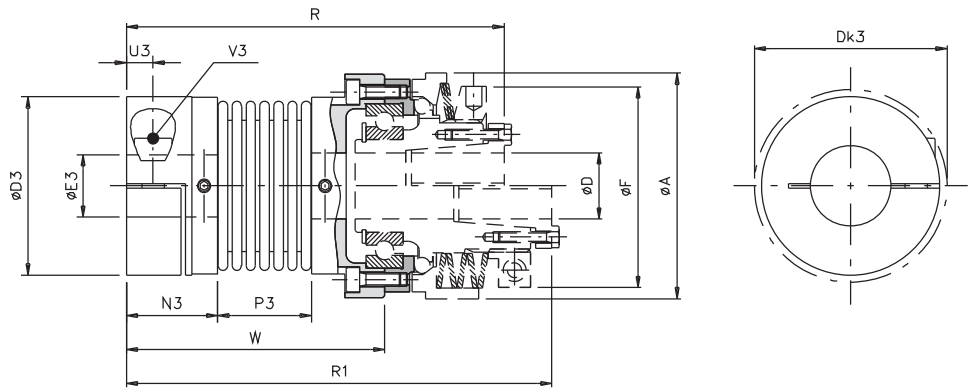


## ... + GSF (model with bellows coupling): technical data



### DIMENSIONS

| Size  |     | D3 | Dk3 | E3 H7 |      | N3   | P3   | U3  | A   | F  | D max. | R    | R1    | W    |
|-------|-----|----|-----|-------|------|------|------|-----|-----|----|--------|------|-------|------|
| SG    | GSF |    |     | min.  | max. |      |      |     |     |    |        |      |       |      |
| 00.40 | 1   | 34 | 36  | 5     | 16   | 17   | 16,5 | 4,5 | 44  | 38 | 12     | 72   | 84    | 48   |
| 00.47 | 2   | 40 | 44  | 8     | 20   | 20,5 | 21   | 5,5 | 50  | 42 | 17     | 87,5 | 102,5 | 58   |
| 0.63  | 3   | 55 | 58  | 10    | 30   | 22,5 | 27   | 6,5 | 70  | 62 | 20     | 109  | 125,5 | 68,5 |
| 1.80  | 4   | 65 | 73  | 14    | 38   | 26   | 32   | 8   | 85  | 75 | 25     | 126  | 144   | 81   |
| 2.96  | 5   | 83 | 89  | 14    | 45   | 31   | 41   | 9,5 | 100 | 82 | 35     | 156  | 174,5 | 102  |

### TECHNICAL DETAILS

| Size  |     | Torque [Nm] |     | Weight [kg] | Inertia [Kgm <sup>2</sup> ] | Max. speed [Rpm] | grubscrews | screws V3 | Tightening torque |             | Misalignments |              |               | Rigidity   |                             |                              |
|-------|-----|-------------|-----|-------------|-----------------------------|------------------|------------|-----------|-------------------|-------------|---------------|--------------|---------------|--|-----------------------------|------------------------------|
| SG    | GSF | Nom         | Max |             |                             |                  |            |           | grubscr. [Nm]     | screws [Nm] | angular α [°] | axial X [mm] | radial K [mm] | torsional R <sub>t</sub> [Nm/rad • 10 <sup>3</sup> ] | axial R <sub>A</sub> [N/mm] | radial R <sub>R</sub> [N/mm] |
| 00.40 | 1   | 5           | 10  | 0,07        | 0,000024                    | 4000             | M3         | M4        | 0,8               | 2,9         | 1° 30'        | ±0,5         | 0,20          | 3,050  | 30                          | 92                           |
| 00.47 | 2   | 15          | 30  | 0,14        | 0,000050                    | 4000             | M3         | M5        | 0,8               | 6           | 1° 30'        | ±0,6         | 0,20          | 7,000  | 45                          | 129                          |
| 0.63  | 3   | 35          | 70  | 0,29        | 0,000229                    | 4000             | M4         | M6        | 2                 | 10          | 2°            | ±0,8         | 0,25          | 16,300   | 69                          | 160                          |
| 1.80  | 4   | 65          | 130 | 0,45        | 0,000622                    | 3000             | M4         | M8        | 2                 | 25          | 2°            | ±0,8         | 0,25          | 33,000   | 74                          | 227                          |
| 2.96  | 5   | 150         | 300 | 0,93        | 0,000834                    | 2500             | M4         | M10       | 2                 | 49          | 2°            | ±1,0         | 0,30          | 64,100   | 87                          | 480                          |

