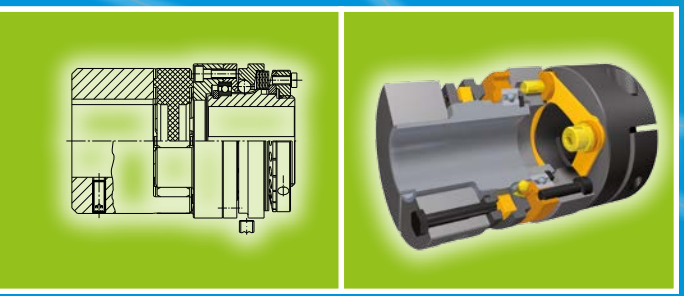
mayr®

your reliable partner

EAS®-smartic®

Installation space-optimised torque limiting clutches



Characteristics and Advantages of the EAS®-smartic®:

- ❒ ***Very easy and quick installation via the clamping ring 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 ring 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***

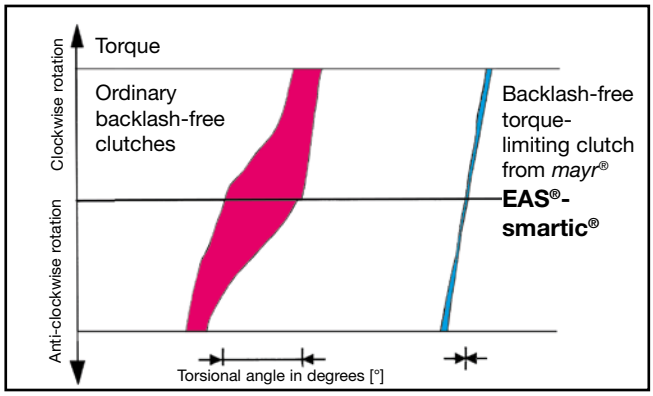
Function

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.

If the set limit torque is exceeded, the clutch disengages. The torque drops immediately. The mounted *mayr*®-limit switch registers the disengagement movement and switches off the drive. After the malfunction has been removed, the clutch re-engages automatically.

Re-engagement

After the malfunction (overload) has been removed, 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.



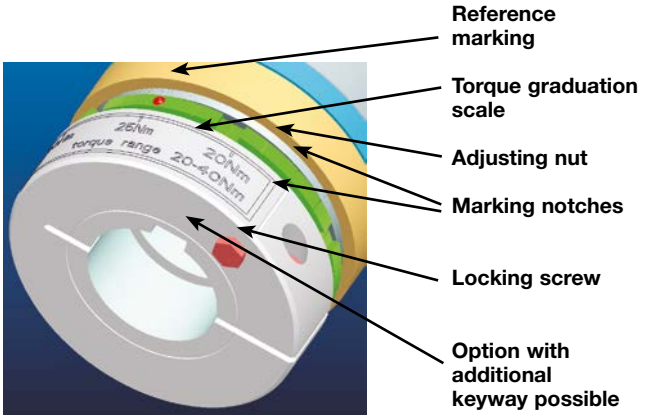
Backlash means:

- The torsional angle between the input and output of the clutch
- 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 approx. 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 locking 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 screw back in again.



Installation

Shaft securement – clamping ring hub
The device is secured onto the shaft by tightening one single screw. The clamping ring 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 together with 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.

