

M/162000/M, Rotary cylinders (Rack & pinion version) Magnetic piston, double acting



- > \varnothing 32 ... 125 mm
- > Torques from 1,2 ... 510 Nm
- > Rotation angles 90°, 180°, 270°, 360°
- > Reed or solid state switches can be

- mounted flush with the profile barrel
- > ISO 15552 pitch to use standard mountings
- > High performance adaptive cushioning system "ACS"



Technical features

Medium:

Compressed air, filtered, lubricated or non-lubricated

Operation:

M/162000/M: Double acting, magnetic piston, adjustable cushioning

Operating pressure:

1 ... 10 bar (14,5 ... 145 psi)

Rotation angles:

90°, 180°, 270°, 360°

Fixed up to +8°

Adjustable $\pm 5^\circ$

Additional angles on request

Operating temperature:

-5 ... 80 °C (+23 ... +176 °F)

Air supply must be dry enough to avoid ice formation at temperatures below +2 °C (+35 °F)

Materials:

Profile barrel: anodized aluminium

End covers: pressure diecast aluminium

Central body: anodized aluminium

Rack: normalized steel

Pinion: surface hardened high strength steel

Pinion bearings: ball bearings

(\varnothing 32 PTFE bronze bearings)

Rack guide shoe: acetal resin

Piston seals: PUR

O-rings: NBR

Technical data, standard

Cylinder \varnothing (mm)	32	40	50	63	80	100	125
Theoretical torque (Nm) at 6 bar	7,2	13,8	23,4	43,8	94,2	157,8	306
Cushion length (mm)	19	22	24	24	27	34	41
Initial cushion volume (cm ³)	12,3	20,7	36	64	11	24	45

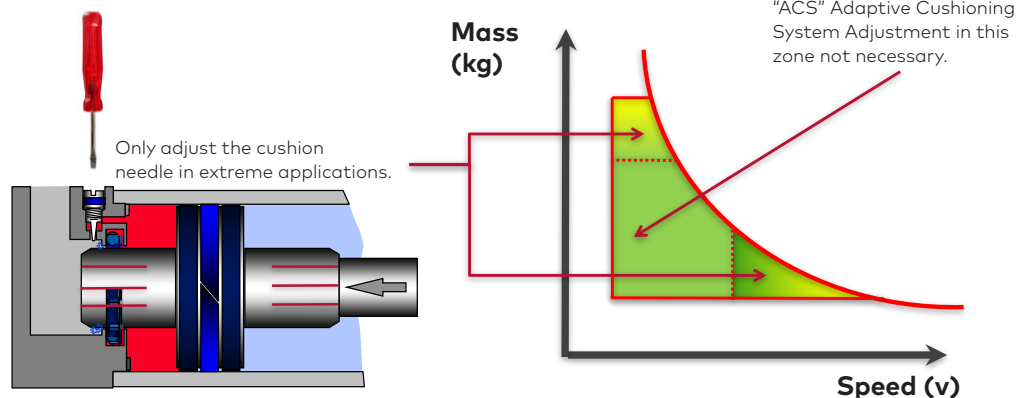
Rotation angle*

\varnothing	90°	180°	270°	360°
32	•	•	•	•
40	•	•	•	•
50	•	•	•	•
63	•	•	•	•
80	•	•	•	•
100	•	•	•	•
125	•	•	•	•


* other angles of rotation on request

The function

The new "ACS" Adaptive Cushioning System provides a high performance pneumatic damping function. The system will automatically cushion for a wide range of general applications as delivered. Manual adjustment is still possible for extreme applications.



Cylinder variants

Symbol	Model with magnetic piston	Description	Dimensions Page
	M/162000/MI	Rotary cylinders with fixed angle (+8°) and male pinion	4
	M/162000/MIX	Rotary cylinders with fixed angle (+8°) and female pinion	4
	M/162000/ME	Rotary cylinders with adjustable angle (±5°) and male pinion	5
	M/162000/MEX	Rotary cylinders with adjustable angle (±5°) and female pinion	5

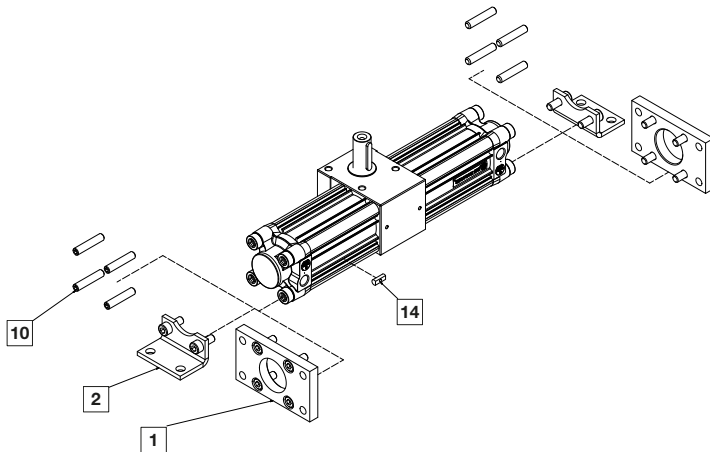
Cylinder diameters (mm)		Substitute	M/162***/***/***		Standard rotation angle		Substitute
32		032			90°		90
40		040			180°		180
50		050			270°		270
63		063			360°		360
80		080					
100		100					
125		125					
Cylinder variants		Substitute			Pinion variants		Substitute
Magnetic piston		M			Male pinion		None
					Female pinion		X
					Tolerances of rotation angle		Substitute
					Adjustable ±5°		E
					Fixed up to +8°		I






Note: If option is not required, disregard option position within part number eg. M/162100/ME/90.

