

- > Ø 8 ... 40 mm
- > Saves 20% space over the basic length of a corresponding ISO/VDMA cylinder
- > Low friction, long life seals
- > High strength, double crimped end cap design
- > Standard magnetic piston for full control system versatility



### Technical features

#### Medium:

Compressed air, filtered, lubricated or non-lubricated

#### Operation:

R./57100: Single acting, sprung in with buffer cushioning

R./57300: Single acting, sprung out with buffer cushioning

#### Operating pressure:

2 ... 10 bar (29 ... 145 psi)

Ø 8 mm: 3 ... 10 bar (43 ... 145 psi)

#### Cylinder diameters:

8, 10, 12, 16, 20, 25, 32, 40 mm

#### Strokes:

10, 25, 50 mm

#### Operating temperature:

+80°C max. (+176°F)

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

#### Materials:

Piston rod: Stainless steel (Ø 8 ... 16 mm austenitic, Ø 20 ... 63 mm martensitic)  
Barrel: Stainless steel (austenitic)  
End covers: Aluminium  
Wiper: PUR  
Seals and 'O'-rings: NBR

### Technical data

#### Cylinder RT/57100/M & RT/57300/M (Ø8 ... 40 mm); RM/57100/M & RM/57300/M (Ø20 ... 40 mm)

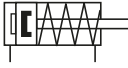
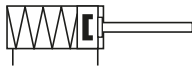
Cylinder Ø (mm)	8	10	12	16	20	25	32	40
Port size	M3 (M3)*1	M5 (M5)*1	M5 (M5)*1	M5 (M5)*1	Rc 1/8 (M6)*1	Rc 1/8 (M6)*1	Rc 1/8 (G 1/8)*1	Rc 1/8 (G 1/8)*1
Piston rod Ø (mm)	3	4	4	6	8	10	12	14
Piston rod thread	M3	M4	M4	M6	M8	M10 x 1,25	M10 x 1,25	M12 x 1,25
<b>R./57100/M</b>								
Theoretical thrusts at 6 bar outstroke N	22,7	38,2	56,2	101	161	264	432	687
Theoretical thrusts F1 outstroke (N)	3,6	4,6	6,1	10,5	14,5	20	32	44
Air consumption at 6 bar outstroke l/cm	0,004	0,005	0,008	0,014	0,022	0,035	0,056	0,087
<b>R./57300/M</b>								
Theoretical thrusts at 6 bar outstroke N	18,6	30,8	48,4	84,5	131	217	364	594
Theoretical thrusts F1 outstroke (N)	3,6	4,6	6,1	10,5	14,5	20	32	44
Air consumption at 6 bar outstroke l/cm	0,003	0,004	0,006	0,013	0,019	0,028	0,048	0,074

\*1) Values in ( ) for RM/57... only

### Standard strokes

Cylinder Ø (mm)	Stroke length (mm)		
	10	25	50
8	•	•	•
10	•	•	•
12	•	•	•
16	•	•	•
20	•	•	•
25	•	•	•
32	•	•	•
40	•	•	•

### Cylinder variants

Symbol	Model magnetic piston	Description	Dimensions
			Page
	R./57100/M	Standard cylinder, sprung in (RT/571... - Ø8 ... 40 mm; RM/571... - Ø20 ... 40 mm)	4
	R./57100/MC	Cylinder with central rear port (RT/571... - Ø8 ... 40 mm; RM/571... - Ø20 ... 40 mm)	4
	R./57300/M	Standard cylinder, sprung out (RT/573... - Ø8 ... 40 mm; RM/573... - Ø20 ... 40 mm)	4
	R./57300/MC	Cylinder with central rear port (RT/573... - Ø8 ... 40 mm; RM/573... - Ø20 ... 40 mm)	4

