

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



Motor type : 1CV4312B INNOMOTICS SD - 315 M - IM B3 - 4p

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

Remarks

Safe Area

Electrical data -/-

| 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>f</sub> /I <sub>N</sub> | T <sub>f</sub> /T <sub>N</sub> | T <sub>B</sub> /T <sub>N</sub> |       |
| DOL duty (S1) - 155(F) to 130(B)                    |       |          |        |      |        |         |       |                 |                                                  |                        |                    |      |      |                                |                                |                                |       |
| 400                                                 | Δ     | 50       | 132.00 | -/-  | 235.00 | 1490    | 850.0 | 96.4            | 96.6                                             | 96.3                   | 0.85               | 0.81 | 0.73 | 8.2                            | 3.3                            | 3.2                            | IE4   |
| 690                                                 | Y     | 50       | 132.00 | -/-  | 135.00 | 1490    | 850.0 | 96.4            | 96.6                                             | 96.3                   | 0.85               | 0.81 | 0.73 | 8.2                            | 3.3                            | 3.2                            | IE4   |
| 460                                                 | Δ     | 60       | 132.00 | -/-  | 205.00 | 1791    | 700.0 | 96.5            | 96.5                                             | 95.9                   | 0.84               | 0.80 | 0.71 | 9.2                            | 3.6                            | 3.6                            | IE4   |
| 460                                                 | Δ     | 60       | 152.00 | -/-  | 235.00 | 1790    | 810.0 | 96.5            | 96.6                                             | 96.3                   | 0.85               | 0.82 | 0.74 | 8.1                            | 3.2                            | 3.1                            | IE4   |
|                                                     |       |          |        |      |        |         |       |                 |                                                  |                        |                    |      |      |                                |                                |                                |       |
| IM B3 / IM1001                                      |       | FS 315 M |        |      |        | IP55    | UKCA  | IEC/EN 60034    |                                                  | IEC, DIN, ISO, VDE, EN |                    |      |      |                                |                                |                                |       |
| Environmental conditions : -20 °C - +40 °C / 1000 m |       |          |        |      |        |         |       |                 | Locked rotor time (hot / cold) : 25.4 s   39.5 s |                        |                    |      |      |                                |                                |                                |       |

Mechanical data

|                                                                                     |                                |                                |                            |                                         |
|-------------------------------------------------------------------------------------|--------------------------------|--------------------------------|----------------------------|-----------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 67 / 81 dB(A) <sup>2) 3)</sup> | 72 / 86 dB(A) <sup>2) 3)</sup> | External earthing terminal | (Standard) Yes                          |
| Moment of inertia                                                                   | 2.9100 kg m <sup>2</sup>       |                                | Vibration severity grade   | Grade A                                 |
| Bearing DE   NDE                                                                    | NU 319                         | 6319 C3                        | Thermal class              | F                                       |
| permissible lateral force on (N)                                                    | X <sub>0</sub> : 31000         | X <sub>0.5</sub> : N/A         | Duty type                  | S1                                      |
| bearing lifetime                                                                    |                                |                                | Direction of rotation      | bidirectional                           |
| L <sub>10mh</sub> F <sub>Rad,min</sub> for coupling operation 50 60Hz <sup>1)</sup> | 40000 h                        | 32000 h                        | Frame material             | cast iron                               |
| Relubrication interval/quantity DE   NDE                                            | 40 g   40 g<br>6000 h          |                                | Net weight of the motor    | 942 kg                                  |
| Lubricants                                                                          | UNIREX N3                      |                                | Coating (paint finish)     | Standard paint finish C2                |
| Regreasing device                                                                   | Flat type lubricating nipple   |                                | Color, paint shade         | RAL7030                                 |
| Grease nipple                                                                       | M10x1 DIN 3404 A               |                                | Motor protection           | without (Standard)                      |
| Type of bearing                                                                     | Locating bearing NDE           |                                | Method of cooling          | IC411 - self ventilated, surface cooled |
| Condensate drainage holes                                                           | (Standard) Yes                 |                                |                            |                                         |

Terminal box

|                          |              |                                |                     |
|--------------------------|--------------|--------------------------------|---------------------|
| Terminal box position    | at the right | Max. cross-sectional area      | 240 mm <sup>2</sup> |
| Material of terminal box | cast iron    | Cable diameter from ... to ... | 34 mm - 45 mm       |
| Type of terminal box     | TB1Q01       | Cable entry                    | 2xM63x1,5           |
| Contact screw thread     | 6xM12        | Cable gland                    | 2 plugs             |

I<sub>f</sub>/I<sub>N</sub> = locked rotor current / current nominal  
M<sub>f</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 I at full load

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

Transmittal, reproduction, dissemination and/or editing of this document as well as utilization of its contents and communication thereof to others without express authorization are prohibited. Offenders will be held liable for payment of damages. All rights created by patent grant or registration of a utility model or design patent are reserved.

|                                  |                                        |                   |                                      |                                                                                                              |                             |                                                                                       |             |
|----------------------------------|----------------------------------------|-------------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------|-------------|
| 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>1LE5504-3AB23-4AA5-Z |                   |                                      | Document number<br>TDS-240826-110359                                                                         |                             |                                                                                       |             |
| Restricted<br>© Innomotics 2024  | L22                                    |                   |                                      | Revision<br>AA                                                                                               | Creation date<br>2024-08-26 | Language<br>en                                                                        | Page<br>1/2 |

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



Motor type : 1CV4312B

INNOMOTICS SD - 315 M - IM B3 - 4p

Special design

L22

Bearing design for increased cantilever forces

Transmittal, reproduction, dissemination and/or editing of this document as well as utilization of its contents and communication thereof to others without express authorization are prohibited. Offenders will be held liable for payment of damages. All rights created by patent grant or registration of a utility model or design patent are reserved.

|                                  |                                        |                   |                                      |                                                                                                              |                             |                                                                                       |  |
|----------------------------------|----------------------------------------|-------------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------|--|
| 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>1LE5504-3AB23-4AA5-Z |                   |                                      | Document number<br>TDS-240826-110359                                                                         |                             |                                                                                       |  |
|                                  | Restricted<br>© Innomotics 2024        |                   |                                      | Revision<br>AA                                                                                               | Creation date<br>2024-08-26 |                                                                                       |  |