This options selector explains only the cylinder variants.

Additional variants/options are not possible

Mountings



Cyl.	A	B, G	C	Groove key	Magnetically operated switches
					
	10	1	2	14	
ø	Page 6	Page 6	Page 6	Page 6	Page 7 ... 10
32	QM/8032/35	QA/8032/22	QA/8032/21	M/P72816	
40	QM/8032/35	QA/8040/22	QA/8040/21	M/P72816	
50	QM/8050/35	QA/8050/22	QA/8050/21	M/P72816	
63	QM/8050/35	QA/8063/22	QA/8063/21	M/P72816	
80	QM/8080/35	QA/8080/22	QA/8080/21	M/P72816	
100	QM/8080/35	QA/8100/22	QA/8100/21	M/P72816	
125	QM/8125/35	QM/8125/22	QM/8125/21	M/P72816	

Pos.	Style	Standard
1	B, G	Clear anodised aluminium
2	C	Coated steel (ø 32 ... 125 mm)
10	A	Galvanized steel
14	Groove key	Steel

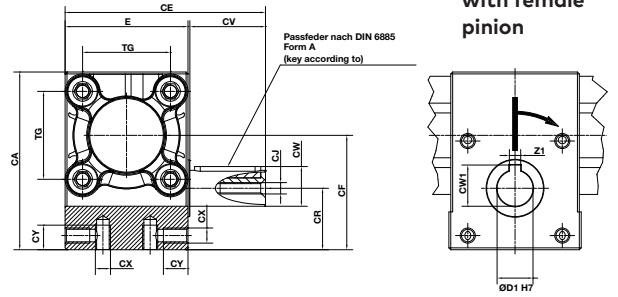
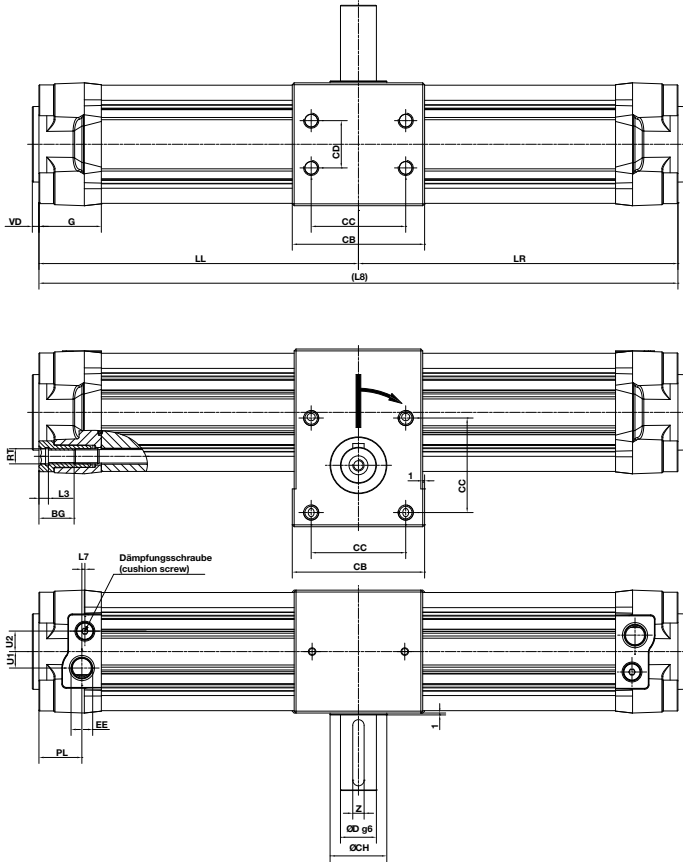
Spares kit for rotary actuators

(wearing parts to be replaced are: piston seals, barrel seals, damping seals and piston rod seals as well as the wear ring)



Spares kit		Option	
with fixed rotation angle		MI / MIX	
with adjustable rotation angle		ME / MEX	
Model	ø	Standard temperature (-5 °C ... +80 °C)	
Standard	M/162***	032	QA/162032/00
		040	QA/162040/00
		050	QA/162050/00
		063	QA/162063/00
		080	QA/162080/00
		100	QA/162100/00
		125	QA/162125/00

Dimensions
M/162000/MI* - Rotary cylinders with fixed angle (up to +8°)

