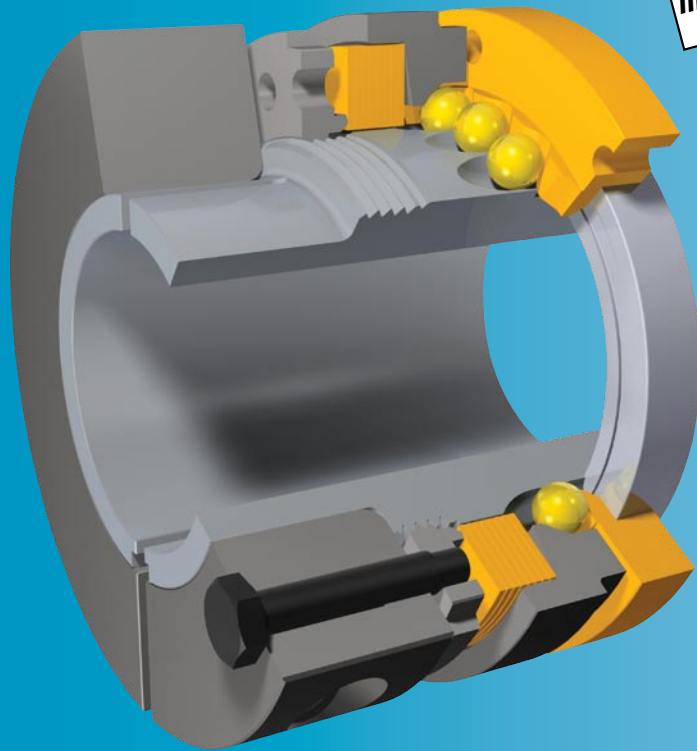


EAS[®]-smartic[®]

Installation space-optimised
torque limiting clutches

The
No. 1
for torque
limiting clutches



- *Simple, easily readable torque adjustment*
- *Quick installation via clamping hub*
- *Backlash-free torque transmission*
- *Good dynamic characteristics*

www.mayr.de

K.481.V09.GB

mayr[®]
your reliable partner

Characteristics and Advantages of the EAS®-smartic®:

- ❑ **Very easy and quick installation via the clamping hub by tightening one single screw**
- ❑ **Durable backlash-free torque transmission**
- ❑ **Good dynamic characteristics**
- ❑ **Economical and reliable**
- ❑ **Simple and safe torque adjustment via a graduation scale with a directly readable torque indication**
- ❑ **Highest possible transmission security due to keyway and clamping hub**
- ❑ **High torque range from 6 – 100 % of the maximum torque**
- ❑ **Adjustment of the different torques possible by re-layering the cup springs already installed without reducing/adding the number of springs**

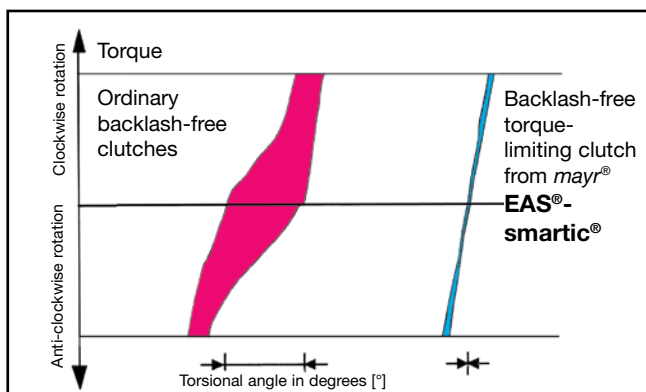


Function

The EAS®-smartic® Type 481 transmits the torque from the drive shaft onto a drive element which can be mounted onto the ball bearing-supported clutch flange. The EAS®-smartic® Type 484 and Type 486 connect two shafts and compensate for shaft misalignments. The torque transmission takes place backlash-free for the entire lifetime of the clutch. When the set limit torque is exceeded, the clutch disengages. The torque drops immediately. The mounted mayr®-limit switch registers the disengagement movement and switched off the drive. After the malfunction has been removed, the clutch re-engages automatically.

Re-engagement

After the malfunction has been removed (overload), the clutch re-engages exactly at the point at which it previously disengaged. The input and output, therefore, always have the same angular position to each other during operation.



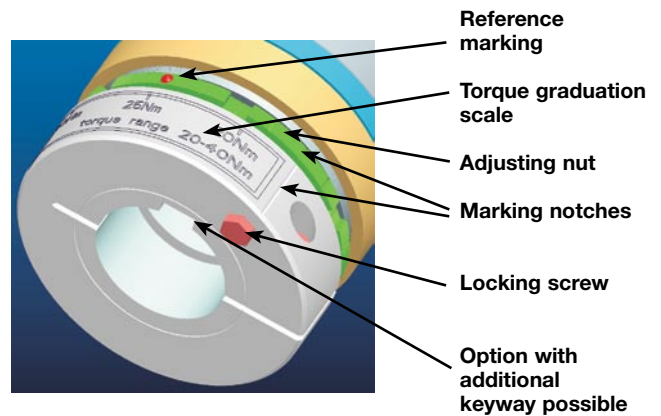
Backlash is:

- The torsional angle between the clutch input and output
- Also known as "torsional backlash"
- Not to be confused with the transmission backlash from the shaft onto the hub
- At mayr®, backlash-free means: Backlash → 0 (see Diagram)

Torque Adjustment

If the torque is not specified on order, we set your clutch to c. 80 % of the maximum torque. The reference marking and the torque indication show the set value directly. Should the torque need setting to a different value, simply:

- Loosen the fixing screw,
- Turn the adjusting nut using a hook wrench until the reference marking shows the required torque value.
- If necessary, slightly correct the adjusting nut position until the marking notches align, and
- Screw the locking screws back in again.



Installation

Shaft securement – clamping hub

The device is secured onto the shaft by tightening one single screw. The clamping hub is dimensioned so that it transfers even the maximum clutch torque safely and reliably. It is optionally available with an additional keyway for highest transmission safety.

