM V1 / IM 3011                                     |       | FS 315 L |        |      |        | IP55    | UKCA   | IEC/EN 60034    |                                                  | IEC, DIN, ISO, VDE, EN |                    |      |      |                                |                                |                                |       |
| Environmental conditions : -20 °C - +40 °C / 1000 m |       |          |        |      |        |         |        |                 | Locked rotor time (hot / cold) : 22.5 s   45.4 s |                        |                    |      |      |                                |                                |                                |       |

|                                                                                     |  |  |                                |  |  |                                |  |  |                                 |  |  |                                                   |  |  |  |  |  |
|-------------------------------------------------------------------------------------|--|--|--------------------------------|--|--|--------------------------------|--|--|---------------------------------|--|--|---------------------------------------------------|--|--|--|--|--|
| Mechanical data                                                                     |  |  |                                |  |  |                                |  |  |                                 |  |  |                                                   |  |  |  |  |  |
| Sound level (SPL / SWL) at 50Hz 60Hz                                                |  |  | 73 / 87 dB(A) <sup>2) 3)</sup> |  |  | 78 / 93 dB(A) <sup>2) 3)</sup> |  |  | External earthing terminal      |  |  | With (standard)                                   |  |  |  |  |  |
| Moment of inertia                                                                   |  |  | 3.7000 kg m <sup>2</sup>       |  |  |                                |  |  | Vibration severity grade        |  |  | A                                                 |  |  |  |  |  |
| Bearing DE   NDE                                                                    |  |  | 6319 C3                        |  |  | 6319 C3                        |  |  | Thermal class                   |  |  | F                                                 |  |  |  |  |  |
| bearing lifetime                                                                    |  |  |                                |  |  |                                |  |  | Duty type                       |  |  | S1                                                |  |  |  |  |  |
| L <sub>10mh</sub> F <sub>Rad min</sub> for coupling operation 50 60Hz <sup>1)</sup> |  |  | 20000 h                        |  |  | 16000 h                        |  |  | Direction of rotation           |  |  | bidirectional                                     |  |  |  |  |  |
| Relubrication interval/quantity DE   NDE                                            |  |  | 40 g   40 g 6000 h             |  |  |                                |  |  | Frame material                  |  |  | cast iron                                         |  |  |  |  |  |
| Lubricants                                                                          |  |  | Unirex N3                      |  |  |                                |  |  | Net weight of the motor (IM B3) |  |  | 1190 kg                                           |  |  |  |  |  |
| Regreasing device                                                                   |  |  | With (standard)                |  |  |                                |  |  | Coating (paint finish)          |  |  | Special paint finish C3                           |  |  |  |  |  |
| Grease nipple                                                                       |  |  | M10x1 DIN 3404 A               |  |  |                                |  |  | Color, paint shade              |  |  | RAL7030                                           |  |  |  |  |  |
| Type of bearing                                                                     |  |  | Locating bearing NDE           |  |  |                                |  |  | Motor protection                |  |  | (H) 3 resistance thermometers PT100 (6 terminals) |  |  |  |  |  |
| Condensate drainage holes                                                           |  |  | With (standard)                |  |  |                                |  |  | Method of cooling               |  |  | IC411 - self ventilated, surface cooled           |  |  |  |  |  |

|                          |  |  |           |  |  |                                |  |  |                     |  |  |  |  |  |  |  |  |
|--------------------------|--|--|-----------|--|--|--------------------------------|--|--|---------------------|--|--|--|--|--|--|--|--|
| Terminal box             |  |  |           |  |  |                                |  |  |                     |  |  |  |  |  |  |  |  |
| Terminal box position    |  |  | top       |  |  | Max. cross-sectional area      |  |  | 150 mm <sup>2</sup> |  |  |  |  |  |  |  |  |
| Material of terminal box |  |  | cast iron |  |  | Cable diameter from ... to ... |  |  | 38 mm - 45 mm       |  |  |  |  |  |  |  |  |
| Type of terminal box     |  |  | TB1 Q01   |  |  | Cable entry                    |  |  | 2xM63x1,5-2xM20x1,5 |  |  |  |  |  |  |  |  |
| Contact screw thread     |  |  | M12       |  |  | Cable gland                    |  |  | 4 plugs             |  |  |  |  |  |  |  |  |

I<sub>A</sub>/I<sub>N</sub> = locked rotor current / current nominal  
M<sub>K</sub>/M<sub>N</sub> = locked rotor torque / torque nominal  
M<sub>B</sub>/M<sub>N</sub> = break down torque / nominal torque

1) L<sub>10mh</sub> according to DIN ISO 281 10/2010  
2) at rated power / at full load

3) Value is valid only for DOL operation with motor design IC411

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|                                  |                                        |                   |                                      |                                                                                                              |                             |                                |             |
|----------------------------------|----------------------------------------|-------------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------------|-------------|
| Responsible department<br>IN LVM | Technical reference                    | Created by<br>SPC | Approved by<br>Created automatically | Technical data are subject to change! There may be discrepancies between calculated and rating plate values. |                             | <a href="#">Link documents</a> |             |
| INNOMOTICS                       | Document type<br>Technical data sheet  |                   |                                      | Document status<br>Released                                                                                  |                             |                                |             |
|                                  | Document title<br>1LE1503-3AB53-4GH4-Z |                   |                                      | Document number<br>TDS-240923-125336                                                                         |                             |                                |             |
| Restricted<br>© Innomotics 2024  | D22+Q01+Q02+Q72+R62+S02                |                   |                                      | Revision<br>AA                                                                                               | Creation date<br>2024-09-23 | Language<br>en                 | Page<br>1/2 |

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|                |
|----------------|
| Special design |
|----------------|

|     |                                                                                     |     |                                                            |
|-----|-------------------------------------------------------------------------------------|-----|------------------------------------------------------------|
| D22 | Motor without CE character for export outside the EEA (see EU regulation 2019/1781) | Q72 | 2 Pt100 resistance thermometers for bearings (4 terminals) |
| Q01 | Measuring nipple for SPM shock pulse measurement to monitor bearings                | R62 | Cast iron auxiliary terminal box (small)                   |
| Q02 | Anti-condensation heating for 230 V (2 terminals)                                   | S02 | Special paint finish C3                                    |

Additional information:

## Space heaters

|                 |                     |
|-----------------|---------------------|
| Technical data: | 1-phase, 230 V 109W |
|-----------------|---------------------|

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