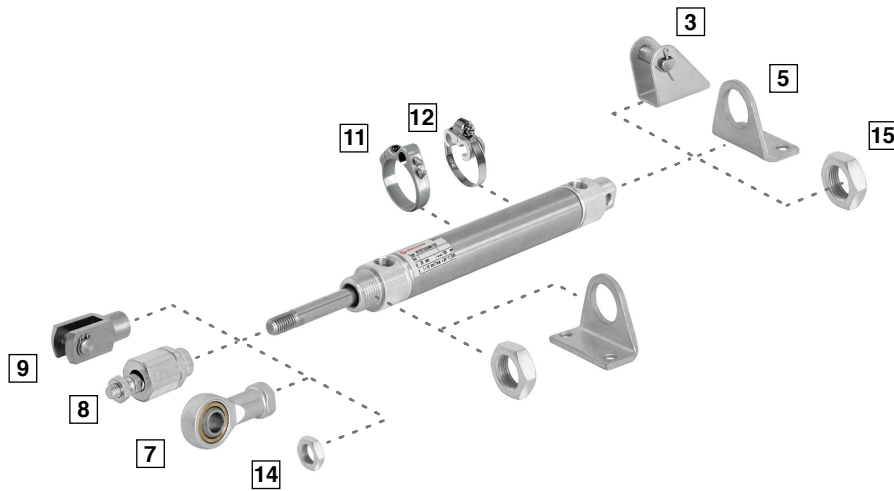
### Option selector









**R★/57★★★/★/★★★**

Port size	Cylinder Ø (mm)	Substitute
M3	8	T
M5	10	T
M5	12	T
M5	16	T
M6	20	M
Rc1/8	20	T
M6	25	M
Rc1/8	25	T
G1/8	32	M
Rc1/8	32	T
G1/8	40	M
Rc1/8	40	T
Spring position		Substitute
Sprung in		1
Sprung out		3

Stroke (mm)	Substitute
50 max.	
Cylinder variants	Substitute
Magnetic piston	M
Magnetic piston, central rear port, flat end	MC
Cylinder Ø (mm)	Substitute
8	08
10	10
12	12
16	16
20	20
25	25
32	32
40	40

**Mountings**


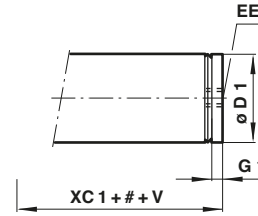
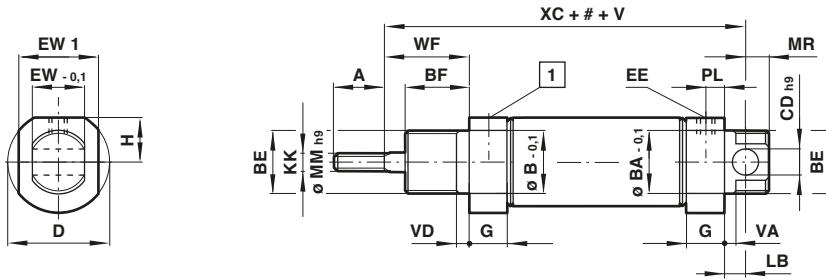
Cyl.	AK	C	F	L	N
					
	<b>8</b>	<b>5</b>	<b>9</b>	<b>3</b>	<b>15</b>
	Page 5	Page 5	Page 5	Page 5	Page 5
Ø	—	M/P71273/1	QM/57008/25	QM/57008/24	M/P71364
8	—	M/P71273/2	QM/8010/25	QM/947	M/P71364
10	QM/8010/38	M/P71273/2	QM/8010/25	QM/947	M/P71364
12	QM/8010/38	M/P19369	QM/57016/25	QM/946	M/P1501/90
16	QM/8012/38	M/P19389	QM/57020/25	QM/8012/24	M/P13834
20	QM/8020/38	M/P40381	QM/57025/25	QM/57025/24	M/P13607
25	QM/8025/38	M/P19406	QM/57032/25	QM/8020/24	M/P13615
32	QM/8025/38	M/P71273/3	QM/57040/25	QM/57040/24	M/P29254
40	QM/8040/38				
Cyl.	N2	UF	Switch mounting brackets >15 mm stroke	<15 mm stroke	Magnetically operated switches
					
