

# Product data sheet

Specifications



gearbox straight teeth GBX, Lexium,  
120mm, reduction 3:1 , 7arc.min,  
115N.m

GBX120003K

**Product availability: Non-Stock - Not normally stocked in  
distribution facility**

## Main

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range Compatibility       | Lexium SD3<br>Lexium 62<br>Lexium 28<br>Lexium 32<br>Lexium 62 ILM<br>Lexium 52<br>Lexium 32i                                                                                                                                                                                                                                                                                                                                                                   |
| Gear box type             | Straight teeth                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Product or Component Type | Planetary gearbox                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Device short name         | GBX                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Product compatibility     | BMI 3.9 in (100 mm), 2<br>BMI 3.9 in (100 mm), 3<br>BMH 5.5 in (140 mm), 1<br>BMH 5.5 in (140 mm), 2<br>BMH 5.5 in (140 mm), 3<br>BSH 3.9 in (100 mm), 4<br>BSH 5.5 in (140 mm), 1<br>BSH 5.5 in (140 mm), 2<br>BSH 5.5 in (140 mm), 3<br>BSH 5.5 in (140 mm), 4<br>BRS3<br>BCH2 3.9 in (100 mm), 1<br>BCH2 3.9 in (100 mm), 2<br>BCH2 5.1 in (130 mm), 1<br>BCH2 5.1 in (130 mm), 2<br>BCH2 5.1 in (130 mm), 3<br>BCH2 5.1 in (130 mm), 4<br>SH3<br>MH3<br>ILM |
| Gearbox external diameter | 4.7 in (120 mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Reduction ratio           | 3:1                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

## Complementary

|                            |                               |
|----------------------------|-------------------------------|
| Maximum torsional backlash | 7 arc.min                     |
| Torsional rigidity         | 12 N.m/arcmin                 |
| Housing Colour             | Black                         |
| Housing material           | Black anodized aluminium      |
| Shaft material             | C 45                          |
| Additional information     | Lubricated for life           |
| Service life in hours      | 30000 h 100 rpm 86 °F (30 °C) |
| Mounting position          | Any position                  |
| Efficiency                 | 97.0 %                        |

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

|                          |                                                                                            |
|--------------------------|--------------------------------------------------------------------------------------------|
| Maximum radial force Fr  | 1500 N 100 rpm, force applied at mid-distance from output shaft during 30000 hour at 30 °C |
| Maximum axial force Fa   | 2100 N 100 rpm, during 30000 hour at 30°C                                                  |
| moment of inertia        | 2.361 kg.cm²                                                                               |
| Continuous output torque | 1017.8 lbf.in (115 N.m) 100 rpm 86 °F (30 °C)                                              |
| Maximum output torque    | 1628.5 lbf.in (184 N.m) 100 rpm 86 °F (30 °C)                                              |
| Product Weight           | 13.2 lb(US) (6 kg)                                                                         |
| Input diameter           | 0.9 in (24.0 mm)                                                                           |
| No load running torque   | 2.7 lbf.in (0.3 N.m)                                                                       |
| Reduction ratio          | 3                                                                                          |
| Compatibility code       | GBX                                                                                        |
| Internal length          | 3.9 in (99.5 mm)                                                                           |

## Environment

|                                   |                            |
|-----------------------------------|----------------------------|
| Noise level                       | 65 dB 1 m, no-load         |
| IP Degree of Protection           | Shaft output IP54          |
| ambient temperature for operation | -13...194 °F (-25...90 °C) |

## Ordering and shipping details

|                   |               |
|-------------------|---------------|
| Category          | US1PC5318283  |
| Discount Schedule | PC53          |
| GTIN              | 3606480388439 |
| Returnability     | No            |
| Country of origin | DE            |

## Packing Units

|                              |                           |
|------------------------------|---------------------------|
| Unit Type of Package 1       | PCE                       |
| Nbr. of units in pkg.        | 1                         |
| Package 1 Height             | 5.118 in (13.000 cm)      |
| Package 1 Width              | 5.118 in (13.000 cm)      |
| Package 1 Length             | 7.087 in (18.000 cm)      |
| Package weight(Lbs)          | 11.828 lb(US) (5.365 kg)  |
| Unit Type of Package 2       | S02                       |
| Number of Units in Package 2 | 2                         |
| Package 2 Height             | 5.906 in (15.000 cm)      |
| Package 2 Width              | 11.811 in (30.000 cm)     |
| Package 2 Length             | 15.748 in (40.000 cm)     |
| Package 2 Weight             | 24.229 lb(US) (10.990 kg) |
| Unit Type of Package 3       | P06                       |
| Number of Units in Package 3 | 32                        |
| Package 3 Height             | 29.528 in (75.000 cm)     |
| Package 3 Width              | 31.496 in (80.000 cm)     |

|                  |                             |
|------------------|-----------------------------|
| Package 3 Length | 23.622 in (60.000 cm)       |
| Package 3 Weight | 405.298 lb(US) (183.840 kg) |