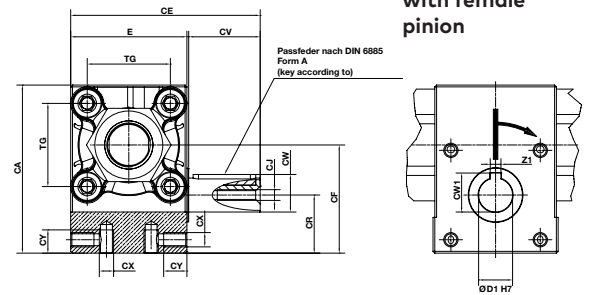
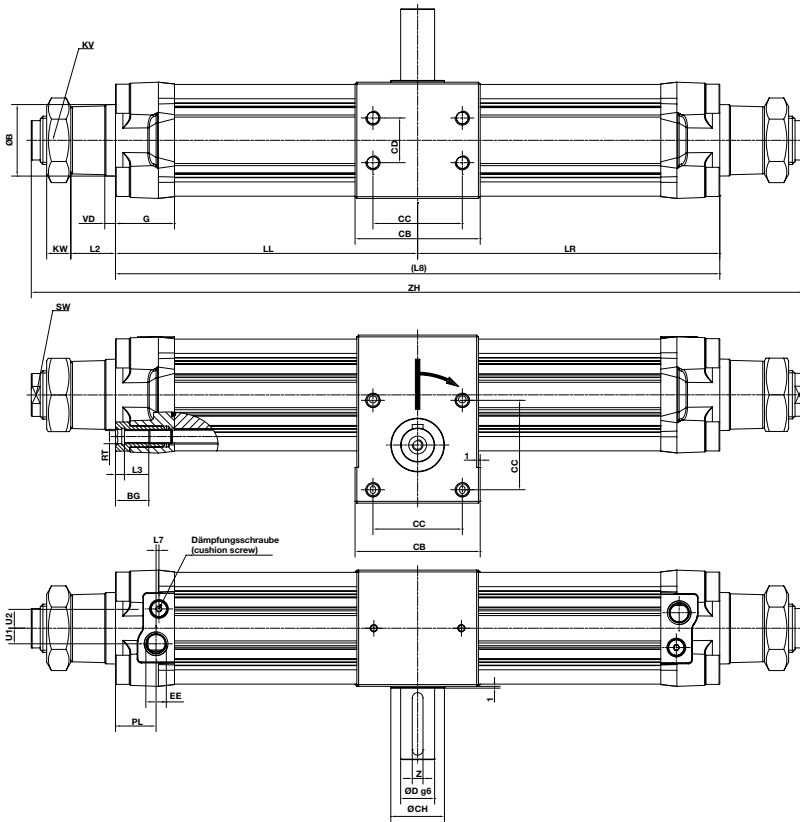
 Dimensions in mm
 Projection/First angle

Rotary cylinders with female pinion

ø	ø B _{d11}	BG min.	CA	CB	CC	CD	CE	CF	ø CH	CJ	CR	CV	CW	CW1	CX	CY	ø D _{g6}	ø D1 _{H7}	E	EE	G	L3	L7	Model
32	30	16	71,5	50	33	18	81	46,5	25	M5	25	30	16	16,3	M6	10	14	14	50	G 1/8	29	4	6,6	M/162032/.
40	35	16	82	60	40	22	91	54,5	25	M5	30	30	16	16,3	M6	10	14	14	60	G 1/4	34,5	4	5,6	M/162040/.
50	40	16	94	70	50	25	106	60,5	30	M6	32,5	40	21,5	21,8	M8	13	19	19	65	G 1/4	33	5	1,6	M/162050/.
63	45	16	110	75	60	35	116	71	30	M8	37	40	27	21,8	M8	13	24	19	75	G 3/8	36,5	5	3,6	M/162063/.
80	45	17	142	99	80	50	150	93,5	45	M8	50	50	31	27,3	M10	16	28	24	99	G 3/8	42	-	1,8	M/162080/.
100	55	17	156,5	115	80	60	166	99	50	M10	54	50	41	31,3	M10	16	38	28	115	G 1/2	42	-	3,8	M/162100/.
125	60	20	188	125	90	70	191	118	60	M10	60	50	41	31,3	M12	20	38	28	140	G 1/2	54	-	1,8	M/162125/.

ø	LL		LR		(L8)					Model					
	≤ 90°	≤ 180°	≤ 270°	≤ 360°	0° ... 90°	90° ... 180°	180° ... 270°	270° ... 360°	90°	180°	270°	360°			
32	112,9	136,5	160,0	183,6	89,3 ... 112,9	112,9 ... 136,5	136,5 ... 160,0	160,0 ... 183,6	225,8	273	320	367,2	M/162032/.		
40	129,7	158,0	186,4	214,7	101,3 ... 129,7	129,7 ... 158,0	158,0 ... 186,4	186,4 ... 214,7	259,4	316	372,8	429,4	M/162040/.		
50	137,5	169,0	200,5	232,0	106,0 ... 137,5	137,5 ... 169,0	169,0 ... 200,5	200,5 ... 232,0	275	338	401	464	M/162050/.		
63	161,7	199,0	236,4	273,7	124,3 ... 161,7	161,7 ... 199,0	199,0 ... 236,4	236,4 ... 273,7	323,4	398	472,8	547,4	M/162063/.		
80	194,5	244,0	293,5	343,0	145,0 ... 194,5	194,5 ... 244,0	244,0 ... 293,5	293,5 ... 343,0	389	488	587	686	M/162080/.		
100	204,6	258,0	311,5	364,9	151,1 ... 204,6	204,6 ... 258,0	258,0 ... 311,5	311,5 ... 364,9	409,2	516	623	729,8	M/162100/.		
125	237,1	303,0	369,0	435,0	171,1 ... 237,1	237,1 ... 303,0	303,0 ... 369,0	369,0 ... 435,0	474,2	606	738	870	M/162125/.		