	<b>14</b>	<b>7</b>	<b>11</b>	<b>12</b>	
	Page 5	Page 6	Page 6	Page 6	Page 7 & 8
Ø	M/P1500/111	—	—	—	
8	M/P1501/80	QM/8010/32	QM/33/010/22	QM/33/010/23	
10	M/P1501/80	QM/8010/32	QM/33/012/22	QM/33/016/23	
12	M/P1501/79	QM/8012/32	QM/33/016/22	QM/33/016/23	
16	M/P1501/60	QM/8020/32	QM/33/020/22	QM/33/020/23	
20	M/P1501/89	QM/8025/32	QM/33/025/22	QM/33/025/23	
25	M/P1501/89	QM/8025/32	QM/33/032/22	—	
32	M/P1501/90	QM/8040/32	QM/33/040/22	—	
40	M/P1501/90				

**Basic dimensions**

Ø 8 ... 12 mm - R./571../M

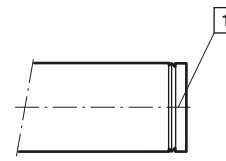
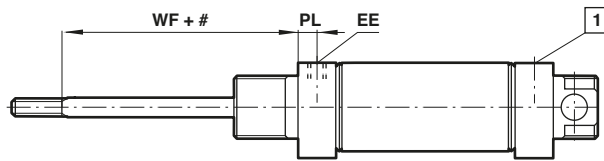
RT/571../MC

Dimensions in mm  
Projection/First angle



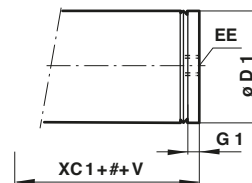
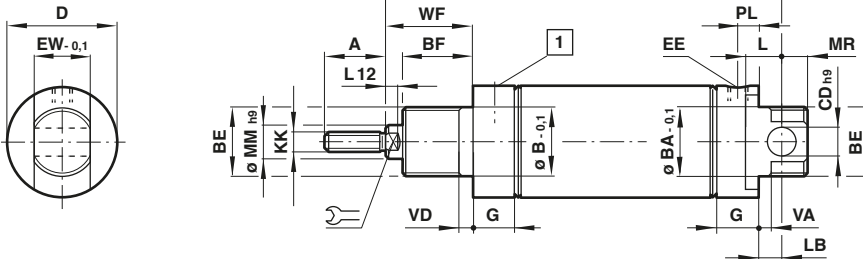
Ø 8 ... 12 mm - R./573../M

RT/573../MC



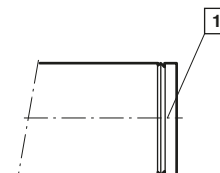
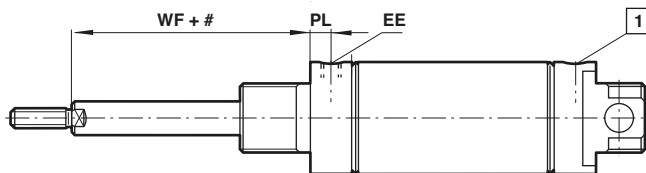
Ø 16 ... 40 mm - R./571../M

RT/571../MC



Ø 8 ... 12 mm - R./573../M

RT/573../MC




# Stroke

 Filtered exhaust position, do not obstruct

Ø	A	Ø B/Ø BA	BE	BF	Ø CD h9	Ø D	Ø D1	RT/57... EE	RM/57... EE	EW -0,1	EW1	G	G1	H	KK	L
8	8	10	M10 x 1	7,5	3	12	9,5	M3	-	6	10	7,5	3	5	M3	-
10	9	10	M10 x 1	8	4	15	11,5	M5	-	8	12,5	9,5	4,5	6,5	M4	-
12	9	10	M10 x 1	8	4	15	13	M5	-	8	-	9,5	4,5	6,5	M4	-
16	12	12	M12 x 1,25	10	5	17,5	17,5	M5	-	10	-	11,5	4	-	M6	-
20	14	16	M16 x 1,5	12	6	22	21,5	Rc 1/8	M6	12	-	15,5	8	-	M8	-
25	16	18	M18 x 1,5	12	8	26,5	26,5	Rc 1/8	M6	14	-	15,5	8	-	M10 x 1,25	-
32	22	22	M22 x 1,5	15	8	33,5	33,5	Rc 1/8	G 1/8	16	-	17,5	5,5	-	M10 x 1,25	12
40	23	30	M30 x 1,5	15	10	41,5	41,5	Rc 1/8	G 1/8	20	-	18	5,5	-	M12 x 1,25	14

