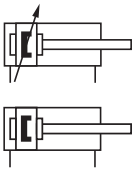
- > Ø 12 ... 25 mm
- > High corrosion and acid resistance
- > Magnetic piston as standard
- > Conforming to ISO 6432
- > Suitable for applications in the Food Industry
- > Buffer or adjustable cushioning
- > Nose mounting nut and piston rod locknut as standard





Technical features

Medium:
Compressed air, filtered, lubricated or non-lubricated
Standard:
ISO 6432
Operation:
Double acting with magnetic piston and buffer or adjustable cushioning

Operating pressure:
1 ... 10 bar (14 ... 145 psi)
Cylinder diameters:
12, 16, 20, 25 mm (buffer)
20, 25 mm (adjustable cushioning)
Strokes:
See page below
Non-standard strokes:
up to 500 mm max. on request

Operating temperature:
-10 ... +80°C max. (+14 ... +176°F)
Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F).

Materials:
Cylinder barrel: X5 Cr Ni 18 10 (1.4301; AISI 304)
End covers: X10 Cr Ni S 18 9 (1.4305; AISI 303)
Piston rod: X10 Cr Ni S 18 9 (1.4305; AISI 303)
Piston: POM
Buffer: PUR
Piston rod seal: PUR
Piston and cushion seal: NBR
'O'-rings: NBR

Technical data

Cylinder Ø (mm)	12	16	20	25
Port size	M5	M5	G1/8	G1/8
Piston rod Ø (mm)	6	6	8	10
Piston rod thread	M6	M6	M6	M10x1,25
Cushion length mm	-	-	19	19
Theoretical thrusts at 6 bar outstroke (N)	67,8	120	188	294
Theoretical thrusts at 6 bar instroke (N)	51	104	158	247
Air consumption at 6 bar outstroke (l/cm)	0,008	0,014	0,022	0,035
Air consumption at 6 bar instroke (l/cm)	0,006	0,013	0,019	0,028

Standard strokes with buffer cushioning

Cylinder Ø (mm)	Stroke length (mm) 10	25	40	50	80	100	125	160	200	250
12	•	•	•	•	•	•	•	•	•	—
16	•	•	•	•	•	•	•	•	•	—
20	•	•	•	•	•	•	•	•	•	•
25	•	•	•	•	•	•	•	•	•	•

with adjustable cushioning

Cylinder Ø (mm)	Stroke length (mm) 10	25	40	50	80	100	125	160	200	250
20	—	•	—	•	•	•	•	•	•	•
25	—	•	—	•	•	•	•	•	•	•

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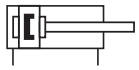
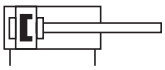
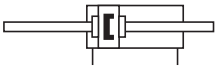
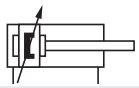
Cylinder variants

Symbol	Model magnetic piston	Description	Drawing Page
	KM/8000/M	Standard cylinder with integral eye mounting	4
	KM/8000/MF	Cylinder with flat rear cover	4
	KM/802./M/R	Cylinder Ø 20 & 25 mm with rear eye mounting	5
	KM/802./M/UR	Cylinder Ø 20 & 25 mm with universal rear eye mounting	5
	KM/8000/MU	Cylinder with extended piston rod piston rod extension 75 mm: KM/8***/*U/stroke/75	4
	KM/8000/JM	Cylinder with double ended piston rod (Ø 16 to 25 mm)	4
	KM/802./M	Cylinder Ø 20 & 25 mm with adjustable cushioning	4
	KM/802./M/R	Cylinder Ø 20 & 25 mm with adjustable cushioning and rear eye mounting	5
	KM/802./M/UR	Cylinder Ø 20 & 25 mm with adjustable cushioning and universal rear eye mounting	5

Option selector

KM/80★★/★★/★★/★★★

Cylinder Ø (mm) with buffer	Substitute
12	**12**
16	**16**
20	**20**
25	**25**
Cylinder Ø (mm) with adjustable cushioning	**Substitute**
20	**21**
25	**26**

Stroke (mm)	
max. 500	
Mounting variants	**Substitute**
Cylinder with integrated rear eye mounting	**R**
Cylinder with integrated universal rear eye mounting	**UR**
Variants	**Substitute**
Standard	**M**
Flat rear cover	**MF**
Double ended piston rod	**JM**
Extended piston rod KM/8***/MU/***/***	**MU Extention (mm)**