ø	PL	RT	SW	TG	U1	U2	VA	Z	Z1	Weight (kg) Variante= MI					Weight (kg) Variante= MIX					Weight (kg) pro °	Model
										0°	90°	180°	270°	360°	0°	90°	180°	270°	360°		
32	15	M6	15	32,5	4,6	6,3	3,5	5	5	5,64	5,79	5,93	6,05	6,10	5,24	5,39	5,53	5,65	5,70	0,00145	M/162032/.
40	21,5	M6	17	38	5,8	9,2	3,5	5	5	5,98	6,21	6,39	6,54	6,61	5,83	6,06	6,24	6,39	6,46	0,00213	M/162040/.
50	22,7	M8	22	46,5	8,7	10,8	3,5	6	6	7,05	7,37	7,69	7,98	8,09	6,80	7,12	7,44	7,73	7,84	0,00324	M/162050/.
63	24,2	M8	22	56,5	10	12,8	3,5	8	6	8,43	8,89	9,34	9,92	10,07	8,18	8,64	9,09	9,67	9,82	0,00449	M/162063/.
80	29,7	M10	24	72	12	14,5	3,5	8	8	13,04	13,81	14,73	15,68	15,99	12,44	13,21	14,13	15,08	15,39	0,00912	M/162080/.
100	27,7	M10	24	89	9	14,5	3,5	10	8	16,40	17,54	18,84	20,03	20,43	15,60	16,74	18,04	19,23	19,63	0,01293	M/162100/.
125	39,7	M12	27	110	12	17	5,5	10	8	24,37	27,20	29,43	31,56	32,28	23,27	26,10	28,33	30,46	31,18	0,02343	M/162125/.

Dimensions
M/162000/ME* - Rotary cylinders with adjustable angle (±5°)

 Dimensions in mm
 Projection/First angle

Rotary cylinders with female pinion

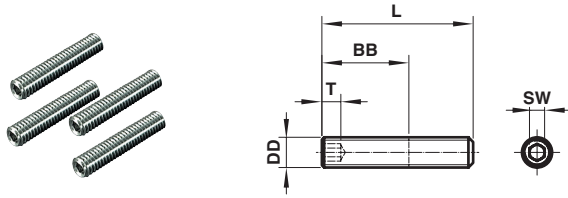
ø	ø B	BG	CA	CB	CC	CD	CE	CF	ø	CJ	CR	CV	CW	CW1	CX	CY	ø D	ø D1	E	EE	G	KV	KW	L2	L3	L7	Model
	d11	min.							CH							g6	H7										
32	30	16	71,5	50	33	18	81	46,5	25	M5	25	30	16	16,3	M6	10	14	14	50	G 1/8	29	SW30	10	19,5	4	6,6	M/162032/.
40	35	16	82	60	40	22	91	54,5	25	M5	30	30	16	16,3	M6	10	14	14	60	G 1/4	34,5	SW32	11	22	4	5,6	M/162040/.
50	40	16	94	70	50	25	106	60,5	30	M6	32,5	40	21,5	21,8	M8	13	19	19	65	G 1/4	33	SW41	13,5	25	5	1,6	M/162050/.
63	45	16	110	75	60	35	116	71	30	M8	37	40	27	21,8	M8	13	24	19	75	G 3/8	36,5	SW41	13,5	25	5	3,6	M/162063/.
80	45	17	142	99	80	50	150	93,5	45	M8	50	50	31	27,3	M10	16	28	24	99	G 3/8	42	SW46	15	33	-	1,8	M/162080/.
100	55	17	156,5	115	80	60	166	99	50	M10	54	50	41	31,3	M10	16	38	28	115	G 1/2	42	SW46	15	35	-	3,8	M/162100/.
125	60	20	188	125	90	70	191	118	60	M10	60	50	41	31,3	M12	20	38	28	140	G 1/2	54	SW55	18	44	-	1,8	M/162125/.

ø	LL			LR			(L8)						Model				
	≤ 90°	≤ 180°	≤ 270°	≤ 360°	0° ... 90°	90° ... 180°	180° ... 270°	270° ... 360°	90°	180°	270°	360°	PL	RT	SW	TG	
32	112,9	136,5	160,0	183,6	89,3 ... 112,9	112,9 ... 136,5	136,5 ... 160,0	160,0 ... 183,6	225,8	273	320	367,2	15	M6	15	32,5	M/162032/.
40	129,7	158,0	186,4	214,7	101,3 ... 129,7	129,7 ... 158,0	158,0 ... 186,4	186,4 ... 214,7	259,4	316	372,8	429,4	21,5	M6	17	38	M/162040/.
50	137,5	169,0	200,5	232,0	106,0 ... 137,5	137,5 ... 169,0	169,0 ... 200,5	200,5 ... 232,0	275	338	401	464	22,7	M8	22	46,5	M/162050/.
63	161,7	199,0	236,4	273,7	124,3 ... 161,7	161,7 ... 199,0	199,0 ... 236,4	236,4 ... 273,7	323,4	398	472,8	547,4	24,2	M8	22	56,5	M/162063/.
80	194,5	244,0	293,5	343,0	145,0 ... 194,5	194,5 ... 244,0	244,0 ... 293,5	293,5 ... 343,0	389	488	587	686	29,7	M10	24	72	M/162080/.
100	204,6	258,0	311,5	364,9	151,1 ... 204,6	204,6 ... 258,0	258,0 ... 311,5	311,5 ... 364,9	409,2	516	623	729,8	27,7	M10	24	89	M/162100/.
125	237,1	303,0	369,0	435,0	171,1 ... 237,1	237,1 ... 303,0	303,0 ... 369,0	369,0 ... 435,0	474,2	606	738	870	39,7	M12	27	110	M/162125/.