### TRANSMITTABLE TORQUE WITH LOCKING ASSEMBLY

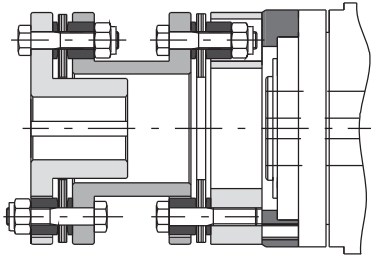
| Size | Transmission torque [Nm] according to the ø finished bore [mm] |   |   |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |
|------|--|---|---|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|      | 5  | 6 | 7 | 8  | 9  | 10 | 11 | 12 | 14 | 15 | 16 | 18 | 19 | 20  | 24  | 25  | 28  | 30  | 32  | 35  | 38  | 40  | 42  | 45  |
| 1    | 5  | 6 | 7 | 8  | 9  | 10 | 11 | 12 | 14 | 15 | 16 |    |    |     |     |     |     |     |     |     |     |     |     |     |
| 2    |  |   |   | 13 | 14 | 16 | 18 | 19 | 22 | 24 | 25 | 29 | 30 | 32  |     |     |     |     |     |     |     |     |     |     |
| 3    |  |   |   |    |    |    | 25 | 27 | 32 | 34 | 36 | 41 | 43 | 45  | 54  | 57  | 63  | 68  |     |     |     |     |     |     |
| 4    |  |   |   |    |    |    |    |    |    |    |    | 75 | 79 | 83  | 100 | 104 | 116 | 124 | 133 | 145 | 158 |     |     |     |
| 5    |  |   |   |    |    |    |    |    |    |    |    |    |    | 132 | 158 | 165 | 183 | 198 | 211 | 231 | 248 | 263 | 277 | 295 |

### NOTES

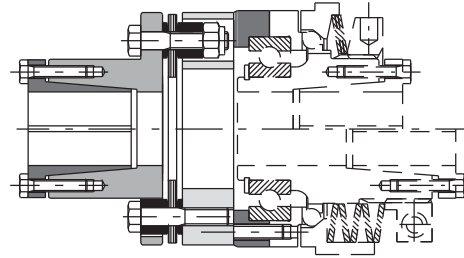
- ⊗ **Technical details:** these details refer only for the coupling (GSF), for torque limiters details, see on page 26-27.
- ⊗ **Technical details:** weights are relevant only for the coupling with pilot bore (GSF); inertias refer only for the coupling with maximum bore (GSF).

# BACKLASH FREE TORQUE LIMITER "DSS/SG": additional information

## OTHER COUPLING TYPES AVAILABLE



DSS/SG model with double flexing torsionally rigid metal disc coupling **GTR/D** when torsional rigidity is required and ability to accommodate radial misalignment.