EAS®-smartic® synchronous clutch

Summary of Constructional Design

EAS®-smartic® flange design

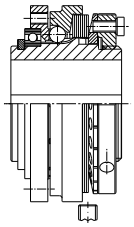


Fig. 1 Type 481._25.0

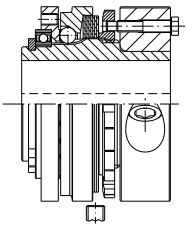


Fig. 2 Type 481._35.0 / 481._45.0

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

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

EAS®-smartic® lastic backlash-free

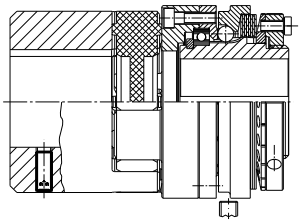


Fig. 3 Type 484._25._

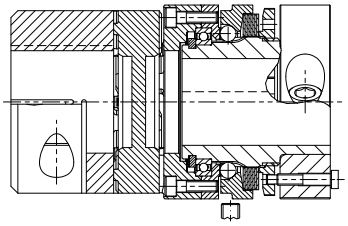


Fig. 4 Type 484._35._/ 484._45._

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

Key hub on both sides:	Type 484._25._	pages 6/7
Clamping (ring) hub on both sides:	Type 484._35._	pages 6/7
Clamping (ring) hub and keyway on both sides:	Type 484._45._	pages 6/7

EAS®-smartic® torsionally rigid

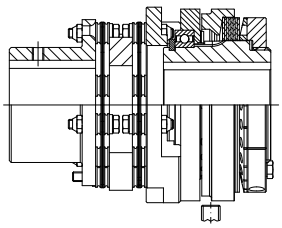


Fig. 5 Type 486._25.0

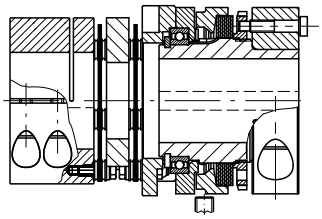


Fig. 6 Type 486._35.0 / 486._45.0

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 on both sides:	Type 486._25.0	pages 8/9
Clamping (ring) hub on both sides:	Type 486._35.0	pages 8/9
Clamping (ring) hub and keyway on both sides:	Type 486._45.0	pages 8/9

Installation Examples

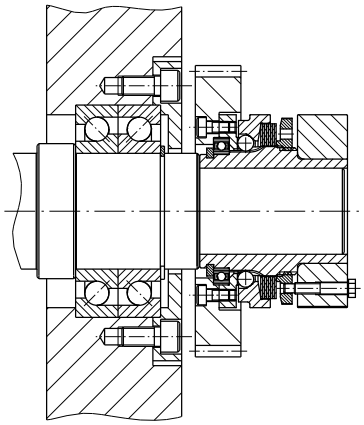


Fig. 7 Type 481._35.0

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

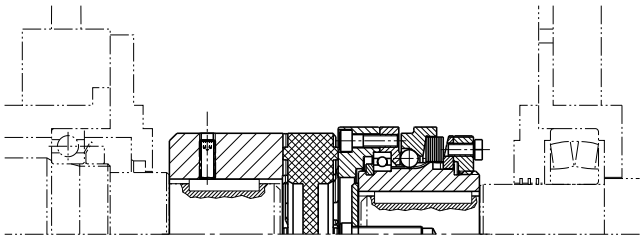


Fig. 8 Type 484._25._

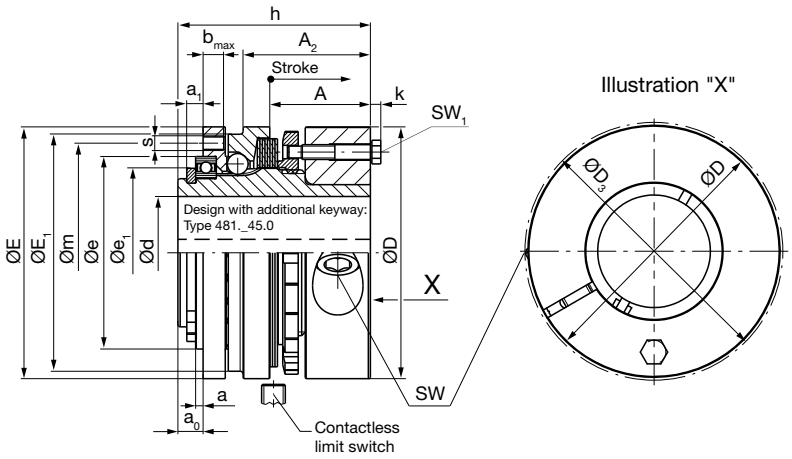
EAS®-smartic® lastic backlash-free.
Overload clutch with key hub on both sides for backlash-free torque transmission between two coaxial shafts. Compensation of axial, radial and angular misalignments. The axial securement takes place EAS®-side via a press cover or lastic-side via a set screw.