ø	ZH				Weight (kg) Variante=ME						Weight (kg) Variante=MEX						Weight (kg) pro °	Model		
	U1	U2	VD	Z	90°	180°	270°	360°	0°	90°	180°	270°	360°	0°	90°	180°			270°	360°
32	4,6	6,3	6	5	305,8	353	400	447,2	5,94	6,09	6,23	6,35	6,40	5,54	5,69	5,83	5,95	6,00	0,00054	M/162032/.
40	5,8	9,2	6	5	353,4	410	466,8	523,4	6,42	6,65	6,83	6,98	7,05	6,27	6,50	6,68	6,83	6,90	0,00075	M/162040/.
50	8,7	10,8	6	6	375	438	501	564	7,78	8,11	8,42	8,72	8,83	7,53	7,86	8,17	8,47	8,58	0,00125	M/162050/.
63	10	12,8	6	8	424,9	499,5	574,3	648,9	9,25	9,70	10,16	10,73	10,88	9,00	9,45	9,91	10,48	10,63	0,00164	M/162063/.
80	12	14,5	6	8	514	613	712	811	14,20	14,98	15,90	16,85	17,16	13,60	14,38	15,30	16,25	16,56	0,00337	M/162080/.
100	9	14,5	6	10	538,2	645	752	858,8	17,69	18,84	20,13	21,32	21,72	16,89	18,04	19,33	20,52	20,92	0,00441	M/162100/.
125	12	17	8	10	631,2	763	895	1027	26,51	29,35	31,58	33,71	34,42	25,41	28,25	30,48	32,61	33,32	0,00795	M/162125/.

Mountings

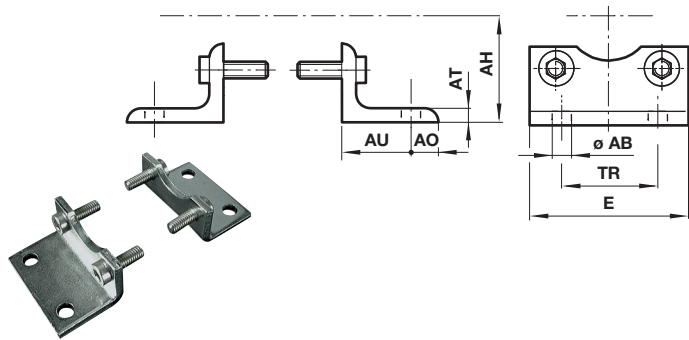
Front or rear stud mounting A



∅	BB	DD	L	SW	T (min)	(kg)	Model (A)
32/40	17	M6	30	3	3,5	0,02	QM/8032/35
50/63	23	M8	40	4	5	0,05	QM/8050/35
80/100	28	M10	45	5	6	0,08	QM/8080/35
125	34	M12	60	6	8	0,14	QM/8125/35

Foot mounting C

Conforms to ISO 15552, type MS1

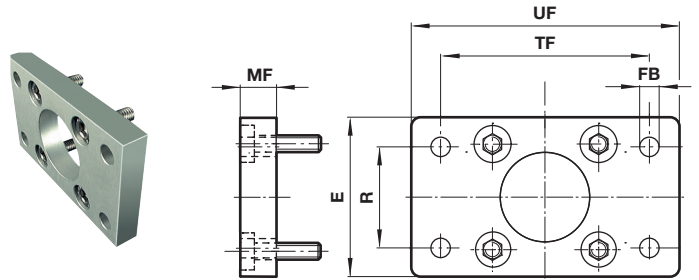


∅	∅ AB	AH	AO	AT	AU	E	TR	(kg)	Model (C)
32	7	32	8	4	24	48	32	0,15	QA/8032/21
40	10	36	9	4	28	53	36	0,18	QA/8040/21
50	10	45	10	5	32	64	45	0,30	QA/8050/21
63	10	50	12	5	32	74	50	0,39	QA/8063/21
80	12	63	19	6	41	98	63	0,80	QA/8080/21
100	14,5	71	19	6	41	115	75	0,95	QA/8100/21
125	16	90	25	8	45	140	90	2,48	QM/8125/21

Front flange B, G

Conforms to ISO 15552, type MF1 and MF2

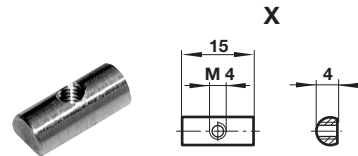
Dimensions in mm
Projection/First angle



∅	E	∅ FB	MF	R	TF	UF	(kg)	Model (B, G)
32	50	7	10	32	64	80	0,10	QA/8032/22
40	55	9	10	36	72	90	0,12	QA/8040/22
50	65	9	12	45	90	110	0,21	QA/8050/22
63	75	9	12	50	100	125	0,27	QA/8063/22
80	100	12	16	63	126	154	0,63	QA/8080/22
100	120	14	16	75	150	186	0,89	QA/8100/22
125	140	16	20	90	180	224	1,59	QM/8125/22

Groove key M/P72816

Weight: 0,01 (kg)



- > Magnetically operating reed switch - Round style
- > Suitable for all cylinder ranges with magnetic piston
- > Switches can be mounted flush with the delivered special adaptor
- > LED indicator on LSU models
- > Alternative variants allows a wide range of application



Technical features

Operation:

M/50/LSU Normally open with LED (yellow)

Switching voltage (Ub):

10 ... 240 V a.c./170 V d.c.

