

**NEW**

**Motion Control Systems**  
 V3.0, 4-Quadrant PWM  
 with RS232 or CANopen interface

**160 mNm**  
**140 W**

**MCS 3274 ... BP4 RS/CO**

| Values at 22°C and nominal voltage                              |                            | MCS 3274G024BP4 .. |                   |
|---|----------------------------|--------------------|-------------------|
| Power supply for electronic                                     | $U_p$                      | 12 ... 50          | V DC              |
| Power supply for motor  | $U_{mot}$                  | 0 ... 50           | V DC              |
| Nominal voltage for motor                                       | $U_N$                      | 24                 | V                 |
| No-load speed (at $U_N$ )                                       | $n_0$                      | 7 400              | min <sup>-1</sup> |
| Peak torque (S2 operation for max. 1s)                          | $M_{max.}$                 | 320                | mNm               |
| Torque constant   | $k_m$                      | 28,4               | mNm/A             |
| PWM switching frequency   | $f_{PWM}$                  | 100                | kHz               |
| Efficiency electronic   | $\eta$                     | 95                 | %                 |
| Standby current for electronic (at 24V)                         | $I_{el}$                   | 0,06               | A                 |
| Shaft bearings  | ball bearings, preloaded   |                    |                   |
| Shaft load max.:  |                            |                    |                   |
| – with shaft diameter   | 5                          |                    | mm                |
| – radial at 3 000 min <sup>-1</sup> (5 mm from mounting flange) | 50                         |                    | N                 |
| – axial at 3 000 min <sup>-1</sup> (push only)                  | 5                          |                    | N                 |
| – axial at standstill (push only)                               | 50                         |                    | N                 |
| Shaft play:   |                            |                    |                   |
| – radial  | ≤ 0,015                    |                    | mm                |
| – axial   | = 0                        |                    | mm                |
| Operating temperature range                                     | -40 ... +100               |                    | °C                |
| Speed range (up to 36V)   | 0 ... 11 600               |                    | min <sup>-1</sup> |
| Housing material  | aluminium, stainless steel |                    |                   |
| Protection class, with option V ring                            | IP 54                      |                    |                   |
| Mass  | 524                        |                    | g                 |

| Rated values for continuous operation |       |       |                   |
|---------------------------------------|-------|-------|-------------------|
| Rated torque                          | $M_N$ | 160   | mNm               |
| Rated current (thermal limit)         | $I_N$ | 5,6   | A                 |
| Rated speed                           | $n_N$ | 6 350 | min <sup>-1</sup> |

**Note:** Rated values are calculated with nominal voltage and at a 22°C ambient temperature.

| Interface                            | ... RS | ... CO  |
|--------------------------------------|--------|---------|
| Configuration from MotionManager 6.0 | RS232  | CANopen |
| Fieldbus                             | RS232  | CANopen |

| Range of functions   | MCS   |
|----------------------|---|
| Operating modes      | PP, PV, PT, CSP, CSV, CST and homing acc. to IEC 61800-7-201 or IEC 61800-7-301 as well as position-, speed- and torque control via analog setpoint or voltage controller |
| Speed range          | See motor diagram   |
| Application programs | Max. 8 application programs (BASIC), one of which is an autostart function  |
| Additional functions | Touch-probe input, connection of a second incremental encoder, control of a holding brake   |
| Indicator            | LEDs for displaying the operating state<br>Trace as recorder (scope function) or logger   |