Ø	LB	L12	Ø MM h9	MR	PL		V *1)	V *2)	VA/VD	WF	XC	XC1	57100 kg < 25 mm	57300 kg < 25 mm	kg per 25 mm	Model
8	4,5	-	3	3	4	-	17	34	1,5	8,5	48	39	0,017	0,02	0,01	RT/57.08/M*
10	5	-	4	4	5,5	-	14	28	1,5	10	54	44	0,025	0,02	0,01	RT/57.10/M*
12	5	-	4	4	5,5	-	14	28	1,5	10	54	44	0,027	0,03	0,01	RT/57.12/M*
16	7	5	6	5	5,5	5	15	30	2	13,5	64,5	50	0,053	0,05	0,01	RT/57.16/M*
20	7	5	8	6	9	7	17	34	3	15,5	75,5	61	0,095	0,09	0,02	R./57.20/M*
25	9	5	10	8	9	9	18	36	3	16,5	78,5	62	0,15	0,14	0,03	R./57.25/M*
32	7	5	12	8	9	10	19	38	3	23	93	74	0,26	0,25	0,04	R./57.32/M*
40	5	6	14	10	10	12	20	40	3	24	96	78,5	0,50	0,38	0,05	R./57.40/M*

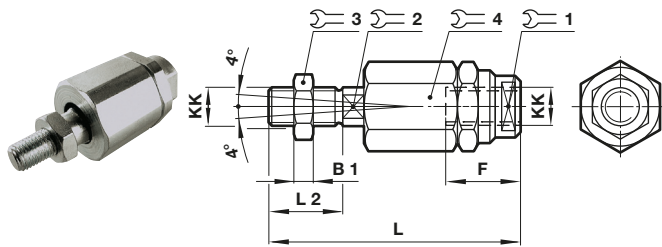
\* Please insert standard stroke length.

\*1) For 10 and 25 mm stroke

\*2) For 50 mm stroke only

### Mountings

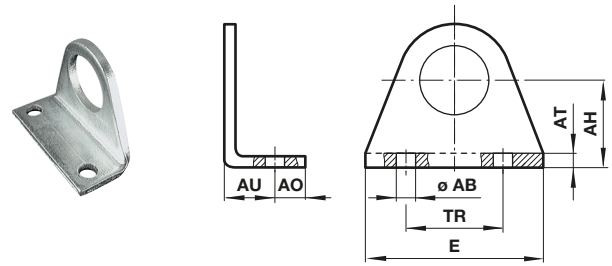
#### Piston rod swivel AK Conforms to DIN ISO 8139



Ø	KK	B1	F	L	L2	1	2	3	4	kg	Model (AK)
10/12	M 4	2	12,5	33	8	11	3,2	7	11	0,01	QM/8010/38
16	M 6	3	14	39	12	7	5	10	13	0,02	QM/8012/38
20	M 8	4	18	55	16	10	7	13	17	0,05	QM/8020/38
25/32	M 10x1,25	5	26	73	20	19	12	17	30	0,20	QM/8025/38
40	M 12x1,25	6	26	77	24	19	12	19	30	0,20	QM/8040/38

