

# Planetary Gearheads

## 0,8 Nm

For combination with  
DC-Micromotors  
Brushless DC-Motors  
Stepper Motors

### Series 20/1R

|   | 20/1R                    |
|---|--------------------------|
| Housing material                          | steel                    |
| Geartrain material                        | metal                    |
| Recommended max. input speed for:         |                          |
| – continuous operation                    | 12 000 min <sup>-1</sup> |
| Backlash, at no-load                      | ≤ 1 °                    |
| Bearings on output shaft                  | ball bearings, preloaded |
| Shaft load, max.:                         |                          |
| – radial (8,5 mm from mounting face)      | ≤ 75 N                   |
| – axial                                   | ≤ 20 N                   |
| Shaft press fit force, max.               | ≤ 35 N                   |
| Shaft play                                |                          |
| – radial (8,5 mm from mounting face)      | ≤ 0,03 mm                |
| – axial                                   | = 0 mm                   |
| Operating temperature range <sup>1)</sup> | - 10 ... + 125 °C        |

| Technical data                               |                 | 1      | 2             | 2     | 3            | 3     | 4   | 5                                  |
|--|-----------------|--------|---------------|-------|--------------|-------|---|------------------------------------|
| Number of gear stages                        |                 |        |               |       |              |       |   |                                    |
| Continuous torque                            | mNm             | 800    | 800           | 800   | 800          | 800   | 800                                       | 800                                |
| Intermittent torque                          | mNm             | 1 100  | 1 100         | 1 100 | 1 100        | 1 100 | 1 100                                     | 1 100                              |
| Mass without motor, ca.                      | g               | 29     | 39            | 39    | 49           | 49    | 59  | 69                                 |
| Efficiency, max.                             | %               | 88     | 80            | 80    | 70           | 70    | 60  | 55                                 |
| Direction of rotation, drive to output       |                 | =      | =             | =     | =            | =     | =   | =                                  |
| Reduction ratio <sup>2)</sup><br>(rounded)   |                 | 3,71:1 | 9,7:1<br>14:1 | 23:1  | 43:1<br>66:1 | 86:1  | 112:1<br>134:1<br>159:1<br>190:1<br>246:1 | 415:1<br>592:1<br>989:1<br>1 526:1 |
| L2 [mm] = length without motor <sup>3)</sup> |                 | 18,4   | 23,5          | 23,5  | 28,6         | 28,6  | 33,7                                      | 38,8                               |
| L1 [mm] = length with motor                  |                 |        |               |       |              |       |   |                                    |
|  | 1741U...CXR     | 59,6   | 64,7          | 64,7  | 69,8         | 69,8  | 74,9                                      | 80,0                               |
|  | 2224U...SR      | 42,6   | 47,7          | 47,7  | 52,8         | 52,8  | 57,9                                      | 63,0                               |
|  | 2232U...SR      | 50,6   | 55,7          | 55,7  | 60,8         | 60,8  | 65,9                                      | 71,0                               |
|  | 1645U...BHS     | 63,8   | 68,9          | 68,9  | 74,0         | 74,0  | 79,1                                      | 84,2                               |
|  | 1660U...BHS/BHT | 78,8   | 83,9          | 83,9  | 89,0         | 89,0  | 94,1                                      | 99,2                               |
|  | 2036U...B       | 54,4   | 59,5          | 59,5  | 64,6         | 64,6  | 69,7                                      | 74,8                               |
|  | 2057S...B       | 77,3   | 82,4          | 87,9  | 87,5         | 93,0  | 92,6                                      | 97,7                               |
|  | 2214S...BXTX    | 37,3   | 42,4          | 47,9  | 47,5         | 53,0  | 52,6                                      | 57,7                               |
|  | 2214S...BXTR    | 36,5   | 41,6          | 47,1  | 46,7         | 52,2  | 51,8                                      | 56,9                               |
|  | AM2224...10     | 46,1   | 51,2          | 51,2  | 56,3         | 56,3  | 61,4                                      | 66,5                               |

<sup>1)</sup> Low operating temperature range - 45 ... + 100 °C shall be ordered as option - K2823

<sup>2)</sup> The reduction ratios are rounded, the exact values are available on request or at [www.faulhaber.com](http://www.faulhaber.com).

<sup>3)</sup> L2 + 1,9 mm or 7,4 mm, in combination with 2057S...B and 2214...BXT R/H.