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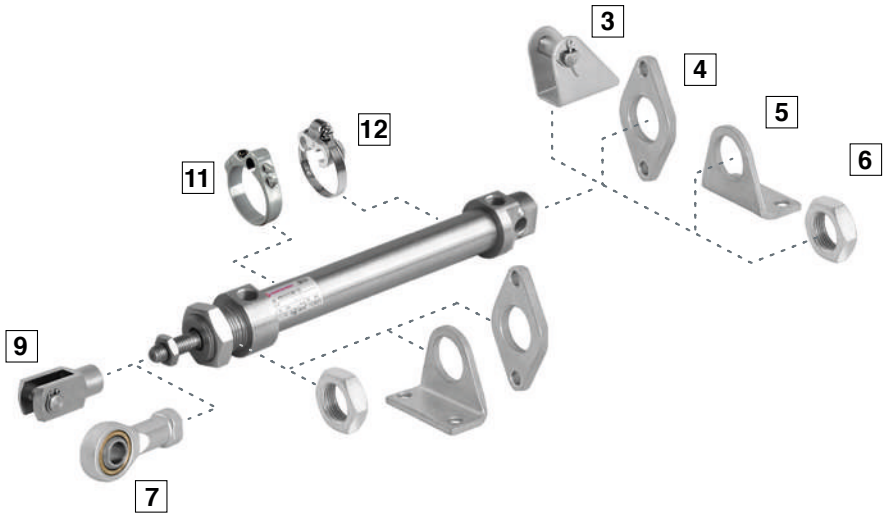
Mountings



Materials of mountings and accessories standard cylinder

Position	Style	Stainless steel	Position	Style	Stainless steel
3	L	Rear hinge mounting: X 5 Cr Ni 18 10 (1.4301; AISI 304), bolt: X 10 Cr Ni S 18 9 (1.4305; AISI 303), eyebolt: X 10 Cr Ni S 18 9 (1.4305; AISI 303)	**7**	UF	Body: X 5 Cr Ni 18 10 (1.4301; AISI 304), Inner ring: X 105 Cr Co 18-2 (1.4528), Outer ring: X 10 Cr Ni S 18 9 (1.4305; AISI 303)
4	B, G	Flange mounting: X 5 Cr Ni 18 10 (1.4301; AISI 304)	**9**	F	Piston rod clevis mounting: X 10 Cr Ni S 18 9 (1.4305; AISI 303), bolt: X 10 Cr Ni S 18 9 (1.4305; AISI 303), eyebolt: X 10 Cr Ni S 18 9 (1.4305; AISI 303)
5	C	Foot mounting: X 5 Cr Ni 18 10 (1.4301; AISI 304)	**11 & 12**	Bracket for switches	Body POM, screws stainless steel
6	N	Nose nut: X 10 Cr Ni S 18 9 (1.4305; AISI 303)			

Model	B, G	C	F	L	N	UF
						
Ø	4 **Page 6**	5 **Page 6**	9 **Page 6**	3 **Page 6**	6 **Page 6**	7 **Page 6**
12	M/P72405	M/P72403	KQM/8012/25	KQM/8012/24	M/P72398	KQM/8012/32
16	M/P72405	M/P72403	KQM/8012/25	KQM/8012/24	M/P72398	KQM/8012/32
20	M/P72406	M/P72404	KQM/8020/25	KQM/8020/24	M/P72399	KQM/8020/32
25	M/P72406	M/P72404	KQM/55433/25	KQM/8020/24	M/P72399	KQM/8032/32

Model	Switch mounting brackets >15 mm stroke	<15 mm stroke	Magnetically operated switches
			
Ø	11 **Page 7**	12 **Page 7**	**Page 7 & 8**
12	QM/33/012/22	QM/33/016/23	
16	QM/33/016/22	QM/33/016/23	
20	QM/33/020/22	QM/33/020/23	
25	QM/33/025/22	QM/33/025/23	