Switching voltage output:

Ub - 2,7 V

Switching current

(see graph overleaf):

0,18 A max.

Switching power:

10 W/10 VA max.

Contact resistance:

150 mΩ

Response time:

1,8 ms

Operating temperature:

-25 ... +80 °C (-13 ... +176 °F)

High temperature version:

+150 °C max. (+302 °F)

Protection rating (EN 60529):

IP66

Shock resistance:

50 g (during 11 ms)

Vibration resistance:

35 g (at 2000 Hz)

Cable type:

2 x 0,25: PVC, PUR or silicone

3 x 0,25 PVC

Cable length:

2, 5 or 10 m

Electromagnetic compatibility

according to:

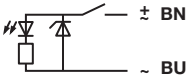
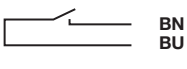
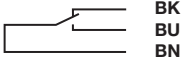
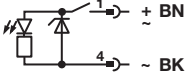
EN 60947-5-2

Materials:

Body: plastic

Cable: see table below

Technical data - Reed switches - additional information see data sheet en 4.3.005

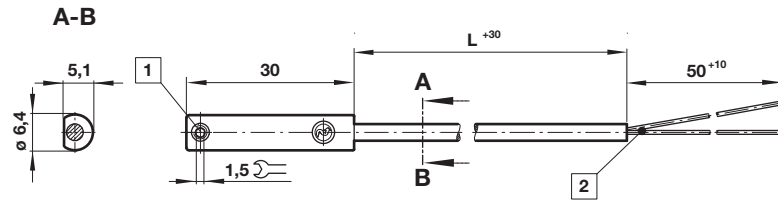
Symbol	Voltage		Current maximum (mA)	Function	Operating temperature (°C)	LED	Protection class	Plug	Cable length (m)	Cable type	Weight (g)	Model
	(V a.c.)	(V d.c.)										
	10 ... 240	10 ... 170	180	Normally open	-25 ... +80	•	IP 66	—	2, 5 or 10	PVC 2x0,25	37	M/50/LSU/*V
	10 ... 240	10 ... 170										
	10 ... 240	10 ... 170	180	Normally open	-25 ... +150	—	IP 66	—	2	Silicon 2x0,25	37	TM/50/RAU/2S
	10 ... 240	10 ... 170	180	Changeover	-25 ... +80	—	IP 66	—	5	PVC 3x0,25	37	M/50/RAC/5V
	10 ... 60	10 ... 60	180	Normally open	-25 ... +80	•	IP 66	M8x1	0,3	PVC 3x0,25	16	M/50/LSU/CP*1)
	10 ... 60	10 ... 60						180				Normally open

* Insert cable length; *1) Plug-in connector see page 12

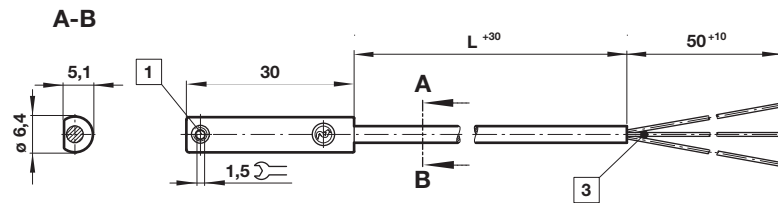
Dimensions

M/50/LSU/*V, M/50/LSU/5U,
TM/50/RAU/2S
Cable length L = 2, 5 or 10 m

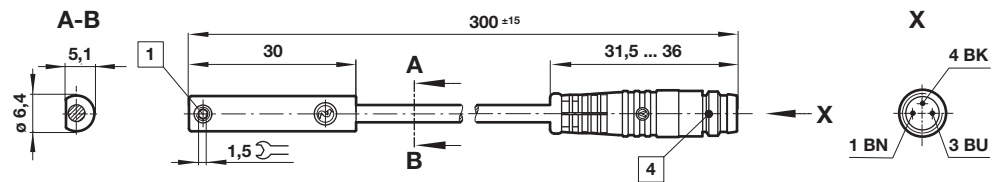
Dimensions in mm
Projection/First angle



M/50/RAC/5V
Cable length L = 5 m



M/50/LSU/CP
M/50/LSU/CC



- 1 Fixing screw
- 2 + BN = brown; - BU = blue (output)
- 3 - BK = black; + BN = brown; - #BU = blue

- 4 Version CP: Plug M8 x 1, color code: BK = +; BN = -; BU = output
Version CC: Plug M12 x 1, color code: BK = +; BN = -; BU = output