Drive elements

Drive elements are centred on the ball bearing of the EAS®-smartic® and screwed to the pressure flange. The screw quality and the tightening torque on the fixing screws are to be chosen so that the set limit torque is transmitted with sufficient security using frictional locking.

Summary of Structural Design

EAS®-smartic® flange design

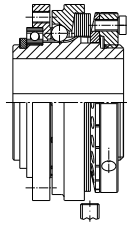


Fig. 1 Type 481._25.0

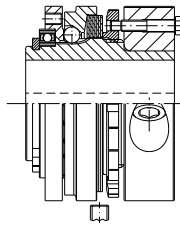


Fig. 2 Type 481._35.0 / 481._45.0

EAS®-smartic® flange clutch for backlash-free torque transmission between the shaft and the drive element.

| | | |
|-------------------------------|----------------|-----------|
| With key hub: | Type 481._25.0 | pages 4/5 |
| With clamping hub: | Type 481._35.0 | pages 4/5 |
| With clamping hub and keyway: | Type 481._45.0 | pages 4/5 |

EAS®-smartic® lastic backlash-free

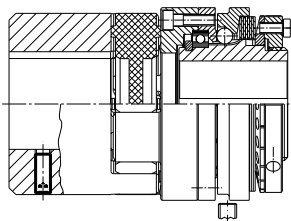


Fig. 3 Type 484._25._

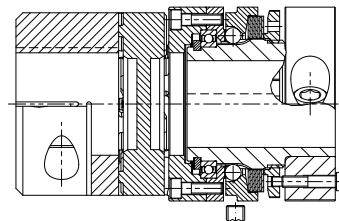


Fig. 4 Type 484._35._ / 484._45._

Overload clutch for backlash-free torque transmission between two coaxial shafts. Compensation of axial, radial and angular misalignments. High damping qualities.

| | | |
|-------------------------------------|----------------|-----------|
| Key hub both sides: | Type 484._25._ | pages 6/7 |
| Clamping hub both sides: | Type 484._35._ | pages 6/7 |
| Clamping hub and keyway both sides: | Type 484._45._ | pages 6/7 |

EAS®-smartic® torsionally rigid

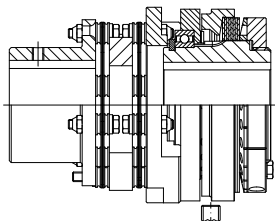


Fig. 5 Type 486._25.0

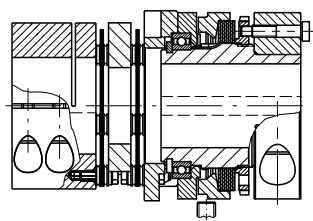


Fig. 6 Type 486._35.0 / 486._45.0

Overload clutch for backlash-free and torsionally rigid torque transmission between two coaxial shafts. Compensation of axial, radial and angular misalignments. High torsional spring rigidity.

| | | |
|-------------------------------------|----------------|-----------|
| Key hub both sides: | Type 486._25.0 | pages 8/9 |
| Clamping hub both sides: | Type 486._35.0 | pages 8/9 |
| Clamping hub and keyway both sides: | Type 486._45.0 | pages 8/9 |

Installation Examples

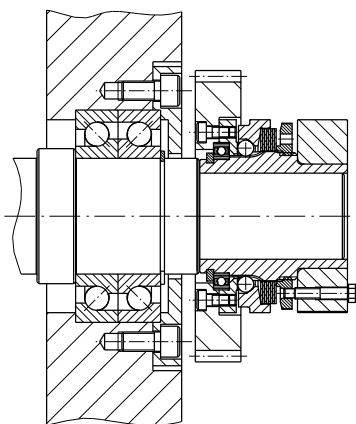


Fig. 7 Type 481._35.0

EAS®-smartic® flange clutch with clamping hub. The drive element is centred onto the deep groove ball bearing and screwed together using the pressure flange. If the resulting radial force lies anywhere near the ball bearing centre, an additional bearing on the drive element is unnecessary.

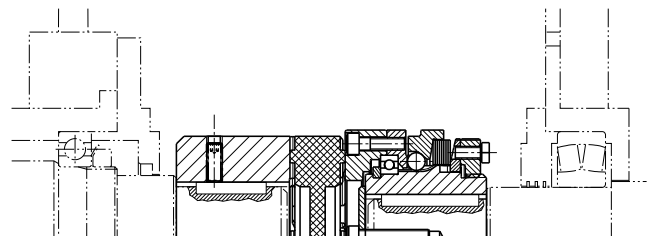


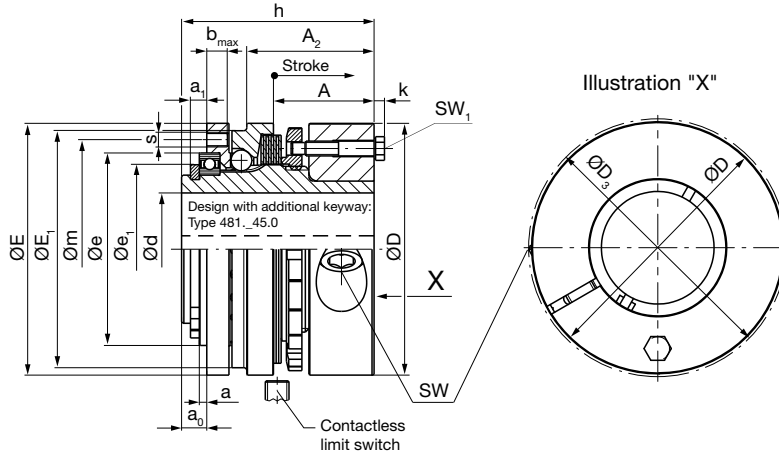
Fig. 8 Type 484._25._

EAS®-smartic® lastic backlash-free. Overload clutch with key hub on both sides for backlash-free torque transmission between two coaxial shafts. Compensation of axial, radial and angular misalignments. The axial securement takes place EAS®-side via a press cover or lastic-side via a set screw.