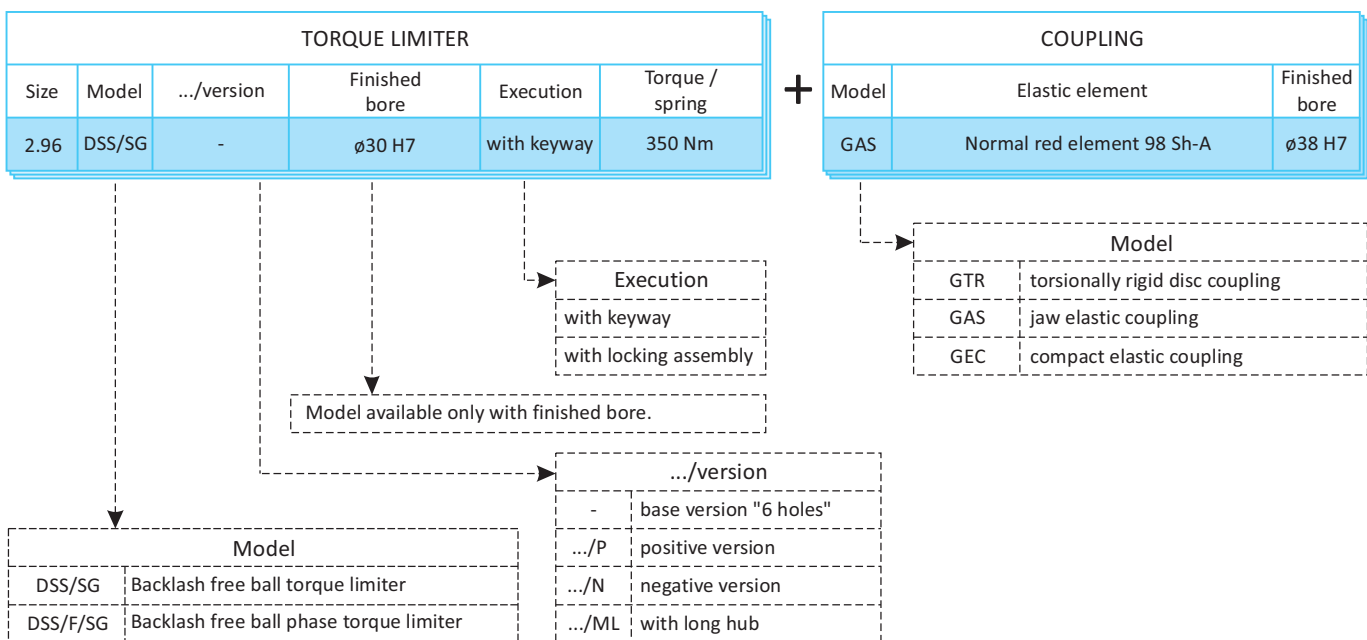
DSS/SG model with single flexing disc coupling **GTR/S** for applications where torsional rigidity is required.

## TORQUE TRANSMISSION

| Size  | Torque transmission [Nm] relevant to the springs configuration |               |                |               |               |                      |           |          |           |
|-------|--|---------------|----------------|---------------|---------------|----------------------|-----------|----------|-----------|
|       | Positive version (P)   |               |                |               |               | Negative version (N) |           |          |           |
|       | A5S1P<br>)00)  | A6S1P<br>)00) | A7S1P<br>)000) | A5M1P<br>)00) | A5G1P<br>)00) | A1N<br>)             | A2N<br>)  | A3N<br>) | A4N<br>)  |
| 00.40 |  | 2 - 10        |                |               |               | 0,6 - 1,5            | 1,5 - 3   | 2,7 - 5  |           |
| 00.47 |  |               | 6 - 14         | 12 - 23       |               | 2 - 5                | 4 - 9     | 7 - 15   |           |
| 0.63  | 5 - 20   |               |                | 11 - 40       | 20 - 75       | 5 - 14               | 12 - 28   | 24 - 50  |           |
| 1.80  | 12 - 35  |               |                |               | 30 - 105      | 9 - 28               | 18 - 60   | 40 - 100 |           |
| 2.96  |  |               |                | 35 - 115      | 50 - 200      | 20 - 45              | 42 - 95   |          | 85 - 200  |
| 3.116 | 40 - 110 *   |               |                | 70 - 290      | 110 - 415     | 35 - 100             | 75 - 200  |          | 195 - 415 |
| 4.138 | 75 - 275 *   |               |                | 140 - 395 *   | 315 - 750     | 75 - 190             | 140 - 345 |          | 245 - 720 |