Accessories

Plug-in connector cable with nut



Outer cover	Cable length (m)	Weight (kg)	Connector	Connector
PVC 3 x 0,25	5	0,18	M8 x 1 straight connector	M/P73001/5
PUR 3 x 0,25	5	0,18	M8 x 1 straight connector	M/P73002/5
PVC 3 x 0,25	5	0,18	angled connector 90°	M/P34615/5
PUR 3 x 0,25	5	0,18	angled connector 90°	M/P34596/5
PUR 3 x 0,34	5	0,21	M12 x 1 straight connector	M/P34594/5

- > Magnetically operated switch, solid state - round style
- > IO-Link version available
- > Suitable for all cylinder ranges with magnetic piston
- > Switches can be mounted flush in all profile cylinders
- > Reliable switching with a very fast reponse time
- > Particularly suited for use in high levels of vibration
- > LED indicator as standard
- > UL listed



Technical features

Operation:

PNP / NPN (see table)
Output with LED (yellow)
Normally open (standard)

Switching voltage (U_b):

10 ... 30 V d.c.
("supply class 2" acc. to cULus)

Voltage drop at output:

< 2,5 V

Residual current:

< 0,5 mA

Switching current

(see graph):

100 mA max. (standard)
300 mA max. (M/50/EHP)

Switching power:

3,0 W max. (standard)
9,0 W max. (M/50/EHP)

Response time:

< 0,1 ms (standard)
< 5 ms (M/50/IOP)

Operating frequency:

1 kHz (standard)
200 Hz (M/50/IOP)

Responsiveness:

2,8 mT

Hysteresis:

0,5 ... 1,5 mT
0,2 mT (M/50/IOP)

Repeatability:

< 0,1 mT

Protection rating (EN 60529):

IP67 (standard)
IP68 (M/50/EAP/5U, M/50/EHP/5U)

Operating temperature:

-40 ... +80 °C (-40 ... 176 °F)
(permanently fixed cable)
-25 ... +80 °C (-13 ... 176 °F)
(moving cable)

Cable type:

PVC 3 x 0,14 mm² (standard)
PUR 3 x 0,14 mm² (M/50/E*P/*U
and all variants with connector)

Cable length:

2, 5 and 10 m

Electromagnetic compatibility

according to:
EN 60947-5-2

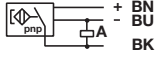
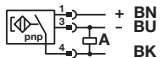
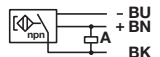
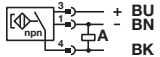
Materials:

Housing: plastic
Thread insert: brass
Set screw: stainless steel
Cable: see table below

Mounting type:

Flush mountable

Technical data - Solid state - additional information see data sheet en 4.3.007

Symbol	Voltage (V DC)	Current maximum (mA)	Function	IO-Link *1)	Operating temperature (°C)	LED	Protection class	Connector	Cable length (m)	Cable type	Weight (g)	Model
	10 ... 30	100	PNP		-40 ... +80	•	IP67	---	2	PVC 3 x 0,14	23	M/50/EAP/2V
	10 ... 30	100	PNP		-40 ... +80	•	IP67	---	5	PVC 3 x 0,14	56	M/50/EAP/5V
	10 ... 30	100	PNP		-40 ... +80	•	IP67	---	10	PVC 3 x 0,14	102	M/50/EAP/10V
	10 ... 30	100	PNP / NPN	•	-40 ... +80	•	IP67	---	5	PVC 3 x 0,14	56	M/50/IOP/5V
	10 ... 30	100	PNP		-40 ... +80	•	IP68	---	5	PUR 3 x 0,14	56	M/50/EAP/5U
	10 ... 30	100	PNP		-40 ... +80	•	IP67	---	10	PUR 3 x 0,14	102	M/50/EAP/10U
	10 ... 30	300	PNP		-40 ... +80	•	IP67	---	2	PVC 3 x 0,14	23	M/50/EHP/2V
	10 ... 30	300	PNP		-40 ... +80	•	IP67	---	5	PVC 3 x 0,14	56	M/50/EHP/5V
	10 ... 30	300	PNP		-40 ... +80	•	IP67	---	10	PVC 3 x 0,14	102	M/50/EHP/10V
	10 ... 30	300	PNP		-40 ... +80	•	IP68	---	5	PUR 3 x 0,14	56	M/50/EHP/5U
	10 ... 30	100	PNP		-40 ... +80	•	IP67	M8 x 1	0,3	PUR 3 x 0,14	7	M/50/EAP/CP
	10 ... 30	100	PNP / NPN	•	-40 ... +80	•	IP67	M8 x 1	0,3	PUR 3 x 0,14	7	M/50/IOP/CP
	10 ... 30	100	PNP		-40 ... +80	•	IP67	M12 x 1	0,3	PUR 3 x 0,14	16	M/50/EAP/CC
	10 ... 30	100	PNP		-40 ... +80	•	IP67	M12 x 1	2	PUR 3 x 0,14	35	M/50/EAP/CC/2
	10 ... 30	100	PNP / NPN	•	-40 ... +80	•	IP67	M12 x 1	0,3	PUR 3 x 0,14	16	M/50/IOP/CC
	10 ... 30	300	PNP		-40 ... +80	•	IP67	M8 x 1	0,3	PUR 3 x 0,14	7	M/50/EHP/CP
	10 ... 30	100	NPN		-40 ... +80	•	IP67	---	2	PVC 3 x 0,14	23	M/50/EAN/2V
	10 ... 30	100	NPN		-40 ... +80	•	IP67	---	5	PVC 3 x 0,14	56	M/50/EAN/5V
	10 ... 30	100	NPN		-40 ... +80	•	IP67	---	10	PVC 3 x 0,14	102	M/50/EAN/10V
	10 ... 30	100	NPN		-40 ... +80	•	IP67	M8 x 1	0,3	PUR 3 x 0,14	7	M/50/EAN/CP