EAS®-smartic® synchronous clutch Type 481._ _5.0

EAS®-smartic® flange design

Type 481._35.0
with clamping ring hub

Type 481._45.0
with clamping ring hub and keyway



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			
			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

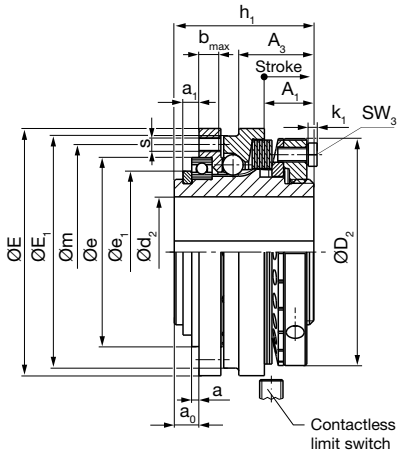
1) Mounting tolerance +0,1.
2) The frictionally-locking transmittable torques are dependent on the bore diameter d, see Table below on page 6.
3) Up to ø 19 keyway acc. DIN 6885/1, over ø 19 keyway acc. DIN 6885/3
4) Up to ø 27 keyway acc. DIN 6885/1, over ø 27 keyway acc. DIN 6885/3
5) Up to ø 36 keyway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

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

EAS®-smartic® synchronous clutch Type 481._ _5.0

EAS®-smartic® flange design

Type 481._25.0
with 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	[kgm²]	0,00011	0,00037	0,00090	0,00220
		Output-side	J	[kgm²]	0,00004	0,00012	0,00025	0,00060
	Type 481._35.0	EAS®-smartic® hub-side	J	[kgm²]	0,00021	0,00061	0,00177	0,00350
		Output-side	J	[kgm²]	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 put strain on the deep groove ball bearing due to the non-centric axial forces having an effect the pressure flange.

Order Number

__ / 4 8 1 . __ __ 5 . 0 / __ / __ / __

Size	Torque range			Bore	Bore	With
01	Torque range	2	2 Keyway			limit switch
0	Torque range	3	3 Clamping ring hub			
1	Torque range	4	4 Clamping ring hub + keyway	Ø d^{H7}	Ø d_2^{H7}	see page 10
2	Torque range	5				
	Torque range	6				
	Torque range	7				
	Torque range	8				

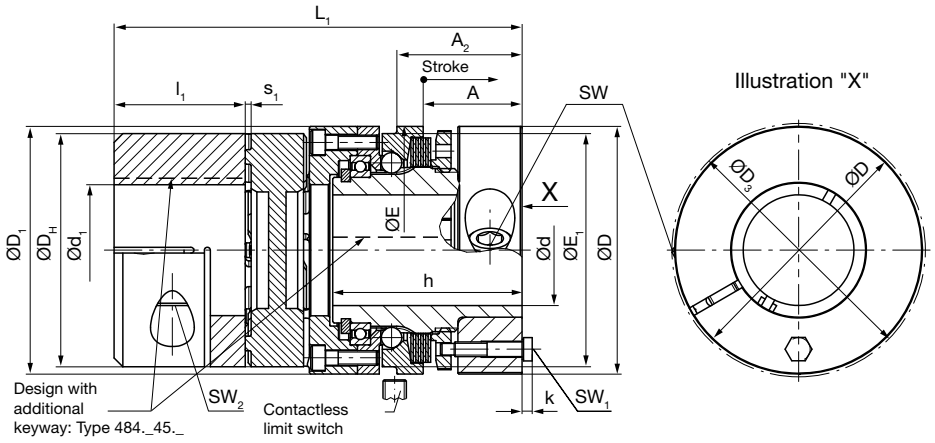
Example: 0 / 481.535.0 / 30 plus limit switch 055.002.5