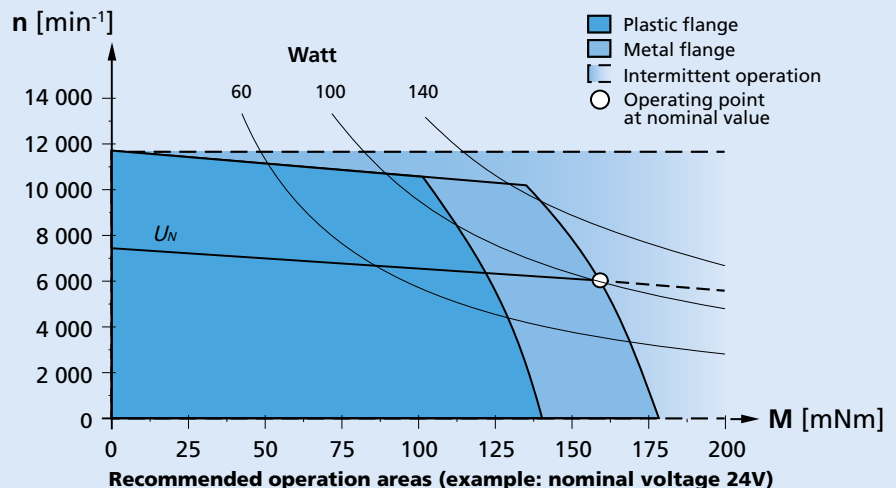
**Note:**

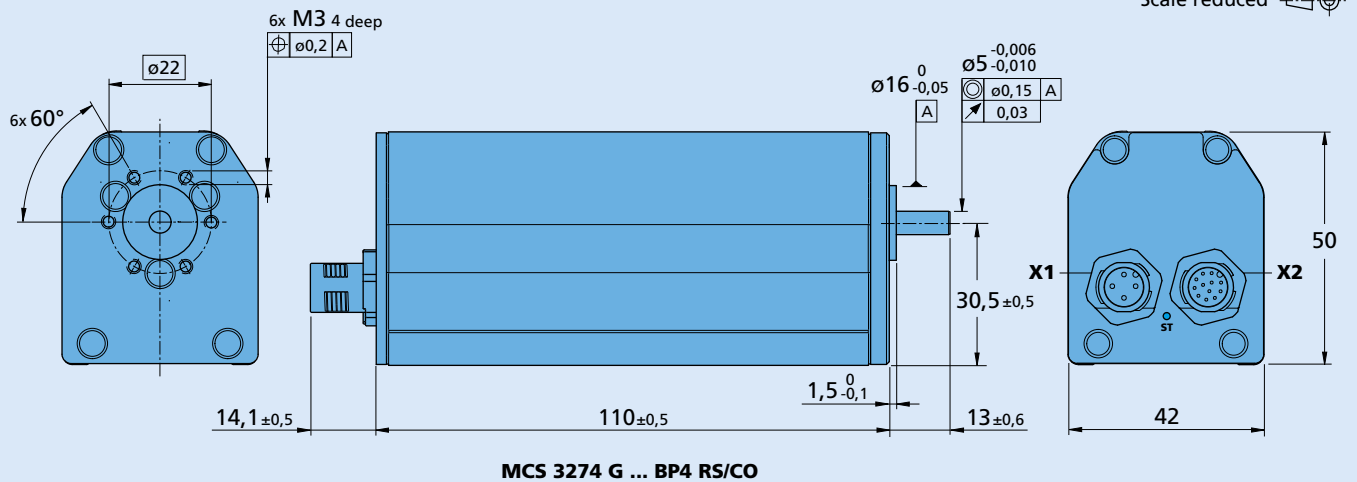
The display shows the range of possible operation points of the drives at a given ambient temperature of 22°C.

The diagram indicates the recommended speed in relation to the available torque at the output shaft.

It includes the assembly on a plastic- as well as on a metal flange (assembly method: IM B 5).

The nominal voltage linear slope describes the maximal achievable operating points at nominal voltage. Any points of operation above this linear slope will require a supply voltage  $U_{mot} > U_N$ .



**Dimensional drawing**

**Option, cable and connection information**

 Example product designation: **MCS3274G024BP4RS-5453**

| Option | Type              | Description                          | Connection |                                   |  |   |
|--------|-------------------|--------------------------------------|------------|-----------------------------------|--|---|
|        |                   |                                      | Name       | Function                          | Inputs-outputs   | Description   |
| 5451   | Cable outlet      | Radial via base plate                | <b>X1</b>  | Motor and electronic power supply |  |   |
| 5452   | Shaft seal        | For use with oil emulsive substances |            |                                   |  |   |
| 5453   | Shaft seal        | IP54 according to IEC 60529          | <b>X2</b>  | Inputs / outputs                  | DigIn1, DigIn2, DigIn3<br>DigOut1, DigOut2<br>AnIn1, AnIn2<br>U <sub>out</sub> / GND | TTL or. PLC level<br>max. 0,7A continuous current<br>± 10V against AGND<br>5V |
| 5657   | Motor flange seal | IP54 according to IEC 60529          |            |                                   |  |   |

**Note:** For details on the connection assignment, see device manual for the MCS.

**Product Combination**

| Precision Gearheads / Lead Screws                | Encoder | Drive Electronics | Cables / Accessories   |
|--|---------|-------------------|--|
| 32A<br>32/3<br>32/3R<br>32/3S<br>38A<br>BS32-2.0 |         | Integrated        | To view our large range of accessory parts, please refer to the "Accessories" chapter. |