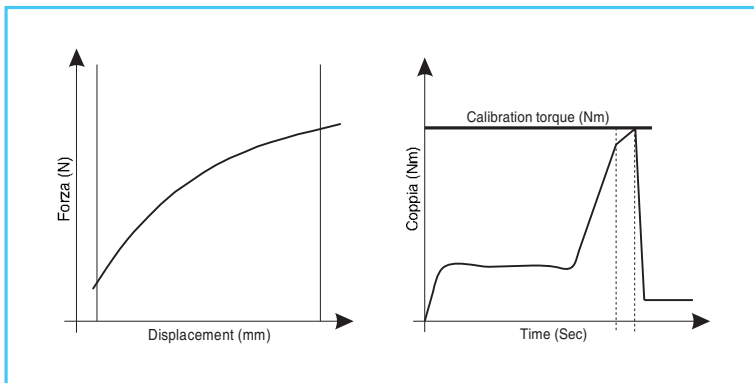
\* Until stocks are finished

## ORDER EXAMPLE



# BACKLASH FREE TORQUE LIMITER "DSS/SG": additional information

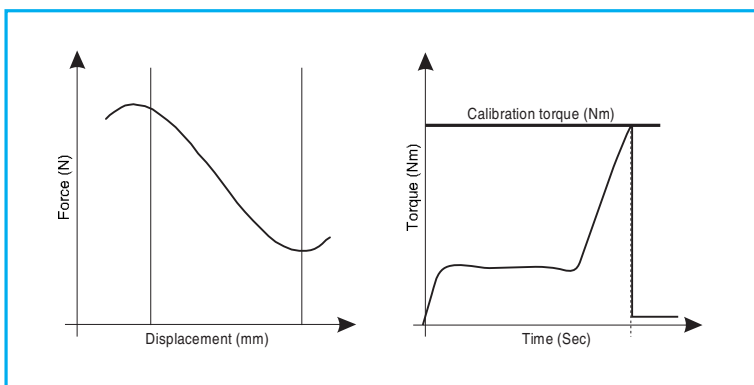
## VERSIONS



... / P

### Positive version (progressive spring)

This allows for a simpler and more linear calibration. Moreover, during disengagement it creates an increase in the torque, caused by the compression of springs, which, on presence of a non-homogenous (but normal) transmission, can be useful to avoid frequent disengagements and machine stops.

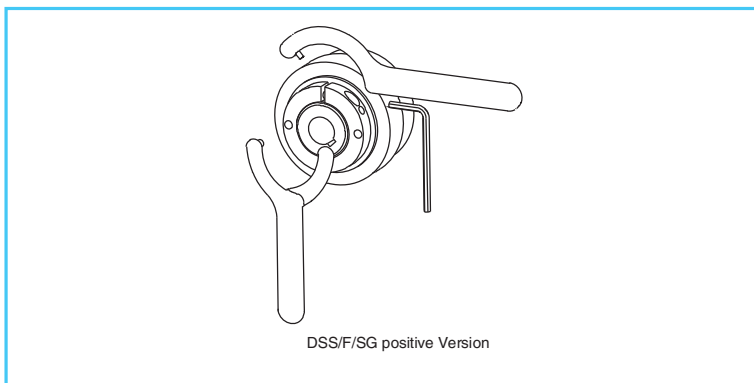


... / N

### Negative version (regressive spring)

It generates an immediate torque reduction, as soon as there is a minor overload, with consequent disengagement of the limiter and immediate stop of the drive. This characteristic is very useful on sensitive applications where even a slight increase of the loads can cause damage to the machine or to the machine product.

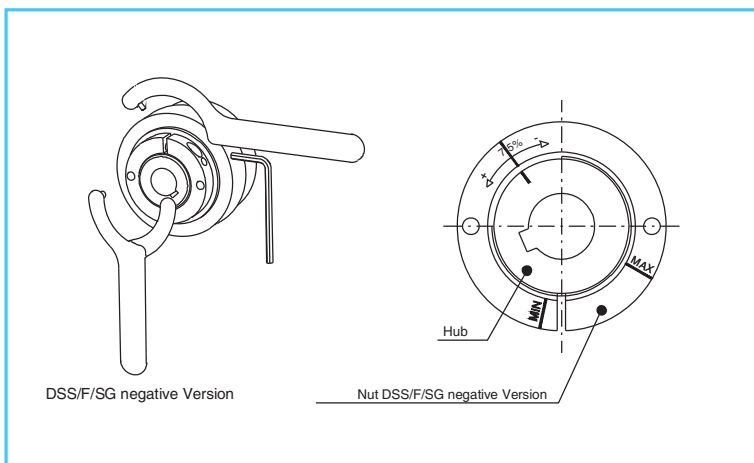
## TORQUE REGULATION



... / P

### Positive version (progressive spring)

As with the majority of ComInTec TORQUE LIMITERS, by turning the adjuster nut clockwise the disengagement torque increases. On the contrary turning it counter-clockwise, you obtain a reduction of the torque.



... / N

### Negative version (regressive spring)

Adjustment of the Negative version is opposite to all other units in our range. Unlike the traditional units, by rotating the adjuster nut clockwise the disengagement torque will reduce, and therefore to increase the torque the nut must be rotated anti-clockwise. To assist the operator in setting, there are clear markings on the nut showing 75% of the max torque and +/- Min/Max directions indicated.