EAS®-smartic® synchronous clutch Type 484._ _5._

EAS®-smartic® lastic backlash-free

Type 484._35._
Clamping (ring) hub on both sides

Type 484._45._
Clamping (ring) hub and keyway on both sides



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

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

Bores				Size			
				01	0	1	2
EAS®-smartic® side	Type 484._25._	Ø d_2 H7	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
	Type 484._45._	Ø d H7	min.	10	14	19	20
			max.	20 5)	30 2)	38 3)	45 4)
ROBA®-ES side	Type 484._25._	Ø d_3 H7	min.	8	10	13	20
			max.	28	38	45	60
	Type 484._35._ 4	Ø d_1 F7	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)		
	Article number hook wrench	
Size	Type 484._25._	Types 484._35._ / 484._45._
01	8170662	8170663
0	4084939	4084158
1	4084939	4084158
2	4084940	4084159

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 on the flexible coupling are dependent on the bore diameters d or d_1 (see Table below: Preferred bores and respective transmittable torques).

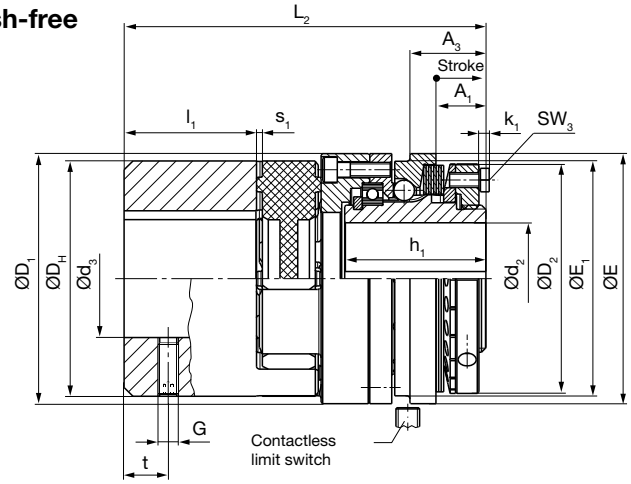
Preferred bores and respective transmittable torques [Nm] on diameters d and d_1 of the hub frictional locking
- **for shaft tolerance k_6 ROBA®-ES-side**
- **for shaft tolerance h_6 EAS®-smartic®-side**

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	Ø d	Ø d_1	Ø d	Ø d_1	Ø d	Ø d_1	Ø d	Ø d_1	Ø d_1
Torque ranges **2 up to 7** (Types 484.**2**35._, 484.**3**35._, 484.**4**35._, 484.**5**35._, 484.**6**35._ and 484.**7**35._)																											
01	23	27	30	37	40	34	53	54	-	57	-	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	42	45	-	64	83	80	104	90	116	102	133	-	145	-	-	-	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	88	83	110	104	124	116	142	133	155	145	186	174	-	187	-	-	-	-	-	-	-
2	-	-	-	-	-	-	140	-	175	-	210	-	240	-	266	350	320	455	343	505	381	600	705				
Torque range **8** (Type 484.**8**35._)																											
01	37	43	48	59	64	54	85	86	-	91	-	101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	67	72	-	102	133	128	166	144	186	163	213	-	232	-	-	-	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	141	133	176	166	198	186	227	213	248	232	298	278	-	299	-	-	-	-	-	-	-
2	-	-	-	-	-	-	224	-	280	-	336	-	384	-	426	408	512	531	549	589	610	700	823				

EAS®-smartic® synchronous clutch Type 484._ _5._

EAS®-smartic® lastic backlash-free

Type 484._25._
Key hub on both sides



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
			$T_{K\,max}$	[Nm]	70	190	380	620
	98 Shore A		T_{KN}	[Nm]	60	160	325	525
			$T_{K\,max}$	[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	[kgm²]	0,00011	0,00037	0,00090	0,00220
		ROBA®-ES-side	J	[kgm²]	0,00028	0,00056	0,00149	0,00773
	Type 484._35._	EAS®-smartic® hub-side	J	[kgm²]	0,00021	0,00061	0,00177	0,00350
		ROBA®-ES-side, Torque ranges 2 up to 7	J	[kgm²]	0,00024	0,00058	0,00140	0,00490
		ROBA®-ES-side, Torque range 8	J	[kgm²]	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				Bore	Bore	Bore	Bore	With
01	Torque range	2		92 Shore A	3	Ø d^{H7}	Ø d_1^{F7}	Ø d_2^{H7}	Ø d_3^{H7}	limit switch
0	Torque range	3		98 Shore A	4					
1	Torque range	4								see
2	Torque range	5	2	Keyway						page 10
	Torque range	6	3	Clamping (ring) hub						
	Torque range	7	4	Clamping (ring) hub + keyway						
	Torque range	8								