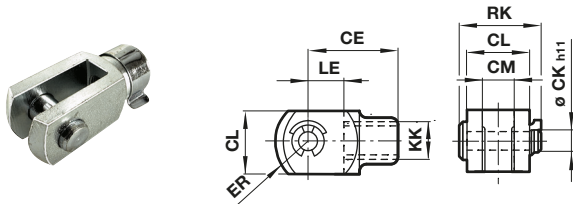
#### Foot C Conforms to DIN ISO 6432

Dimensions in mm  
Projection/First angle



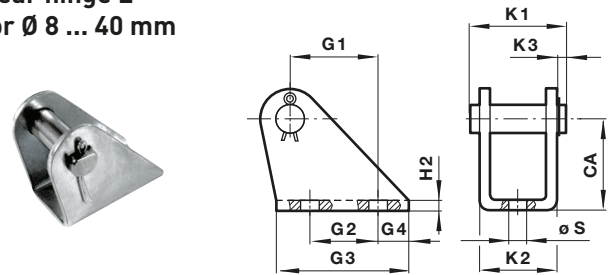
Ø	Ø AB	AH	AO	AT	AU	E	TR	kg	Model (C)
8	3,8	10	3,5	1,5	7,5	25	18	0,01	MP/71273/1
10/12	5	12	4,5	1,5	7,5	30	20	0,01	MP/71273/2
16	4,5	16	6	2	10	35	25	0,02	MP/19369
20	5,5	20	6	3	13	43	32	0,03	MP/19389
25	6,6	22	8	3	12,5	49	38	0,04	MP/40381
32	6,6	25	7,5	4	16	53	40	0,06	MP/19406
40	7	28	7	4	16	66	52	0,08	MP/71273

#### Piston rod clevis F Conforms to DIN ISO 8140



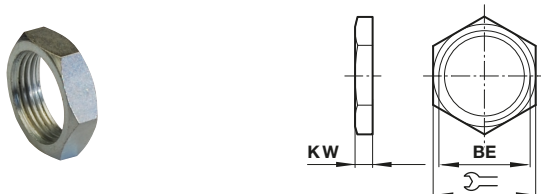
Ø	KK	CE	Ø CK h11	CL	CM	ER	LE	RK	kg	Model (F)
8	M3	11	3	6	3	4,5	5	10,5	0,01	QM/57008/25
10/12	M4	16	4	8	4	6,5	8	11,5	0,01	QM/8010/25
16	M6	20	5	10	5	8	10	14,5	0,01	QM/57016/25
20	M8	24	6	12	6	9,5	12	17,5	0,02	QM/57020/25
25	M10x1,25	26	8	14	7	11,5	12	20,5	0,04	QM/57025/25
32	M10x1,25	32	8	16	8	13	16	22,5	0,05	QM/57032/25
40	M12x1,25	40	10	20	10	16	20	29	0,09	QM/57040/25

#### Rear hinge L for Ø 8 ... 40 mm



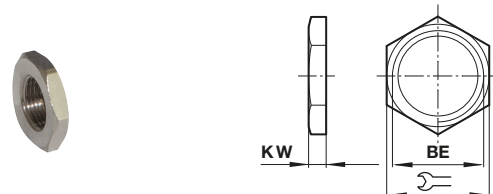
Ø	CA	G				H2	K			Ø S	UT	kg	Model (L)
		1	2	3	4		1	2	3				
8	10	9	7	14	3,5	1	-	8	-	3,5	-	0,01	QM/57008/24
10/12	12	6,5	-	15	6	1	13,5	10,5	2	4,8	-	0,01	QM/947
16	16	13	10	22	6	1,5	-	12,5	-	4,8	-	0,02	QM/946
20	20	18,5	15	30	8	1,5	20	15	3	5,5	-	0,02	QM/8012/24
25	22	20	15	33	9	2	-	18	-	6,6	-	0,04	QM/57025/24
32	25	20	15	35	10	2	25	20,5	3	6,6	-	0,04	QM/8020/24
40	28	25	20	42	11	3	-	26	-	7	-	0,09	QM/57040/24

#### Nose nut N



Ø	BE	1	KW	kg	Model (N)
8...12	M10x1	14	4	0,01	M/P71364
16	M12x1,25	19	6	0,01	M/P1501/90
20	M16x1,5	22	5	0,01	M/P13834
25	M18x1,5	24	5	0,01	M/P13607
32	M22x1,5	27	8	0,02	M/P13615
40	M30x1,5	36	8	0,03	M/P29254