EAS®-smartic® flange design

Type 481._.35.0
with clamping hub

Type 481._.45.0
with clamping hub and keyway



Sizes 01 to 2
Clamping hub

| Dimensions | Size | | | |
|-------------------|--------|--------|--------|--------|
| | 01 | 0 | 1 | 2 |
| a ¹⁾ | 2,5 | 2,5 | 2,5 | 3 |
| a ₀ | 6,5 | 7,5 | 8,5 | 9 |
| a ₁ | 4,5 | 5 | 5,5 | 6 |
| A | 29 | 29 | 34 | 38 |
| A ₁ | 14 | 15 | 17 | 19 |
| A ₂ | 33,5 | 37 | 43 | 50 |
| A ₃ | 18,3 | 23 | 26 | 31 |
| b _{max} | 6 | 6,5 | 7 | 9,5 |
| Ø D | 55 | 70 | 85 | 100 |
| Ø D ₂ | 50 | 65 | 78 | 91 |
| Ø D ₃ | 59 | 72 | 88 | 104 |
| Ø e _{h5} | 42 | 52 | 65 | 78 |
| Ø e ₁ | 39 | 50,5 | 61 | 72 |
| Ø E | 55 | 70 | 85 | 100 |
| Ø E ₁ | 50 | 65 | 80 | 95 |
| h | 51 | 56 | 65 | 75 |
| h ₁ | 36 | 42 | 48 | 56 |
| k | 2,8 | 2,8 | 3,5 | 4 |
| k ₁ | 1,5 | 2,8 | 3,5 | 3,5 |
| m | 48 | 60 | 74 | 89 |
| s | 8 x M4 | 8 x M4 | 8 x M5 | 8 x M6 |
| SW | 6 | 6 | 8 | 10 |
| SW ₁ | 7 | 7 | 8 | 10 |
| SW ₃ | 5 | 7 | 8 | 8 |

| Bores | Size | Size | | | |
|--|--------------------|------------------|------------------|------------------|------------------|
| | | 01 | 0 | 1 | 2 |
| Type 481._.25.0 Ø d ₂ ^{H7} | min. | 10 | 14 | 19 | 20 |
| | max. | 22 ³⁾ | 30 ⁴⁾ | 38 ⁵⁾ | 45 ⁶⁾ |
| Type 481._.35.0 Ø d ^{H7} | min. ²⁾ | 10 | 14 | 19 | 20 |
| | max. ²⁾ | 22 | 32 | 42 | 50 |
| Type 481._.45.0 Ø d ^{H7} | min. | 10 | 14 | 19 | 20 |
| | max. | 20 ⁷⁾ | 30 ⁴⁾ | 38 ⁵⁾ | 45 ⁶⁾ |

We reserve the right to make dimensional and constructional alterations.

| Accessory parts (hook wrench for torque adjustment) | | |
|---|----------------------------|-------------------------------|
| Size | Article number hook wrench | |
| | Type 481._.25.0 | Types 481._.35.0 / 481._.45.0 |
| 01 | 8170662 | 8170663 |
| 0 | 4084939 | 4084158 |
| 1 | 4084939 | 4084158 |
| 2 | 4084940 | 4084159 |

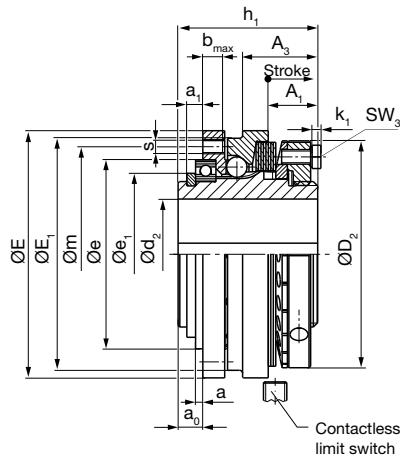
- 1) Mounting tolerance +0,1.
- 2) The frictionally locking transmittable torques are dependent on the bore diameter d, see Table below on page 6.
- 3) Up to ø 19 keyway acc. DIN 6885/1, over ø 19 keyway acc. DIN 6885/3
- 4) Up to ø 27 keyway acc. DIN 6885/1, over ø 27 keyway acc. DIN 6885/3
- 5) Up to ø 36 keyway acc. DIN 6885/1, over ø 36 keyway acc. DIN 6885/3
- 6) Up to ø 43 keyway acc. DIN 6885/1, over ø 43 keyway acc. DIN 6885/3
- 7) Up to ø 17 keyway acc. DIN 6885/1, over ø 17 keyway acc. DIN 6885/3

Please Observe:

According to German notation, decimal points in this catalogue are represented with a comma (e.g. 0,5 instead of 0.5).