Color code: see next page

*1) IO-Link functionality: see next page

IO-Link Switch conforming to IEC 61131-9

Properties and Functionality	M/50/EAP, M/50/EAN M/50/EHP	M/50/IOP
Operating Mode	Standard	Standard
Power LED		•
LED sensor signal	•	•
Normally open (delivery status)	•	•
Normally closed		○
Delay mode		○
Installation aid		•
Temperature measurement		•
Detection counter		•
Teach functionality		•
Responsiveness adjustment		•

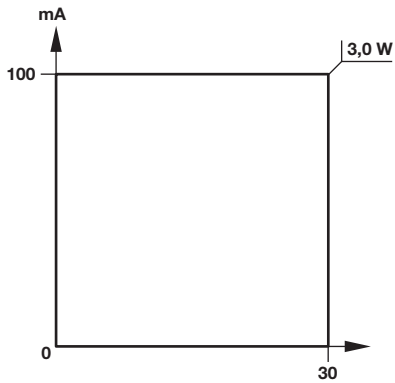
Note: IODD for the M/50/IOP switches available on the Norgren homepage.
<https://www.norgren.com/uk/en/technical-support/software>

• = included

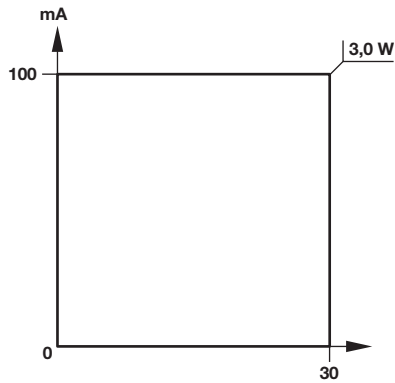
○ = optional (manufacture pre-setting required)

Switching current and switching voltage

M/50/EAP, M/50/EAN, M/50/IOP

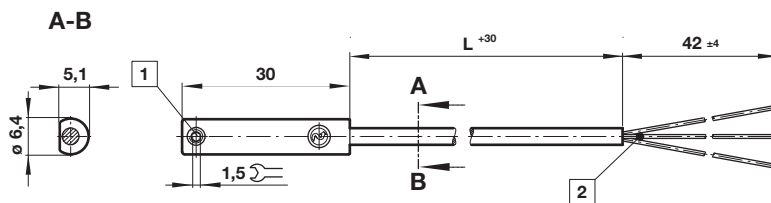


M/50/EHP



Dimensions

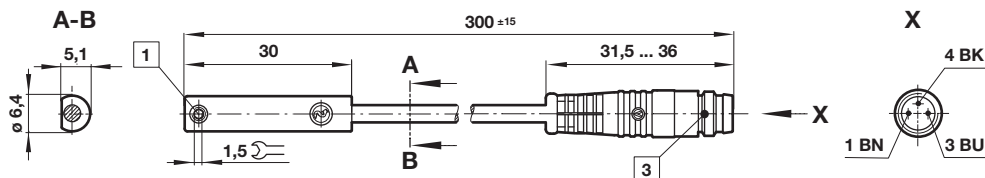
M/50/EAP/*V,
M/50/EAN/*U,
M/50/IOP/5V,
M/50/EHP/*V,
M/50/EHP/5U,
M/50/EAN/*V
Cable length L = 2, 5 or 10 m



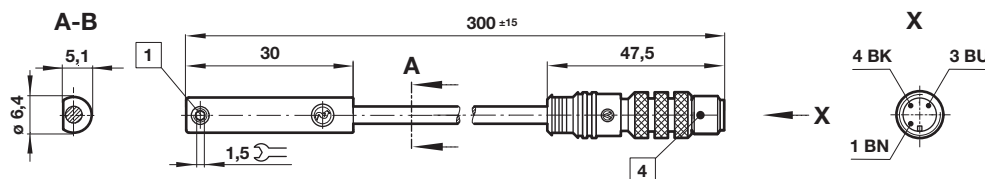
Dimensions in mm
Projection/First angle



M/50/EAP/CP,
M/50/EAN/CP,
M/50/IOP/CP,
M/50/EHP/CP



M/50/EAP/CC,
M/50/IOP/CC,
M/50/EHP/CC



1 Fixing screw

2 Color code: BK = black (output); BN = brown (+); BU = blue (-)

3 Connector M8 x 1; 1 BN = +; 3 BU = -; 4 BK = output

4 Connector M12 x 1; 1 BN = +; 3 BU = -; 4 BK = output

Warning

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under **»Technical features/ data«**.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems or other applications not within published specifications, consult Norgren.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.