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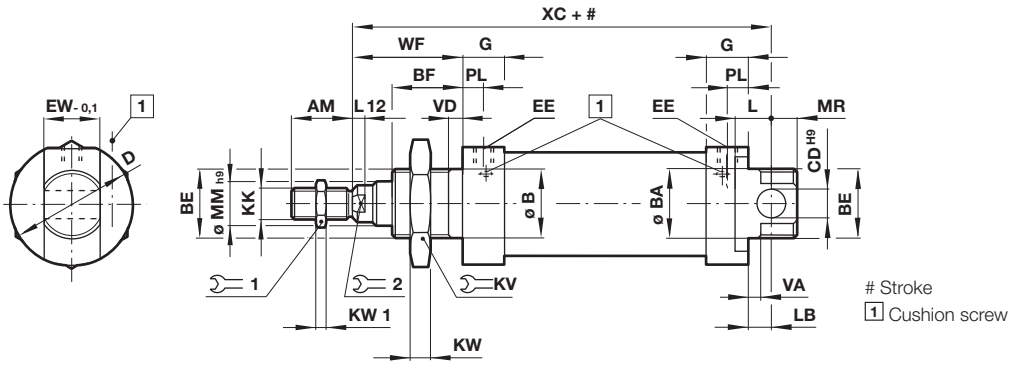
Basic dimensions
KM/8000/M – Cylinder with buffercushioning
KM/8021/M & KM/8026/M – Cylinder with adjustable cushioning

Dimensions in mm
Projection/First angle

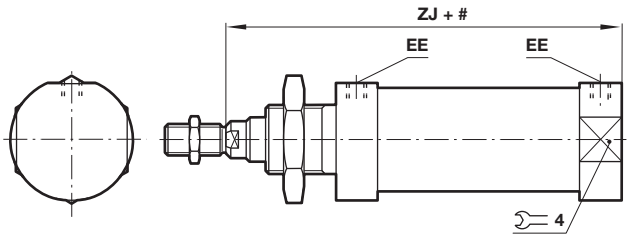


Ø	AM	Ø B/BA	BE	BF	Ø CD H9	Ø D	EE	EW -0,1	G	KK	KV	2	KW	Model
12	16	16	M16x1,5	17	6	20	M5	11,9	9,5	M6	22	5	5	KM/8012/M/*
16	16	16	M16x1,5	17	6	20	M5	11,9	9,5	M6	22	5	5	KM/8016/M/*
20	20	22	M22x1,5	20	8	30	G1/8	15,9	15	M8	27	7	8	KM/8020/M/*
25	22	22	M22x1,5	22	8	30	G1/8	15,9	15	M10x1,25	27	9	8	KM/8025/M/*

Ø	KW1	L	L12	LB	Ø MM h 9	MR	PL	1	WF	VA/VD	XC	at 0 mm	per 25 mm	Model
12	3	9	3	3	6	8	5,5	10	22	2	75	0,116 kg	0,011 kg	KM/8012/M/*
16	3	9	3	4	6	7	5,5	10	22	2	82	0,137 kg	0,012 kg	KM/8016/M/*
20	4	12	3	3	8	11	8	13	24	2	95	0,306 kg	0,018 kg	KM/8020/M/*
25	5	12	4	7	10	9	8	17	28	2	104	0,383 kg	0,028 kg	KM/8025/M/*

* Please insert standard stroke length.

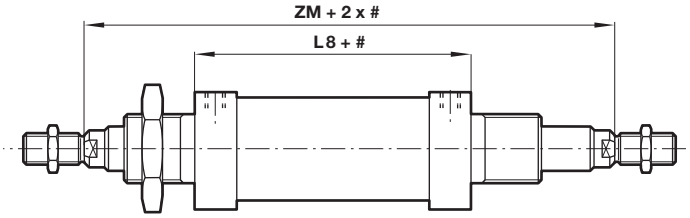
Cylinder variants
KM/8000/MF – Cylinder flat rear cover



Ø	EE	ZJ	4	kg at 0 mm	kg per 25 mm	Model
12	M5	72	17	0,109	0,011	KM/8012/MF/*
16	M5	78	17	0,13	0,012	KM/8016/MF/*
20	G1/8	92	27	0,299	0,018	KM/8020/MF/*
25	G1/8	97	27	0,37	0,028	KM/8025/MF/*

* Please insert standard stroke length.
Note: missing dimensions see standard cylinders

KM/8000/JM – Cylinder with double ended piston rod



Ø	L8	ZM	kg at 0 mm	kg per 25 mm	Model
16	56	100	0,14	0,018	KM/8016/JM/*
20	68	116	0,36	0,028	KM/8020/JM/*
25	69	125	0,44	0,043	KM/8025/JM/*

* Please insert standard stroke length.
Note: missing dimensions see standard cylinders