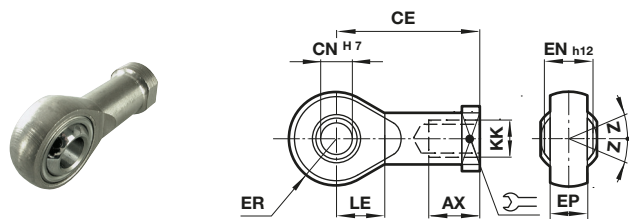
#### Locknut N2



Ø	BE	1	KW	kg	Model (N)
8	M3	6	2	0,01	M/P1500/111
10/12	M4	7	2	0,01	M/P1501/80
16	M6	10	3	0,01	M/P1501/79
20	M8	13	4	0,01	M/P1501/60
25/32	M10x1,25	17	5	0,01	M/P1501/89
40	M12x1,25	19	6	0,01	M/P1501/90

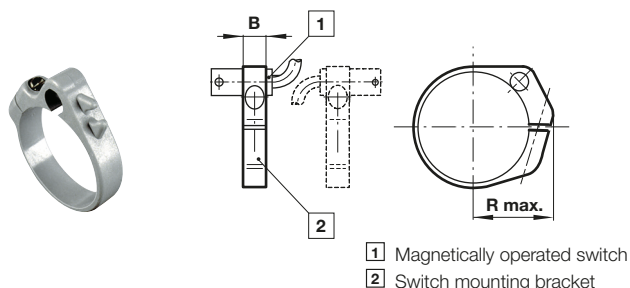
**Universal piston rod eye UF**  
Conforms to DIN ISO 8139

Dimensions in mm  
Projection/First angle



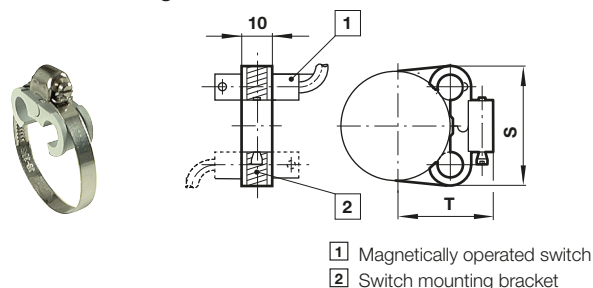
Ø	KK	AX	CE	Ø CN H7	EN -0,1	ER	LE	Z	kg	Model (UF)
10/12	M4	14	27	5	8	8	10	5°	0,02	QM/8010/32
16	M6	14	30	6	9	9	11	5°	0,02	QM/8012/32
20	M8	16	36	8	12	11	13	5°	0,05	QM/8020/32
25/32	M10x1,25	25	42	10	14	14	15	13°	0,08	QM/8025/32
40	M12x1,25	22	50	12	16	16	17	13°	0,12	QM/8040/32

**Switch mounting brackets - Brackets → 15 mm stroke**



Ø	B	R max.	kg	Model
10	8	16	0,01	QM/33/010/22
12	8	18	0,01	QM/33/012/22
16	10	20	0,01	QM/33/016/22
20	10	22	0,01	QM/33/020/22
25	10	24	0,01	QM/33/025/22
32	10	29	0,01	QM/33/032/22
40	10	32	0,01	QM/33/040/22

**Switch mounting brackets - Brackets ← 15 mm stroke**



Ø	S	T	kg	Model
10	27,5	19,5	0,01	QM/33/010/23
12	28,5	21,5	0,01	QM/33/016/23
16	29,5	23,5	0,01	QM/33/016/23
20	29,5	26	0,01	QM/33/020/23
25	31,5	28,5	0,01	QM/33/025/23

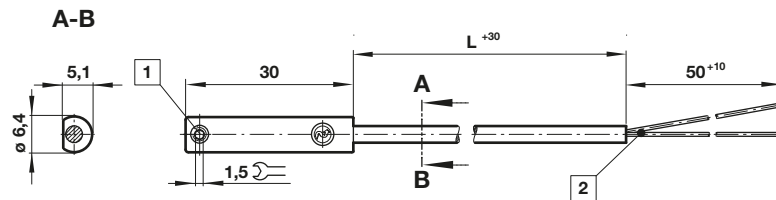
Technical data - Reed switches - additional informations see data sheet N/en 4.3.005