EAS[®]-smartic[®] flange design

Type 481._.25.0
with key hub



Sizes 01 to 2
Key hub

| Technical Data | | | | Size | | | | |
|---------------------------------------|---|---|-------|---------------------|----------|-----------|-----------|---------|
| | | | | 01 | 0 | 1 | 2 | |
| Limit torques for overload | Type 481.2_5.0 (Torque range 2) | M_G | [Nm] | 2,7 - 5 | 5 - 10 | 10 - 20 | 20 - 40 | |
| | Type 481.3_5.0 (Torque range 3) | M_G | [Nm] | 5 - 10 | 10 - 20 | 20 - 40 | 40 - 80 | |
| | Type 481.4_5.0 (Torque range 4) | M_G | [Nm] | 8 - 15 | 15 - 30 | 30 - 60 | 60 - 120 | |
| | Type 481.5_5.0 (Torque range 5) | M_G | [Nm] | 11 - 20 | 20 - 40 | 40 - 80 | 80 - 160 | |
| | Type 481.6_5.0 (Torque range 6) | M_G | [Nm] | 18 - 33 | 35 - 65 | 70 - 125 | 140 - 250 | |
| | Type 481.7_5.0 (Torque range 7) | M_G | [Nm] | 32 - 40 | 60 - 80 | 120 - 160 | 240 - 320 | |
| | Type 481.8_5.0 ⁹⁾ (Torque range 8) | M_G | [Nm] | 35 - 60 | 70 - 120 | 150 - 240 | 300 - 500 | |
| Maximum speed | | n_{max} | [rpm] | 3000 | 3000 | 2500 | 2000 | |
| Thrust washer stroke on overload | | | [mm] | 0,9 | 1,1 | 1,3 | 1,5 | |
| Tightening torques, clamping screws | SW | T_A | [Nm] | 40 | 40 | 83 | 140 | |
| Mass moments of inertia ⁸⁾ | Type 481._.25.0 | EAS [®] -smartic [®] hub-side | J | [kgm ²] | 0,00011 | 0,00037 | 0,00090 | 0,00220 |
| | | Output-side | J | [kgm ²] | 0,00004 | 0,00012 | 0,00025 | 0,00060 |
| | Type 481._.35.0 | EAS [®] -smartic [®] hub-side | J | [kgm ²] | 0,00021 | 0,00061 | 0,00177 | 0,00350 |
| | | Output-side | J | [kgm ²] | 0,00004 | 0,00012 | 0,00025 | 0,00060 |
| Weights ⁸⁾ | Type 481._.25.0 | | [kg] | 0,37 | 0,71 | 1,14 | 1,92 | |
| | Type 481._.35.0 | | [kg] | 0,60 | 1,00 | 1,62 | 2,62 | |
| Permitted bearing load | Axial forces | F_A | [N] | 400 | 500 | 800 | 1200 | |
| | Radial forces | F_R | [N] | 400 | 500 | 800 | 1200 | |
| | Transverse force torques ¹⁰⁾ | M_Q | [Nm] | 3 | 5 | 10 | 15 | |

8) The mass moments of inertia and weights refer to clutches with maximum bore.

9) Maximum speed: 250 rpm

10) Torques which place strain on the deep groove ball bearing due to non-centric axial forces affecting the pressure flange.

Order Number

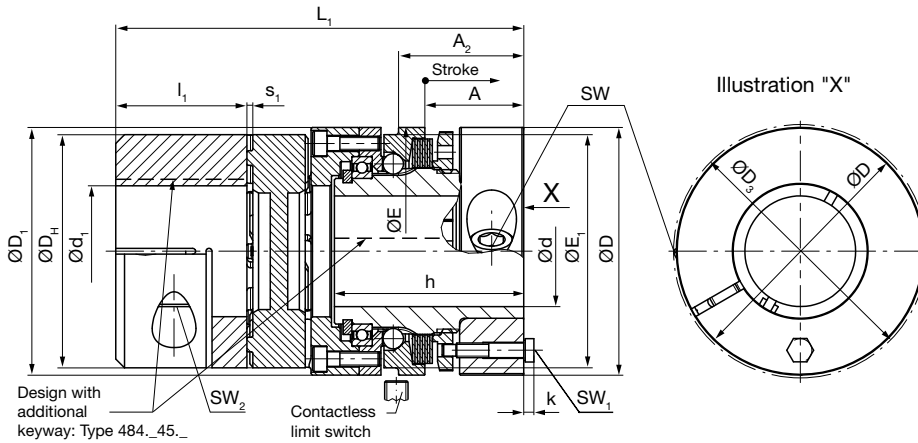
| | | | | | | |
|-----------------------------------|--------------|----------|----------|--------------|----------------------|------------------------|
| _ / 4 8 1 . _ _ 5 . 0 / _ / _ / _ | | | | | | |
| ▲ | | ▲ | ▲ | ▲ | ▲ | ▲ |
| Size | Torque range | 2 | 2 | Keyway | Bore | Bore |
| 01 | Torque range | 3 | 3 | Clamping hub | $\varnothing d^{H7}$ | $\varnothing d_2^{H7}$ |
| 0 | Torque range | 4 | 4 | Clamping hub | | |
| 1 | Torque range | 5 | | + keyway | | |
| 2 | Torque range | 6 | | | | |
| | Torque range | 7 | | | | |
| | Torque range | 8 | | | | With limit switch |
| | | | | | | see page 10 |

Example: 0 / 481.535.0 / 30 plus limit switch 055.002.5

EAS®-smartic® lastic backlash-free

Type 484._35._
Clamping hub both sides

Type 484._45._
Clamping hub and keyway
both sides



Sizes 01 to 2
ROBA®-ES-side: clamping hub, EAS®-smartic®-side: clamping hub

| Dimensions | Size | | | |
|------------------|------|-----|-----|-----|
| | 01 | 0 | 1 | 2 |
| A | 29 | 29 | 34 | 38 |
| A ₁ | 14 | 15 | 17 | 19 |
| Ø D | 55 | 70 | 85 | 100 |
| Ø D ₁ | 57 | 70 | 85 | 105 |
| Ø D ₂ | 50 | 65 | 78 | 91 |
| Ø D _H | 55 | 65 | 80 | 105 |
| Ø E | 55 | 70 | 85 | 100 |
| Ø E ₁ | 50 | 65 | 80 | 95 |
| G | M5 | M6 | M8 | M8 |
| h | 51 | 56 | 65 | 75 |
| h ₁ | 36 | 42 | 48 | 56 |
| k | 2,8 | 2,8 | 3,5 | 4 |
| k ₁ | 1,5 | 2,8 | 3,5 | 3,5 |
| L ₁ | 107 | 118 | 142 | 170 |
| L ₂ | 92 | 104 | 125 | 151 |
| l ₁ | 30 | 35 | 45 | 56 |
| s ₁ | 2 | 2,5 | 3 | 3,5 |
| SW | 6 | 6 | 8 | 10 |
| SW ₁ | 7 | 7 | 8 | 10 |
| SW ₂ | 5 | 6 | 6 | 10 |
| SW ₃ | 5 | 7 | 8 | 8 |
| t | 10 | 15 | 15 | 25 |