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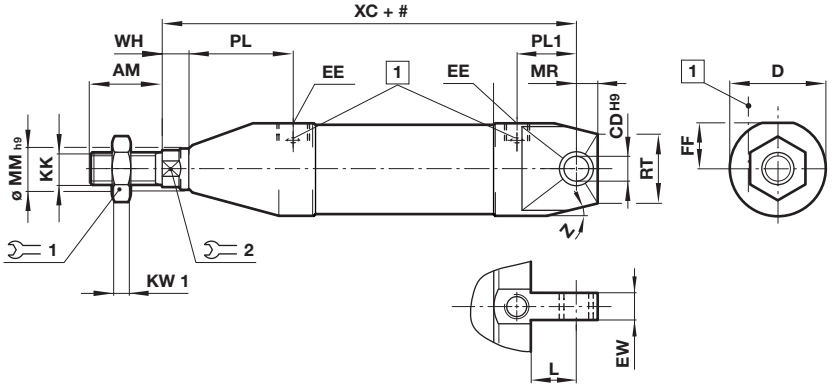
Alternative variants
KM/8000/M/R – Cylinder with rear eye mounting
KM/8021/M/R, KM/8026/M/R – Cylinder with rear eye mounting and adjustable cushioning

Dimensions in mm
Projection/First angle

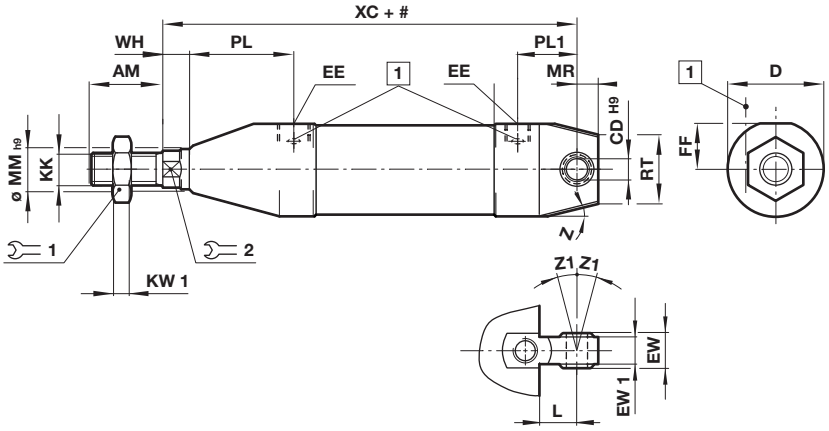


Stroke
1 Cushion screw

Ø	AM	Ø CD H9	Ø D	EE	EW -0,1	FF	KK	L	Ø MM h 9	MR	PL	PL1	RT	WH	XC	Z	1	2	at 0 mm	per 25 mm	Model
12	16	6	20	M5	11,9	9	M6	9	6	11,5	23,5	15,5	10	4	75	5 x 45°	10	5	0,106 kg	0,011 kg	KM/8012/M/R/*
16	16	6	20	M5	11,9	9	M6	9	6	10,5	22,5	15	10	5	82	5 x 45°	10	5	0,130 kg	0,012 kg	KM/8016/M/R/*
20	20	8	30	G1/8	15,9	13,5	M8	12	8	12,5	18,5	18,5	13,5	4	95	30°	13	7	0,300 kg	0,018 kg	KM/8020/M/R/*
25	22	8	30	G1/8	15,9	13,5	M10x1,25	12	10	12,5	19,5	26,5	11,5	6	104	30°	17	9	0,360 kg	0,028 kg	KM/8025/M/R/*

* Please insert standard stroke length.

KM/8000/M/UR – Cylinder with universal rear eye mounting
KM/8021/M/UR, KM/8026/M/UR – Cylinder with universal rear eye mounting and adjustable cushioning



Stroke
1 Cushion screw

Ø	AM	Ø CD H9	Ø D	EE	EW -0,1	EW1	FF	KK	KW1	L	Ø MM h 9	MR	PL	PL1	RT	WH	XC	Z	Z1	1	2	Model
12	16	6	20	M5	9	6,8	9	M6	3	9	6	11,5	23,5	15,5	—	4	75	5 x 45°	13°	10	5	KM/8012/M/UR/*
16	16	8	20	M5	9	6,8	9	M6	3	9	6	10,5	22,5	15	—	5	82	5 x 45°	13°	10	5	KM/8016/M/UR/*
20	20	8	30	G1/8	12	9	13,5	M8	4	12	8	12,5	20,5	18,5	14	4	95	30°	13°	13	7	KM/8020/M/UR/*
25	22	8	30	G1/8	12	9	13,5	M10x1,25	8	12	10	12,5	25,5	19,5	14	6	104	30°	13°	17	9	KM/8025/M/UR/*

* Please insert standard stroke length.
Weights see talble on top.