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	Closer	-25 ... +80	•	IP66	—	2, 5 or 10	PVC 2 x 0,25	37	M/50/LSU/*V
	10 ... 240	10 ... 170										
	10 ... 240	10 ... 170	180	Closer	-25 ... +80	•	IP66	—	5	PUR 2 x 0,25	37	M/50/LSU/5U
	10 ... 240	10 ... 170										
	10 ... 240	10 ... 170	180	Closer	-25 ... +150	—	IP66	—	2	Silicon 2 x 0,25	37	TM/50/RAU/2S
	10 ... 240	10 ... 170	180	Changeover	-25 ... +80	—	IP66	—	5	PVC 3 x 0,25	37	M/50/RAC/5V
	10 ... 60	10 ... 60	180	Closer	-25 ... +80	•	IP66	M8 x 1	0,3	PVC 3 x 0,25	16	M/50/LSU/CP *1)

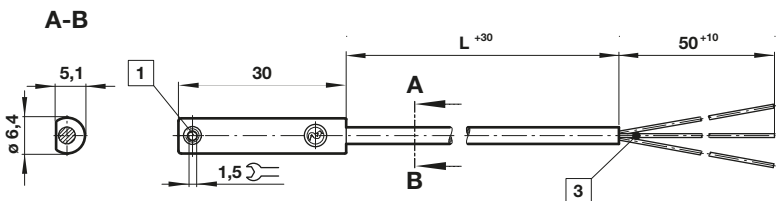
\* Insert cable length; \*1) Plug-in connector see page 11; Color code: BK = black, BN = brown, BU = blue

Drawings

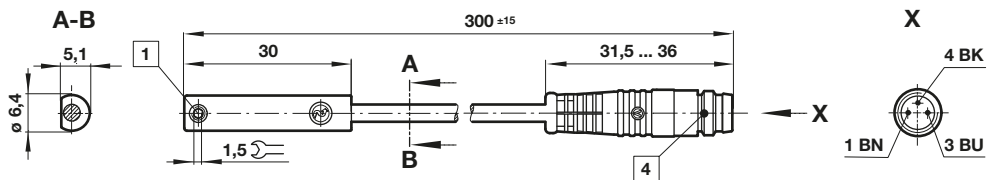
M/50/LSU/\*V, M/50/LSU/5U,  
TM/50/RAU/2S  
Cable length L = 2, 5 or 10 m



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

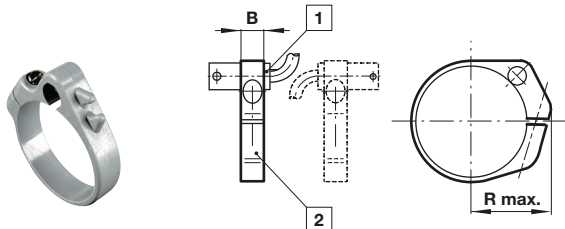


M/50/LSU/CP



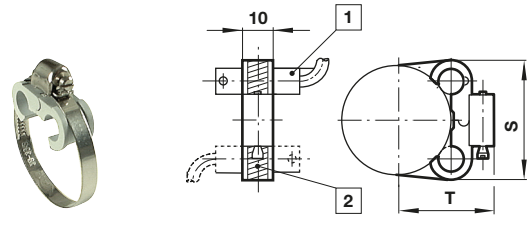
- 1 Fixing screw
- 2 + BN = brown; - BU = blue (output)
- 3 - BK = black; + BN = brown; - ≠BU = blue
- 4 Plug M8 x 1, color code: BK = black; BN = brown; BU = blue

Switch mounting brackets - Brackets > 15 mm stroke



- 1 Magnetically operated switch
- 2 Switch mounting bracket

Switch mounting brackets - Brackets < 15 mm stroke

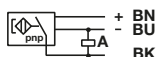
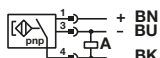
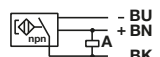
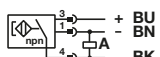


- 1 Magnetically operated switch
- 2 Switch mounting bracket

Ø	B	R max.	kg	Model
10	8	16	0,01	QM/33/010/22
12	8	18	0,01	QM/33/012/22
16	10	20	0,01	QM/33/016/22
20	10	22	0,01	QM/33/020/22
25	10	24	0,01	QM/33/025/22