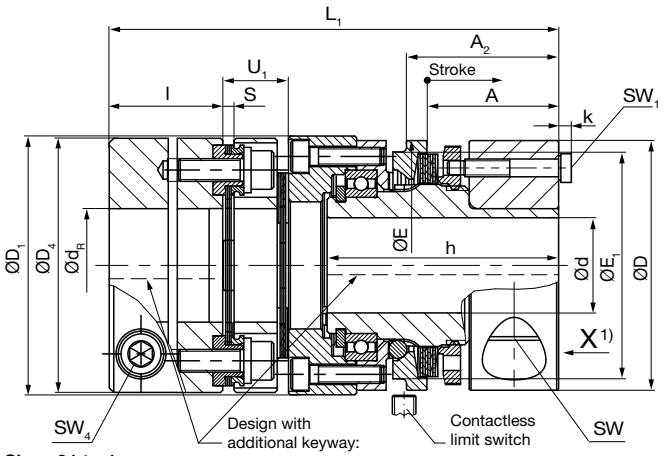
Example: 1 / 484.535.4 / 35 / 35 / plus limit switch 055.002.5

EAS®-smartic® synchronous clutch Type 486._ _5.0

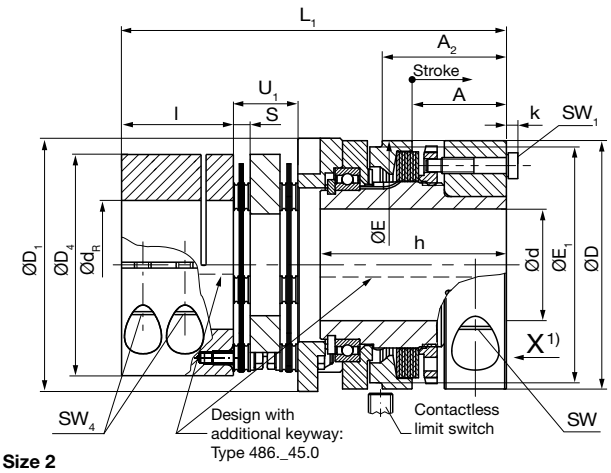
EAS®-smartic® torsionally rigid

Type 486._35.0: Clamping (ring) hub on both sides

Type 486._45.0: Clamping (ring) hub and keyway on both sides



Sizes 01 to 1



Size 2

Dimensions	Size			
	01	0	1	2
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
Ø d_1	-	-	-	60
Ø D	55	70	85	100
Ø D_1	57	70	85	102
Ø D_2	50	65	78	91
Ø D_3	59	72	88	104
Ø D_4	56	69	79	89
Ø D_5	-	-	-	89
Ø E	55	70	85	100
Ø E_1	50	65	80	95
G	-	-	-	M6 [2]
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	99,2	110,5	127,2	155,4
L_2	84,2	96,5	110,2	136,4
l	25	32	33,5	45
S	2,6	3	2,9	7,2
SW	6	6	8	10
SW_1	7	7	8	10
SW_3	5	7	8	8
SW_4	5	6	6	6
t	-	-	-	15
U_1	14,7	15,5	15,8	26,4

Bore				Size			
				01	0	1	2
EAS®-smartic® side	Type 486._25.0	Ø d_2 H7	min.	10	14	19	20
			max.	22 [3]	30 [4]	38 [5]	45 [6]
	Type 486._35.0	Ø d H7	min.	10	14	19	20
			max.	22	32	42	50
	Type 486._45.0	Ø d H7	min.	10	14	19	20
			max.	20 [7]	30 [4]	38 [5]	45 [6]
ROBA®-DS side	Type 486._35.0	Ø d_P H7	min.	14	19	25	20
			max.	28	35	42	40
	Type 486._35.0 4	Ø d_R H7	min. [8] [9]	14	19	25	22
			max. [8] [9]	28	35	42	52

We reserve the right to make dimensional and constructional alterations.