## Contractual warranty

|                      |    |
|----------------------|----|
| Warranty (in months) | 18 |
|----------------------|----|



## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)



### Environmental footprint

|                                                        |                  |
|--------------------------------------------------------|------------------|
| Total lifecycle Carbon footprint                       | 1 184 kg CO2 eq. |
| Carbon footprint of the manufacturing phase [A1 to A3] | 24 kg CO2 eq.    |
| Carbon footprint of the distribution phase [A4]        | 0.8 kg CO2 eq.   |
| Carbon footprint of the installation phase [A5]        | 0 kg CO2 eq.     |
| Carbon footprint of the use phase [B2, B3, B4, B6]     | 1 159 kg CO2 eq. |
| Carbon footprint of the end-of-life phase [C1 to C4]   | 0.5 kg CO2 eq.   |

## Use Better



### Materials and Substances

|                                        |                                                                                                                                                                                                                                                                                             |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Packaging made with recycled cardboard | No                                                                                                                                                                                                                                                                                          |
| Packaging without single use plastic   | No                                                                                                                                                                                                                                                                                          |
| SCIP Number                            | 7c9e597c-8ccc-4daf-95fb-5d67fc70d561                                                                                                                                                                                                                                                        |
| EU RoHS Directive                      | <a href="#">Compliant By Exemption</a>                                                                                                                                                                                                                                                      |
| REACH Regulation                       | <a href="#">Reference contains Substances of Very High Concern above the threshold</a>                                                                                                                                                                                                      |
| California proposition 65              | WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> |
| PVC free                               | Yes                                                                                                                                                                                                                                                                                         |

## Use Longer



### Lifetime extension

|        |    |
|--------|----|
| Repair | No |
|--------|----|

## Use Again

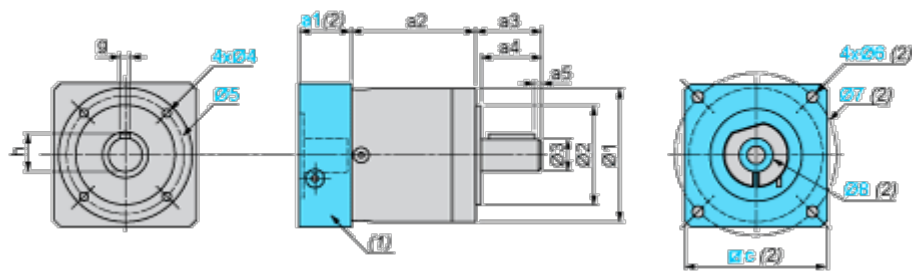


### Repack and remanufacture

|                     |                                          |
|---------------------|------------------------------------------|
| Circularity Profile | No need of specific recycling operations |
| Take-back           | No                                       |

Dimensions Drawings

Dimensions with Servo Motor Adaptation Kit



- (1) GBK adaptation kit
- (2) GBK adaptation kit related dimensions a1, c, Ø6, Ø7, Ø8 depend on the gearbox and servo motor combination
- Ø8 shaft end adaptor in case motor shaft diameter is smaller than gearbox input coupling diameter

Values in mm

| a2   | a3 | a4 | a5 | h  | g | Ø1  | Ø2    | Ø3    | Ø4       | Ø5  |
|------|----|----|----|----|---|-----|-------|-------|----------|-----|
| 99.5 | 55 | 50 | 5  | 28 | 8 | 115 | 80 h7 | 25 h7 | M10 x 16 | 100 |

Values in in.

| a2   | a3   | a4   | a5   | h    | g    | Ø1   | Ø2      | Ø3      | Ø4         | Ø5   |
|------|------|------|------|------|------|------|---------|---------|------------|------|
| 3.92 | 2.17 | 1.97 | 0.19 | 1.10 | 0.31 | 4.53 | 3.15 h7 | 0.98 h7 | M10 x 0.63 | 3.94 |