Ø	S	T	kg	Model
10	27,5	19,5	0,01	QM/33/010/23
12	28,5	21,5	0,01	QM/33/016/23
16	29,5	23,5	0,01	QM/33/016/23
20	29,5	26	0,01	QM/33/020/23
25	31,5	28,5	0,01	QM/33/025/23

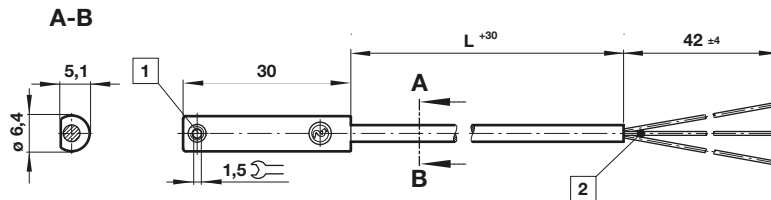
**Technical data - Solid state - additional informations see data sheet N/en 4.3.007**

Symbol	Voltage (V d.c.)	Current maximum (mA)	Function	Operating temperature (°C)	LED	Protection class	Plug	Cable length (m)	Cable type	Weight (g)	Model
	10 ... 30	150	PNP	-40 ... +80	•	IP67	—	2, 5 or 10	PVC 3 x 0,12	37	M/50/EAP/*V
	10 ... 30	150	PNP	-40 ... +80	•	IP68	—	5	PUR 3 x 0,14	37	M/50/EAP/5U
	10 ... 30	150	PNP	-40 ... +80	•	IP67	M8 x 1	0,3	PVC 3 x 0,14	16	M/50/EAP/CP *1)
	10 ... 30	150	PNP	-40 ... +80	•	IP67	M12 x 1	0,3	PVC 3 x 0,14	16	M/50/EAP/CC *1)
	10 ... 30	150	NPN	-40 ... +80	•	IP67	—	2, 5 or 10	PVC 3 x 0,12	37	M/50/EAN/*V
	10 ... 30	150	Closer	-40 ... +80	•	IP67	M8 x 1	0,3	PVC 3 x 0,14	16	M/50/EAN/CP *1)

\* Insert cable length; \*1) Plug-in connector below; Color code: BK = black, BN = brown, BU = blue

**Drawings**

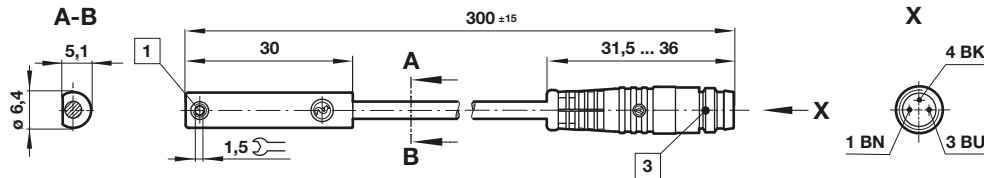
M/50/EAP/\*V,  
M/50/EAN/\*V  
Cable length L = 2, 5 or 10 m



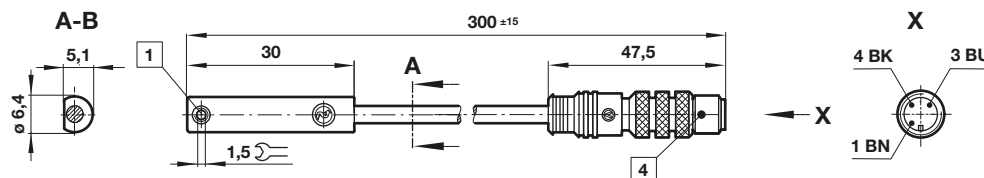
Dimensions in mm  
Projection/First angle



M/50/EAP/CP,  
M/50/EAN/CP



M/50/EAP/CC



- 1 Fixing screw
- 2 Color code: BK = black; BN = brown; BU = blue
- 3 Plug M8 x 1
- 4 Plug M12 x 1

**Accessories**

Plug-in connector cable with nut



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

**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 IMI Precision Engineering, Norgren GmbH. 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.