| | Bores | Size | | | | |
|--------------------|------------------|-------------------------------------|------------------|------------------|------------------|------------------|
| | | 01 | 0 | 1 | 2 | |
| EAS®-smartic® side | Type 484._25._ | Ø d ₂ min. | 10 | 14 | 19 | 20 |
| | | max. | 22 ¹⁾ | 30 ²⁾ | 38 ³⁾ | 45 ⁴⁾ |
| | Type 484._35._ | Ø d ^{H7} min. | 10 | 14 | 19 | 20 |
| | | max. | 22 | 32 | 42 | 50 |
| ROBA®-ES side | Type 484._45._ | Ø d ^{H7} min. | 10 | 14 | 19 | 20 |
| | | max. | 20 ⁵⁾ | 30 ²⁾ | 38 ³⁾ | 45 ⁴⁾ |
| | Type 484._25._ | Ø d ₃ min. | 8 | 10 | 13 | 20 |
| | | max. | 28 | 38 | 45 | 60 |
| | Type 484._35._/4 | Ø d ₁ min. ⁶⁾ | 15 | 19 | 20 | 35 |
| | | max. ⁶⁾ | 28 | 35 | 45 | 55 |

We reserve the right to make dimensional and constructional alterations.

| Accessory parts (hook wrench for torque adjustment) | | |
|---|----------------------------|-----------------------------|
| Size | Article number hook wrench | |
| | Type 484._25._ | Types 484._35._ / 484._45._ |
| 01 | 8170662 | 8170663 |
| 0 | 4084939 | 4084158 |
| 1 | 4084939 | 4084158 |
| 2 | 4084940 | 4084159 |

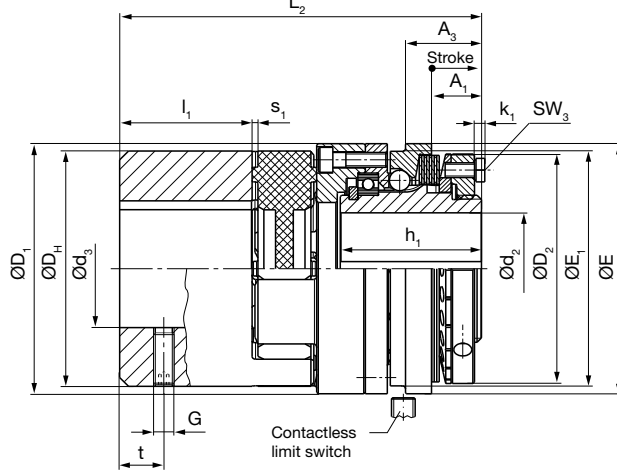
- 1) Up to ø 19 keyway acc. DIN 6885/1, over ø 19 keyway acc. DIN 6885/3
- 2) Up to ø 27 keyway acc. DIN 6885/1, over ø 27 keyway acc. DIN 6885/3
- 3) Up to ø 36 keyway acc. DIN 6885/1, over ø 36 keyway acc. DIN 6885/3

- 4) Up to ø 43 keyway acc. DIN 6885/1, over ø 43 keyway acc. DIN 6885/3
- 5) Up to ø 17 keyway acc. DIN 6885/1, over ø 17 keyway acc. DIN 6885/3
- 6) The transmittable torques on the flexible coupling "T_{KN}" are dependent on factors such as e.g. temperature factor, torsional rigidity factor etc., (please contact the manufacturers). Furthermore, the transmittable torques are dependent on the bore diameters d or d₁ (see Table below: Preferred bores and respective transmittable torques).

| Preferred bores and respective transmittable torques [Nm] on diameters d and d ₁ of frictional locking on hubs | | | | | | | | | | | | | | |
|---|------|------|------|------|------|------------------|------|------------------|------|------------------|------|------------------|------|------------------|
| • for shaft tolerance k ₆ ROBA®-ES-side | | | | | | | | | | | | | | |
| • for shaft tolerance h ₆ / h ₈ EAS®-smartic®-side | | | | | | | | | | | | | | |
| Size | Ø 10 | Ø 11 | Ø 12 | Ø 14 | Ø 15 | Ø 20 | Ø 25 | Ø 28 | Ø 32 | Ø 35 | Ø 42 | Ø 45 | Ø 50 | Ø 55 |
| | Ø d | Ø d | Ø d | Ø d | Ø d | Ø d ₁ | Ø d | Ø d ₁ | Ø d | Ø d ₁ | Ø d | Ø d ₁ | Ø d | Ø d ₁ |
| Torque ranges 2 up to 7 (Types 484.235._, 484.335._, 484.435._, 484.535._, 484.635._ and 484.735._) | | | | | | | | | | | | | | |
| 01 | 23 | 27 | 30 | 37 | 40 | 34 | 53 | 54 | - | 57 | - | 63 | - | - |
| 0 | - | - | - | 42 | 45 | - | 64 | 83 | 80 | 104 | 90 | 116 | 102 | 133 |
| 1 | - | - | - | - | - | - | 88 | 83 | 110 | 104 | 124 | 116 | 142 | 133 |
| 2 | - | - | - | - | - | - | 140 | - | 175 | - | 210 | - | 240 | 266 |
| Torque range 8 (Type 484.835._) | | | | | | | | | | | | | | |
| 01 | 37 | 43 | 48 | 59 | 64 | 54 | 85 | 86 | - | 91 | - | 101 | - | - |
| 0 | - | - | - | 67 | 72 | - | 102 | 133 | 128 | 166 | 144 | 186 | 163 | 213 |
| 1 | - | - | - | - | - | - | 141 | 133 | 176 | 166 | 198 | 186 | 227 | 213 |
| 2 | - | - | - | - | - | - | 224 | - | 280 | - | 336 | - | 384 | 426 |