Accessory parts (hook wrench for torque adjustment)		
	Article number hook wrench	
Size	Type 486._25.0	Types 486._35.0 / 486._45.0
01	8170662	8170663
0	4084939	4084158
1	4084939	4084158
2	4084940	4084159

1) Illustration “X“: see Fig. page 4.
2) M5 on bore under ø 22.
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
8) Type 486._35.0: The transmittable torques on the flexible torsionally rigid coupling are dependent on the bore diameters d or d_R (see Table below: Preferred bores and respective transmittable torques).
9) Recommended hubs/shaft tolerance, Type 486._35.0 – ROBA®-DS-side: H7 / k6 (Sizes 01 to 1) and H7 / h6 (Size 2).

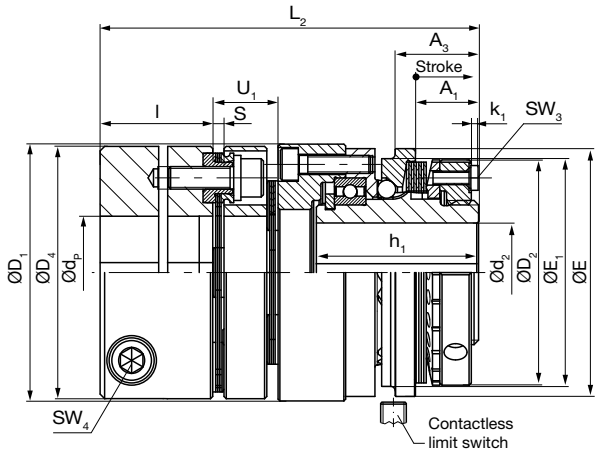
Preferred bores and respective transmittable torques [Nm] on diameters d and d_R of the hub frictional locking
- **for shaft tolerance k_6 (clamping hub Sizes 01 to 1) / h_6 (clamping hub Size 2) ROBA®-DS-side**
- **for shaft tolerance h_6 EAS®-smartic®-side**

	Ø 10	Ø 11	Ø 12	Ø 14		Ø 15		Ø 16	Ø 18	Ø 19	Ø 20		Ø 22	Ø 24	Ø 25		Ø 28		Ø 30	Ø 32		Ø 35		Ø 38	Ø 40	Ø 42		Ø 45	Ø 50
Size	Ø d	Ø d	Ø d	Ø d	Ø d_R	Ø d	Ø d_R	Ø d_R	Ø d_R	Ø d_R	Ø d	Ø d_R	Ø d_R	Ø d_R	Ø d	Ø d_R	Ø d	Ø d_R	Ø d_R	Ø d	Ø d_R	Ø d	Ø d_R	Ø d_R	Ø d_R	Ø d	Ø d_R	Ø d	Ø d
01	23	27	30	37	46	40	51	56	65	70	53	74	84	92	-	95	-	107	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	42	-	45	-	-	-	99	64	105	116	128	80	135	90	151	162	102	173	-	189	-	-	-	-	-	-
1	-	-	-	-	-	-	-	-	-	-	88	-	-	-	110	143	124	163	177	142	191	155	211	229	241	186	253	-	-
2	-	-	-	-	-	-	-	-	-	-	140	-	199	-	175	226	210	253	290	240	325	266	355	386	406	320	-	343	381