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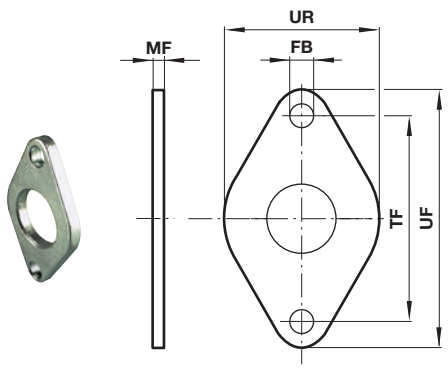
Mountings

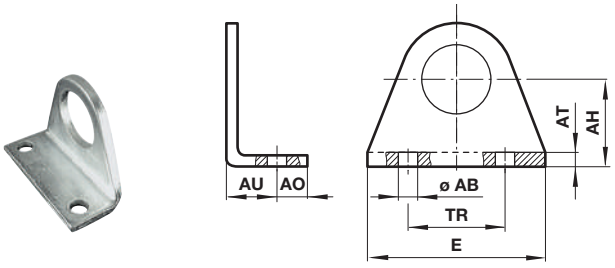
Front or rear flange G and B

Dimensions in mm
Projection/First angle



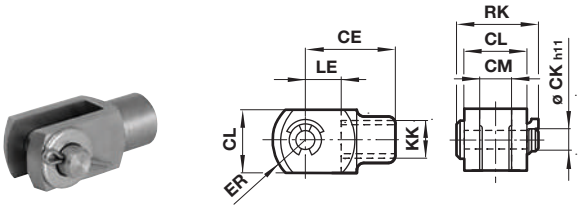
Ø	Ø FB	MF	TF	UF	UR	kg	Model
12/16	5,5	4	40	52	30	0,03	M/P72405
20/25	6,6	5	50	66	40	0,05	M/P72406

Foot C
Conforms to DIN ISO 6432



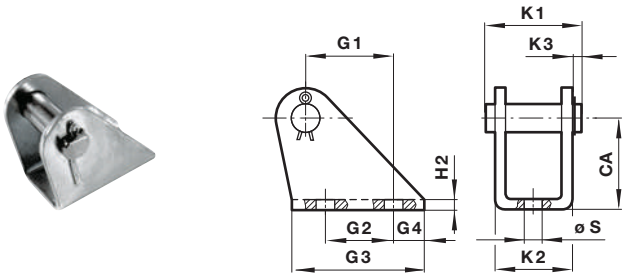
Ø	Ø AB	AH	AO	AT	AU	E	TR	kg	Model
12/16	5,5	20	6	3	13	43	32	0,03	M/P72403
20/25	6,5	25	7,5	4	16	53	40	0,06	M/P72404

Piston rod clevis F
Conforms to DIN ISO 8140



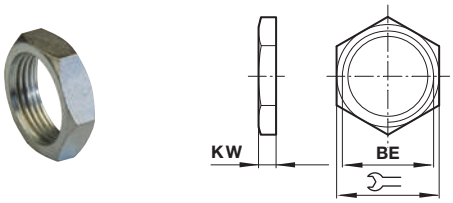
Ø	KK	CE	øCK h11	CL	CM	ER	LE	RK	kg	Model
12/16	M6	24	6	12	6	9,5	12	17,5	0,02	KQM/8012/25
20	M8	32	8	16	8	13	16	22	0,06	KQM/8020/25
25	M10x1,25	40	10	20	10	16	20	28	0,10	KQM/55433/25

Rear hinge L



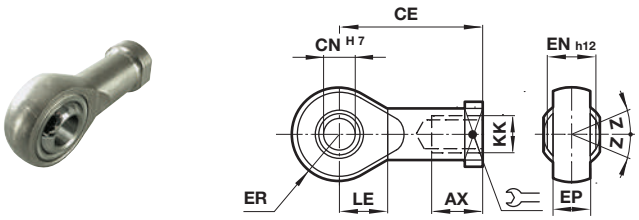
Ø	CA	G1	G2	G3	G4	H2	K1	K2	K3	Ø S	kg	Model
12/16	27	13	15	25	4	3	23	18	3	5,5	0,04	KQM/8012/24
20/25	30	16	20	32	6	4	29,5	24	3	6,6	0,08	KQM/8020/24