EAS®-smartic® lastic backlash-free

Type 484. 25. _
key hub both sides



Sizes 01 to 2
ROBA®-ES-side: key hub, EAS®-smartic®-side: key hub

| Technical Data | | | | Size | | | | | |
|--|--|-------------------------|-------------------------|---------------------|---------------------|-----------|-----------|---------|---------|
| | | | | 01 | 0 | 1 | 2 | | |
| Limit torques for overload | Type 484.2.5. _ (Torque range 2) | M_G | [Nm] | 2,7 - 5 | 5 - 10 | 10 - 20 | 20 - 40 | | |
| | Type 484.3.5. _ (Torque range 3) | M_G | [Nm] | 5 - 10 | 10 - 20 | 20 - 40 | 40 - 80 | | |
| | Type 484.4.5. _ (Torque range 4) | M_G | [Nm] | 8 - 15 | 15 - 30 | 30 - 60 | 60 - 120 | | |
| | Type 484.5.5. _ (Torque range 5) | M_G | [Nm] | 11 - 20 | 20 - 40 | 40 - 80 | 80 - 160 | | |
| | Type 484.6.5. _ (Torque range 6) | M_G | [Nm] | 18 - 33 | 35 - 65 | 70 - 125 | 140 - 250 | | |
| | Type 484.7.5. _ (Torque range 7) | M_G | [Nm] | 32 - 40 | 60 - 80 | 120 - 160 | 240 - 320 | | |
| | Type 481.8.5.0 ⁸⁾ (Torque range 8) | M_G | [Nm] | 35 - 60 | 70 - 120 | 150 - 240 | 300 - 500 | | |
| | Nominal and maximum torques, ⁶⁾ flexible backlash-free shaft coupling | 92 Shore A | T_{KN} | [Nm] | 35 | 95 | 190 | 310 | |
| T_{Kmax} | | | [Nm] | 70 | 190 | 380 | 620 | | |
| 98 Shore A | | T_{KN} | [Nm] | 60 | 160 | 325 | 525 | | |
| | | T_{Kmax} | [Nm] | 120 | 320 | 650 | 1050 | | |
| Maximum speed | | n_{max} | [rpm] | 3000 | 3000 | 2500 | 2000 | | |
| Thrust washer stroke on overload | | | [mm] | 0,9 | 1,1 | 1,3 | 1,5 | | |
| Tightening torques, clamping screws | SW | T_A | [Nm] | 40 | 40 | 83 | 140 | | |
| | SW ₂ | Torque ranges 2 up to 7 | T_A | [Nm] | 10 | 25 | 25 | 120 | |
| | | Torque range 8 | T_A | [Nm] | 17 | 40 | 40 | 140 | |
| Permitted misalignments, flexible backlash-free shaft coupling | Axial displacement | 92/98 Shore A | ΔK_a | [mm] | 1,4 | 1,5 | 1,8 | 2,1 | |
| | Radial misalignment | 92 Shore A | ΔK_r | [mm] | 0,14 | 0,15 | 0,17 | 0,21 | |
| | | 98 Shore A | ΔK_r | [mm] | 0,1 | 0,11 | 0,12 | 0,16 | |
| | Angular misalignment | 92 Shore A | ΔK_w | [°] | 1,0 | 1,0 | 1,0 | 1,0 | |
| | | 98 Shore A | ΔK_w | [°] | 0,9 | 0,9 | 0,9 | 0,9 | |
| Mass moments of inertia ⁷⁾ | Type 484. 25. _ | EAS®-smartic® hub-side | J | [kgm ²] | 0,00011 | 0,00037 | 0,00090 | 0,00220 | |
| | | ROBA®-ES-side | J | [kgm ²] | 0,00028 | 0,00056 | 0,00149 | 0,00773 | |
| | Type 484. 35. _ | EAS®-smartic® hub-side | J | [kgm ²] | 0,00021 | 0,00061 | 0,00177 | 0,00350 | |
| | | ROBA®-ES-side | Torque ranges 2 up to 7 | J | [kgm ²] | 0,00024 | 0,00058 | 0,00140 | 0,00490 |
| | | | Torque range 8 | J | [kgm ²] | 0,00038 | 0,00088 | 0,00228 | 0,00490 |
| | | Weights ⁷⁾ | Type 484. 25. _ | | [kg] | 0,78 | 1,31 | 2,27 | 5,89 |
| Type 484. 35. _ | Torque ranges 2 up to 7 | | [kg] | 1,01 | 1,62 | 2,75 | 6,72 | | |
| | | Torque range 8 | [kg] | 1,29 | 2,06 | 3,59 | 6,72 | | |

7) The mass moments of inertia and weights refer to clutches with maximum bore.

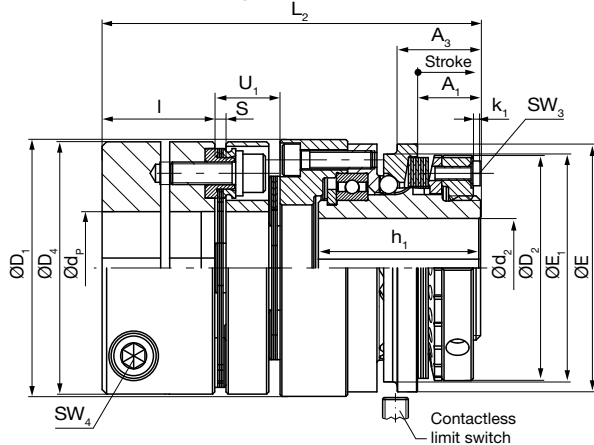
8) Maximum speed: 250 rpm

Order Number

| | | | | | | | | | |
|---|--------------|----------|--------------------------------|----------|----------------------|------------------------|------------------------|------------------------|-------------------|
| _ / 4 8 4 . _ _ 5 . _ / _ / _ / _ / _ / _ | | | | | | | | | |
| ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| Size | Torque range | 2 | 92 Shore A | 3 | Bore | Bore | Bore | Bore | With limit switch |
| 01 | Torque range | 3 | 98 Shore A | 4 | $\varnothing d^{H7}$ | $\varnothing d_1^{F7}$ | $\varnothing d_2^{H7}$ | $\varnothing d_3^{H7}$ | |
| 0 | Torque range | 4 | | | | | | | |
| 1 | Torque range | 5 | 2 Keyway | | | | | | see page 10 |
| 2 | Torque range | 6 | 3 Clamping hub | | | | | | |
| | Torque range | 7 | 4 Clamping hub + keyway | | | | | | |
| | Torque range | 8 | | | | | | | |

