



## Main

|                           |                       |
|---------------------------|-----------------------|
| Range compatibility       | Lexium SD3            |
| Product or component type | Motion control motor  |
| Device short name         | BRS3                  |
| Maximum mechanical speed  | 3000 rpm              |
| Motor type                | 3-phase stepper motor |
| Number of motor poles     | 6                     |
| Supply voltage limits     | 48 V DC<br>34 V DC    |
| Mounting support          | Flange                |
| Motor flange size         | 57.2 mm               |
| Length                    | 42 mm                 |
| Centring collar diameter  | 38 mm                 |

## Complementary

|                                       |                                                                                                                                                                     |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Centring collar depth                 | 1.6 mm                                                                                                                                                              |
| Number of mounting holes              | 4                                                                                                                                                                   |
| Mounting holes diameter               | 5.2 mm                                                                                                                                                              |
| Circle diameter of the mounting holes | 66.6 mm                                                                                                                                                             |
| Electrical connection                 | Flying leads                                                                                                                                                        |
| Holding brake                         | Without                                                                                                                                                             |
| Shaft end                             | Smooth shaft                                                                                                                                                        |
| Second shaft                          | Without second shaft end                                                                                                                                            |
| Shaft diameter                        | 6.35 mm                                                                                                                                                             |
| Shaft length                          | 21 mm                                                                                                                                                               |
| Nominal torque                        | 0.45 N.m                                                                                                                                                            |
| Holding torque                        | 0.51 N.m                                                                                                                                                            |
| Rotor inertia                         | 0.1 kg.cm <sup>2</sup>                                                                                                                                              |
| Resolution                            | 200, 400, 500, 1000, 2000, 4000, 5000, 10000 steps number of full steps per revolution<br>1.8 °, 0.9 °, 0.72 °, 0.36 °, 0.18 °, 0.09 °, 0.072 °, 0.036 ° step angle |
| Accuracy error                        | +/- 6 arc min                                                                                                                                                       |
| Maximum starting frequency            | 8.5 kHz                                                                                                                                                             |
| [In] rated current                    | 5.2 A                                                                                                                                                               |
| Resistance                            | 0.42 Ohm (winding)                                                                                                                                                  |
| Time constant                         | 2.1 ms                                                                                                                                                              |
| Maximum radial force Fr               | 24 N (first shaft end)<br>40 N (second shaft end)                                                                                                                   |
| Maximum axial force Fa                | 8.4 N (force pressure)<br>100 N (tensile force)                                                                                                                     |
| Service life in hours                 | 20000 h (bearing)                                                                                                                                                   |
| Angular acceleration                  | 200000 rad/s <sup>2</sup>                                                                                                                                           |
| Product weight                        | 1.3 kg                                                                                                                                                              |

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## Environment

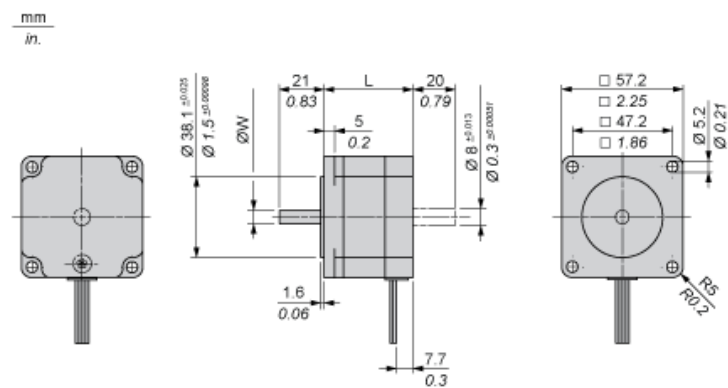
|                                       |                                                                                                                                                 |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Standards                             | EN 50347<br>IEC 60072-1                                                                                                                         |
| Type of cooling                       | Natural convection                                                                                                                              |
| Ambient air temperature for operation | -25...40 °C                                                                                                                                     |
| Ambient air temperature for storage   | -25...70 °C                                                                                                                                     |
| Operating altitude                    | <= 1000 m without power derating                                                                                                                |
| Relative humidity                     | 15...85 % without condensation                                                                                                                  |
| Vibration resistance                  | A conforming to EN/IEC 60034-14<br>20 m/s <sup>2</sup> maximum                                                                                  |
| IP degree of protection               | IP41 for shaft bushing without shaft seal ring conforming to EN/IEC 60034-5<br>IP56 for total except shaft bushing conforming to EN/IEC 60034-5 |
| Temperature class                     | F class winding conforming to IEC/EN 60034-1                                                                                                    |

## Offer Sustainability

|                                  |                                                                                       |
|----------------------------------|---------------------------------------------------------------------------------------|
| Sustainable offer status         | Green Premium product                                                                 |
| RoHS (date code: YYWW)           | Compliant - since 0623 - <a href="#">Schneider Electric declaration of conformity</a> |
| REACH                            | Reference not containing SVHC above the threshold                                     |
| Product environmental profile    | Available <a href="#">Download Product Environmental</a>                              |
| Product end of life instructions | Need no specific recycling operations                                                 |

## Dimensions

### 3-Phase Stepper Motor in Wire Version



Dimensions in mm

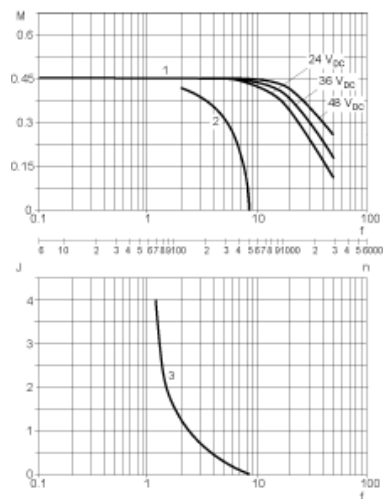
| L       | Shaft diameter ØW |
|---------|-------------------|
| 42 ±0.5 | 6.35 ±0.013       |

Dimensions in in.

| L           | Shaft diameter ØW |
|-------------|-------------------|
| 1.65 ±0.020 | 0.25 ±0.00051     |

## Torque Characteristics

Measurement at 1000 Steps/Revolution, Nominal Voltage DC Bus  $U_N$  and Phase Current  $I_N$



- M : Torque in Nm
- n : Speed in rpm
- f : Frequency in kHz
- J : Rotor inertia in kg.cm<sup>2</sup>
- 1 : Pull-out torque
- 2 : Pull-in torque
- 3 : Maximum load inertia