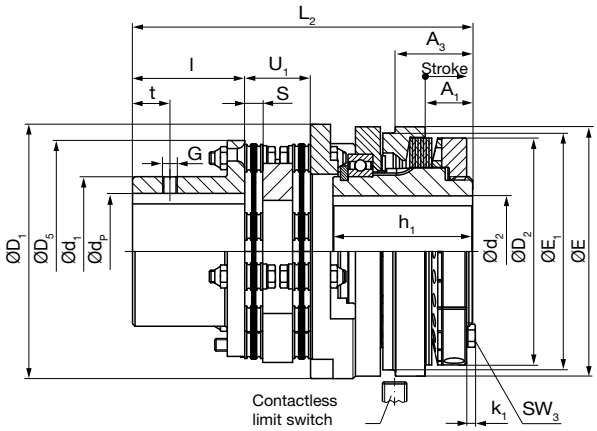
EAS®-smartic® synchronous clutch Type 486._ _5.0

EAS®-smartic® torsionally rigid

Type 486._25.0: Key hub on both sides



Sizes 01 to 1



Size 2

Technical Data					Size 01	Size 0	Size 1	Size 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 torques, flexible torsionally rigid shaft coupling		Nominal torque [10]	T_{KN}	[Nm]	60	100	150	290
		Peak 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
Tightening torques, clamping screws		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	[kgm²]	0,00011	0,00037	0,00090	0,00220
		ROBA®-DS-side	J	[kgm²]	0,00027	0,00066	0,00138	0,00254
	Type 486._35.0	EAS®-smartic® hub-side	J	[kgm²]	0,00021	0,00061	0,00177	0,00350
		ROBA®-DS-side	J	[kgm²]	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 unchanging load direction, max. load cycles ≤ 10^5.
12) The permitted misalignments may not simultaneously reach their maximum 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					Bore	Bore	Bore	Bore	
01	Torque range	2	2	Keyway					With limit switch
0	Torque range	3	3	Clamping (ring) hub	Ø d^{H7}	Ø d_2^{H7}	Ø d_P^{H7}	Ø d_R^{H7}	see page 10
1	Torque range	4	4	Clamping (ring) hub + keyway					
2	Torque range	5							
	Torque range	6							
	Torque range	7							

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

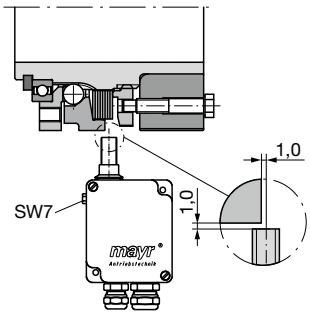
EAS®-smartic® synchronous clutch

Limit Switch Installation

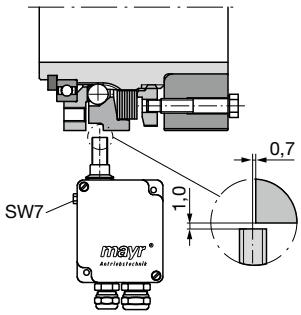
Adjust the switch distances for the contactless limit switch according to the Fig. below.
The distance of the thrust washer and the switching point can be finely adjusted using a hexagon head screw SW7.
On Size 2, use of the mechanical limit switch Type 055.000.5 is also possible.

Contactless limit switch

Undamped installation
(Limit switch is damped when clutch disengages)



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

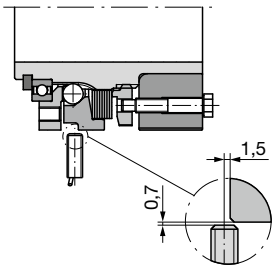


Limit switch Type 055.00_.5 (contactless)

Technical Data

Input voltage (acc. design)	230 VAC, ±10 %, 50–60 Hz 115 VAC, ±10 %, 50–60 Hz 24 VDC, PELV, ±5 %, protected against reverse polarity, for overvoltage category II connection
Power consumption	Max. 1,5 VA
Ambient temperature	-10 °C up to +60 °C limit switch -25 °C up to +60 °C NAMUR-sensor
Protection	IP54
Conductor cross section	Max. 2,5 mm² / AWG 14
Weight	400 g / 14 oz
Protection fuse	0,1 A/fast acting at 24 VDC (in system)
Signalling relay	Floating 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 IP67