**Unless otherwise requested, these models are supplied pre-calibrated at 75% of the maximum torque value of the spring's chosen configuration.**

# BACKLASH FREE TORQUE LIMITER “DSS/SG”: Introduction



- ⊙ Exact torque regulation through a balanced radial nut.
- ⊙ Innovative calibration system by quote “H” for an immediate calibration of the device.
- ⊙ Re-engagement in equidistant phase or 360°.
- ⊙ Maintenance free.
- ⊙ Possibility to add a microswitch / proximity to stop the motor drive.
- ⊙ Model available only with finished bore.
- ⊙ Drive component assembled and directly supported by a ball bearing.

### ON REQUEST

- ⊙ Complete with transmission component worked and assembled (plate wheel, pulley, gear,...)
- ⊙ Available in stainless steel for food and pharmaceutical environments.
- ⊙ Possibility to have a connection flange to the most common intermittent drive units.
- ⊙ Feasibility in personalized phase at 30°, 45°, 60°, 90°, ...

|  |  |  |         |
|--|--|--|---------|
|  | .../P: base model for a high sensitivity in calibration.   | from 1,5 to 750 Nm<br>max. bore ø50 mm | Page 26 |
|  | .../N: immediate disengagement when exceeding the calibration torque; low residual torque after the disengagement. | from 0,7 to 720 Nm<br>max. bore ø50 mm | Page 27 |
|  | ... + GAS/CCE: connection by elastic coupling to accept high misalignments.  | from 0,7 to 750 Nm<br>max. bore ø62 mm | Page 28 |
|  | ... + GAS/SG: connection by elastic coupling and single split clamp hub for a quick installation.                  | from 0,7 to 561 Nm<br>max. bore ø60 mm | Page 29 |
|  | ... + GSF: Connection by bellows coupling for application with reduced inertia.                                    | from 0,7 to 300 Nm<br>max. bore ø45 mm | Page 30 |
|  | DSS/SG/PR-V: Connection between motor and gearboxes with sensor and B5 flange.                                     | from 2 to 415 Nm<br>max. bore ø48 mm   | Page 31 |



### NEWS: DSS/SG in STAINLESS STEEL

- ⊙ Model without any backlash.
- ⊙ Same dimensions as the standard model, both in negative and positive versions.
- ⊙ Made in stainless steel at high resistance by suitable heat treatments.
- ⊙ High resistance to corrosion.
- ⊙ Suitable to food and/or pharmaceutical environments.

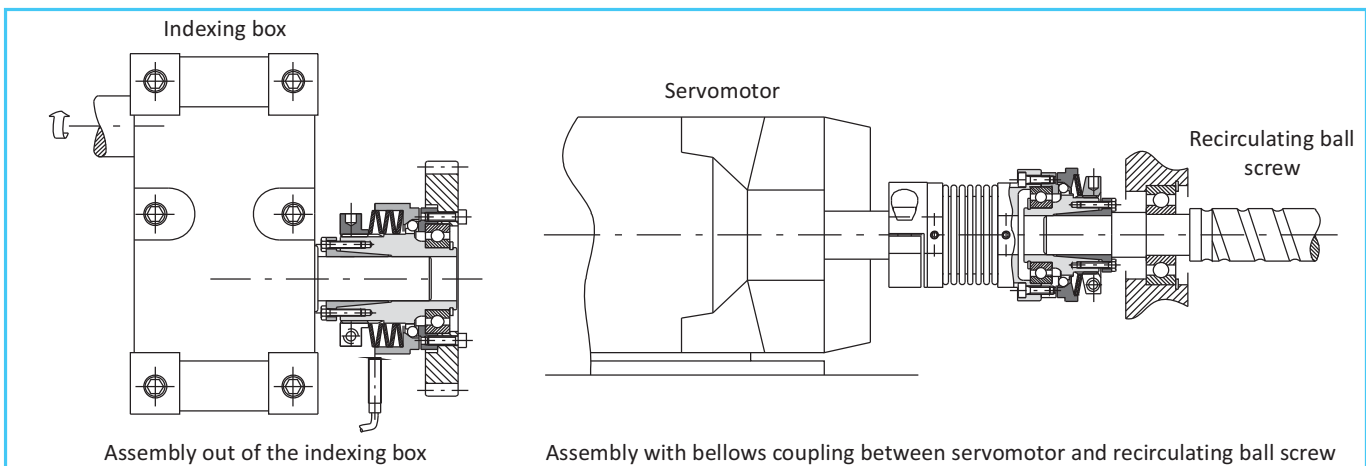
### APPLICATIONS

- ⊙ Packaging automatic machines.
- ⊙ Print machines.
- ⊙ CNC tool machines.
- ⊙ Index tables, filling machines, guiders.
- ⊙ Servomotors, slide guides.