Example: 1 / 484.535.4 / 35 / 35 / plus limit switch 055.002.5

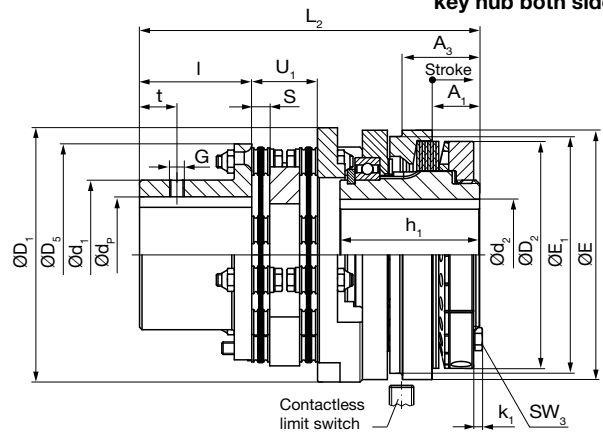
EAS®-smartic® torsionally rigid



Sizes 01 to 1

ROBA®-DS-side: clamping hub/keyway, EAS®-smartic®-side: key hub

Type 486._.25.0
key hub both sides



Size 2

ROBA®-DS-side: key hub, EAS®-smartic®-side: key hub

| Technical Data | | | | Size | | | |
|--|--------------------------------------|------------------------|-----------------------|---------|-----------|-----------|---------|
| | | | | 01 | 0 | 1 | 2 |
| Limit torques for overload | Type 486.2_5.0 (Torque range 2) | M_G [Nm] | 2,7 - 5 | 5 - 10 | 10 - 20 | 20 - 40 | |
| | Type 486.3_5.0 (Torque range 3) | M_G [Nm] | 5 - 10 | 10 - 20 | 20 - 40 | 40 - 80 | |
| | Type 486.4_5.0 (Torque range 4) | M_G [Nm] | 8 - 15 | 15 - 30 | 30 - 60 | 60 - 120 | |
| | Type 486.5_5.0 (Torque range 5) | M_G [Nm] | 11 - 20 | 20 - 40 | 40 - 80 | 80 - 160 | |
| | Type 486.6_5.0 (Torque range 6) | M_G [Nm] | 18 - 33 | 35 - 65 | 70 - 125 | 140 - 250 | |
| | Type 486.7_5.0 (Torque range 7) | M_G [Nm] | 32 - 40 | 60 - 80 | 120 - 160 | 240 - 320 | |
| Nominal and peak transient torques, flexible torsionally rigid shaft coupling | Nominal torque ¹⁰⁾ | T_{KN} [Nm] | 60 | 100 | 150 | 290 | |
| | Peak transient torque ¹¹⁾ | T_{KS} [Nm] | 90 | 150 | 225 | 435 | |
| Maximum speed | | n_{max} [rpm] | 3000 | 3000 | 2500 | 2000 | |
| Thrust washer stroke on overload | | [mm] | 0,9 | 1,1 | 1,3 | 1,5 | |
| Clamping screws, tightening torques | SW | T_A [Nm] | 40 | 40 | 83 | 140 | |
| | SW ₄ | T_A [Nm] | 13 | 33 | 33 | 42 | |
| Permitted misalignments ¹²⁾ flexible torsionally rigid shaft coupling | Axial displacement ¹³⁾ | ΔK_a [mm] | 0,7 | 0,9 | 1,1 | 1,3 | |
| | Radial misalignment | ΔK_r [mm] | 0,15 | 0,2 | 0,2 | 0,3 | |
| | Angular misalignment | ΔK_w [°] | 2,0 | 2,0 | 2,0 | 2,0 | |
| Mass moments of inertia ¹⁴⁾ | Type 486._.25.0 | EAS®-smartic® hub-side | J [kgm ²] | 0,00011 | 0,00037 | 0,00090 | 0,00220 |
| | | ROBA®-DS-side | J [kgm ²] | 0,00027 | 0,00066 | 0,00138 | 0,00254 |
| | Type 486._.35.0 | EAS®-smartic® hub-side | J [kgm ²] | 0,00021 | 0,00061 | 0,00177 | 0,00350 |
| | | ROBA®-DS-side | J [kgm ²] | 0,00027 | 0,00066 | 0,00138 | 0,00352 |
| Weights ¹⁴⁾ | Type 486._.25.0 | [kg] | 0,84 | 1,43 | 2,22 | 3,60 | |
| | Type 486._.35.0 | [kg] | 1,05 | 1,72 | 2,70 | 4,75 | |

10) Valid for max. permitted shaft misalignment.

11) Valid for one rotational direction, max. stress $\leq 10^5$.

12) The permitted misalignments may not simultaneously reach their max. value.

The values refer to couplings with 2 disk packs.

13) Only permitted as a static or virtually static value.

14) The mass moments of inertia and weights refer to clutches with maximum bore.