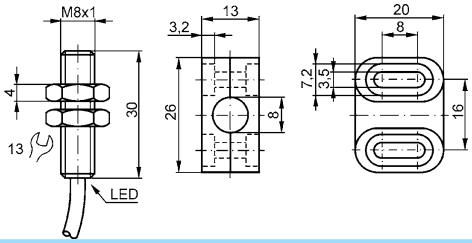
Contactless limit switch with mounting flange



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 carrying capacity	100 mA
Contact type	PNP NO contact
Switching distance S_n	1,5 mm, flush fitting
Assured switching distance S_a	1,2 mm
Characteristics	Reverse voltage protection Synchronised short-circuit protection Switching condition indication via LED
Connection type	Cable 3 m/PUR
Tightening torque	10 Nm
Conductor cross section	0,14 mm²
Ambient temperature	-25 °C up to +70 °C
Protection	IP67
Accessory	Mounting flange



Order Number

0 5 5 . 0 0 __ . 5 / __

Contactless sensing	
Sensor external	1
Sensor internal	2

Connection voltage	
230 VAC	
115 VAC	
24 VDC	

Order Number

0 5 5 . 0 1 2 . 6 / __

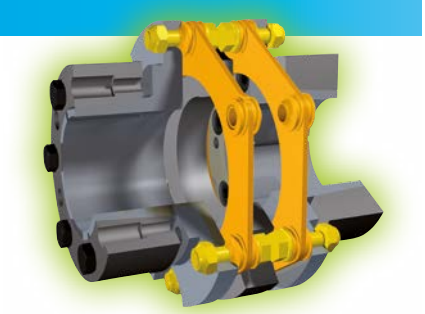
Connection voltage
10 – 30 VDC

Product Summary

Safety Clutches/Overload Clutches

- **EAS®-Compact®/EAS®-NC**
  Positive locking and completely backlash-free torque limiting clutches
- **EAS®-smartic®**
  Cost-effective torque limiting clutches, quick installation
- **EAS®-element clutch/EAS®-elements**
  Load-disconnecting protection against high torques
- **EAS®-axial**
  Exact limitation of tensile and compressive forces
- **EAS®-Sp/EAS®-Sm/EAS®-Zr**
  Load-disconnecting torque limiting clutches with switching function
- **ROBA®-slip hub**
  Load-holding, frictionally locked torque limiting clutches
- **ROBA®-contitorque**
  Magnetic continuous slip clutches

Shaft Couplings

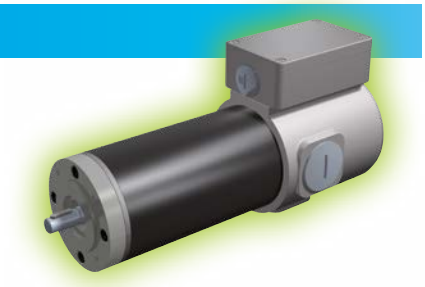


- **smartflex®/primeflex®**
  Perfect precision couplings for servo and stepping motors
- **ROBA®-ES**
  Backlash-free and damping for vibration-sensitive drives
- **ROBA®-DS/ROBA®-D**
  Backlash-free, torsionally rigid all-steel couplings
- **ROBA®-DSM**
  Cost-effective torque-measuring couplings

Electromagnetic Brakes/Clutches

- **ROBA-stop® standard**
  Multifunctional all-round safety brakes
- **ROBA-stop®-M motor brakes**
  Robust, cost-effective motor brakes
- **ROBA-stop®-S**
  Water-proof, robust monoblock brakes
- **ROBA-stop®-Z/ROBA-stop®-silenzio®**
  Doubly safe elevator brakes
- **ROBA®-diskstop®**
  Compact, very quiet disk brakes
- **ROBA®-topstop®**
  Brake systems for gravity loaded axes
- **ROBA®-linearstop**
  Backlash-free brake systems for linear motor axes
- **ROBA®-guidestop**
  Backlash-free holding brake for profield rail guides
- **ROBATIC®/ROBA®-quick/ROBA®-takt**
  Electromagnetic clutches and brakes, clutch brake units

DC Drives



- **tendo®-PM**
  Permanent magnet-excited DC motors
- **tendo®-SC**
  1 quadrant and 4 quadrant transistor controllers

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