### ADVANTAGES AND BENEFITS

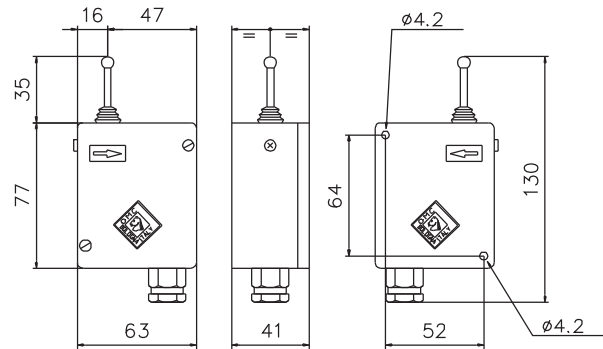
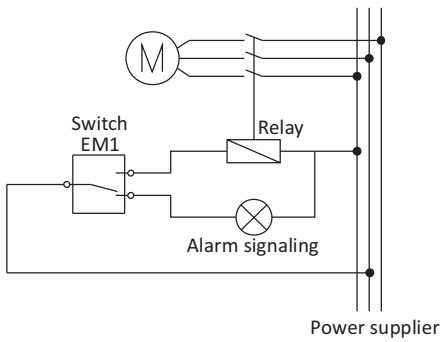
- ⊙ To protect the product against faulty positioning on the rotating table.
- ⊙ To protect the indexing against overloading along the transmission.
- ⊙ To protect the drive from product jam.
- ⊙ To protect the operating units of machine tools against impacts.
- ⊙ To protect slides or servomotors against impact or limit stops.

### ASSEMBLY EXAMPLES

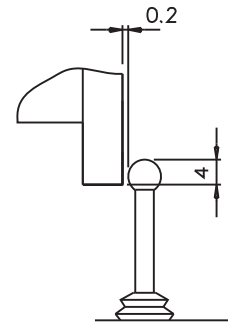


# ELECTROMECHANICAL SWITCH "EM1"

- Die-cast aluminium box with rotection level **IP57** DIN 40050.
- Adjustment of the lever end position possible.
- Operation temperature range from  $-10^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ .
- Three different options of voltage input: 15A-250VCA; 5A-24VCC; 0,2A-250VCC.
- 1 or 2 contacts available.
- Initial stroke 0,5 mm, Extra stroke:  $4 \div 8$  mm depending on setting (possible in a range of 6 mm).

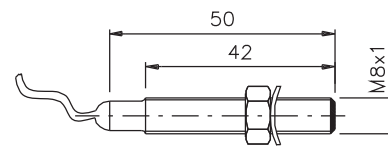
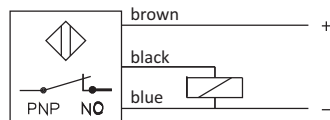
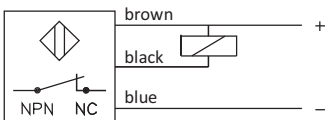
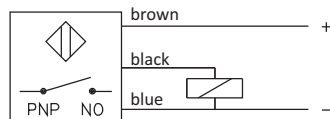
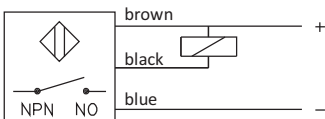


Weight: 350g



## PROXIMITY SENSOR "PRX"

- Standard version: Brass cover with protection level **IP67** DIN 40050.
- Electric contact:  $5 \div 24$  VdC.
- Frequency: 2000 Hz.
- Output: NPN (N.O.-N.C.) – PNP (N.O.-N.C.).
- Operating distance: max 1 mm.
- Cable length: 2 m (3x0,2).



Weight: 50g