Order Number

| | | | | | | | | |
|---|--------------|----------|--------------------------------|----------------------|------------------------|------------------------|------------------------|-------------------|
| _ / 4 8 6 . _ _ 5 . 0 / _ / _ / _ / _ / _ | | | | | | | | |
| ▲ | | ▲ | ▲ | | ▲ | ▲ | ▲ | ▲ |
| Size | Torque range | 2 | 2 Keyway | Bore | Bore | Bore | Bore | With limit switch |
| 01 | Torque range | 3 | 3 Clamping hub | $\varnothing d^{H7}$ | $\varnothing d_2^{H7}$ | $\varnothing d_p^{H7}$ | $\varnothing d_r^{H7}$ | see page 10 |
| 0 | Torque range | 4 | 4 Clamping hub | | | | | |
| 1 | Torque range | 5 | 5 Clamping hub + keyway | | | | | |
| 2 | Torque range | 6 | | | | | | |
| | Torque range | 7 | | | | | | |

Example: 1 / 486.535.0 / 35 / 35 / plus limit switch 055.002.5

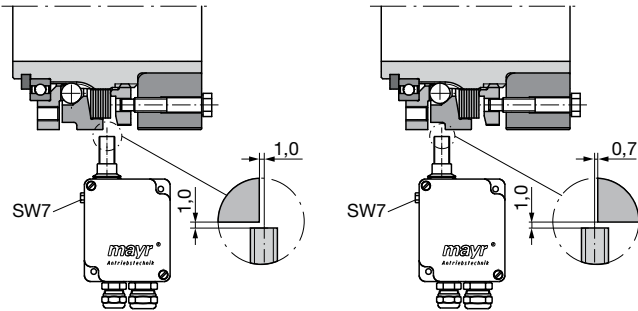
Limit Switch Installation

Adjust the switching distances for the mechanical or contactless limit switch according to the Fig. below. The distance between the thrust washer and the switching point can be finely adjusted using a hexagon head screw SW7.

Contactless limit switch

Undamped installation
(Limit switch is damped when clutch disengages)

Damped installation
(Limit switch is not damped when clutch disengages)



Limit switch Type 055.00_5 (contactless)

Technical Data

| | |
|-----------------------------|--|
| Input voltage (acc. design) | 230 VAC, ±10 %, 50–60 Hz 115 VAC, ±10 %, 50–60 Hz 24 VDC, PELV, ±5 %, polarity reversal-proof, for connection to overvoltage category II |
| Power consumption | Max. 1,5 VA |
| Ambient temperature | -10 °C to +60 °C limit switch -25 °C to +60 °C NAMUR-sensor |
| Protection | IP 54 |
| Conductor cross section | Max. 2,5 mm ² / AWG 14 |
| Weight | 400 g / 14 oz |
| Protection fuse | 0,1 A/fast acting with 24 VDC (in the system) |
| Signalling relay | Potential-free changeover contacts Contact load max. 250 VAC/12 A Contact material AgNi 90/10 Max. switching frequency 20 Hz at min. load, 0,1 Hz at max. load |
| NAMUR-Sensor internal | Installed in a light metal housing, switching distance S _n 2 mm, flush fitting, max. switching frequency 2 kHz, the zero point can be adjusted by 1 mm each using the side adjusting screw SW 7 |
| NAMUR-Sensor external | Metal housing M12 x 1, switching distance S _n 2 mm, flush fitting, max. switching frequency 2 kHz, standard cable length 2 m, max. 100 m on special design, Protection IP 67 |

Order Number

0 5 5 . 0 0 _ . 5 / _



| | | | |
|---------------------|---|--------------------|--|
| Contactless sensing | | Connection voltage | |
| Sensor external | 1 | 230 VAC | |
| Sensor internal | 2 | 115 VAC | |
| | | 24 VDC | |

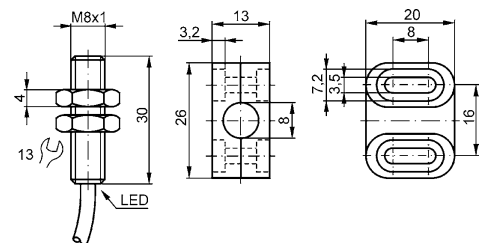
On size 2, use of the mechanical limit switch Type 055.000.5 is also possible.

Contactless limit switch with mounting flange

Limit switch Type 055.012.6 (contactless, with mounting flange)

Technical Data

| | |
|--|---|
| Name | NBB1,5-8GM30-E2-Y |
| Construction size | M8 x 1 |
| Construction Type | Rustproof stainless steel |
| Input voltage | 10 - 30 VDC PELV |
| No-load current | ≤ 15 mA |
| Current capacity | 100 mA |
| Contact type | PNP-NO contact |
| Switching distance S _n | 1,5 mm, flush fitting |
| Secured switching frequency S _a | 1,2 mm |
| Characteristics | Polarity reversal-proof = synchronised short circuit protection = switching condition indication via LED |
| Connection Type | Cable 3 m/PUR |
| Tightening torque | 10 Nm |
| Conductor cross section | 0,14 mm ² |
| Ambient temperature | -25 °C to +70 °C |
| Protection | IP 67 |
| Accessory | Mounting flange |



Order Number

0 5 5 . 0 1 2 . 6 / _



| | |
|--------------------|-----------|
| Connection voltage | 10-30 VDC |
|--------------------|-----------|



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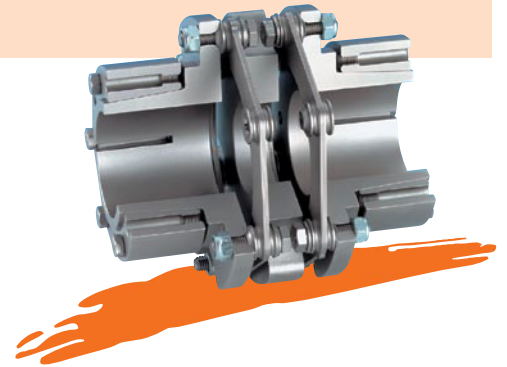
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