Nose nut N



Ø	BE	KW		kg	Model
12/16	M16x1,5	5	22	0,01	M/P72398
20/25	M22x1,5	8	27	0,02	M/P72399

Universal piston rod eye UF
Conforms to DIN ISO 8139



Ø	KK	AX -1	CE	CN H7	EN -0,1	ER	LE	Z	kg	Model
12/16	M6	12	30	6	9	10,5	10	13°	0,02	KQM/8012/32
20	M8	16	36	8	12	12,5	12	13°	0,05	KQM/8020/32
25	M10x1,25	20	43	10	14	14,5	14	13°	0,08	KQM/8032/32

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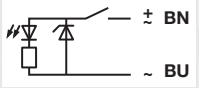
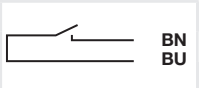
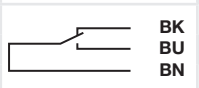
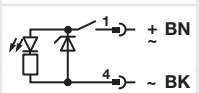
Technical data - Reed switches - additional informations see data sheet N/en 4.3.005

Symbol	Voltage (V a.c.)	Voltage (V d.c.)	Current maximum (mA)	Function	Operating temperature (°C)	LED	Protection class	Plug	Cable length (m)	Cable type	Weight (g)	Model
	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	180	Closer	-25 ... +80	•	IP66	—	5	PUR 2 x 0,25	37	M/50/LSU/5U
	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)

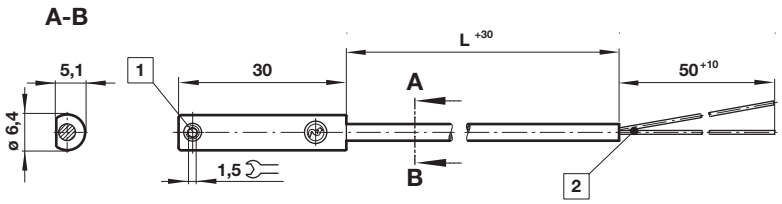
* Insert cable length; *1) Plug-in connector see page 11; Color code: BK = black, BN = brown, BU = blue

Drawings

Dimensions in mm
Projection/First angle

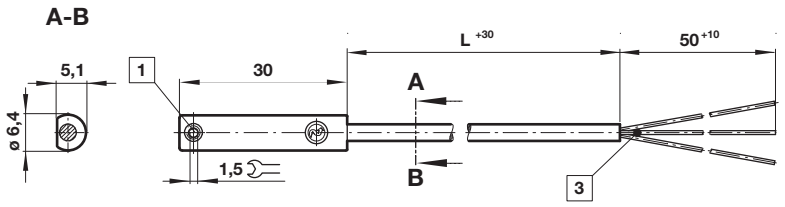
M/50/LSU/*V, M/50/LSU/5U, TM/50/RAU/2S
Cable length L = 2, 5 or 10 m





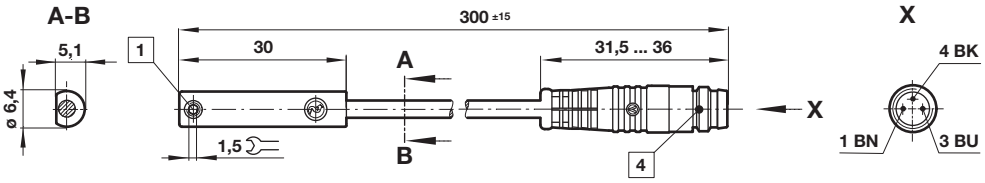
M/50/RAC/5V
Cable length L = 5 m





M/50/LSU/CP

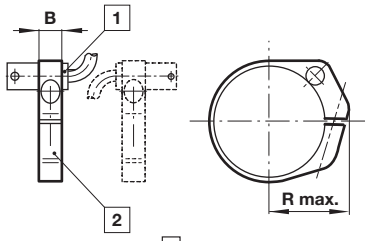




1 Fixing screw
2 + BN = brown; - BU = blue (output)
3 - BK = black; + BN = brown; - ≠BU = blue
4 Plug M8 x 1, color code: BK = black; BN = brown; BU = blue

Switch mounting brackets - Brackets > 15 mm stroke



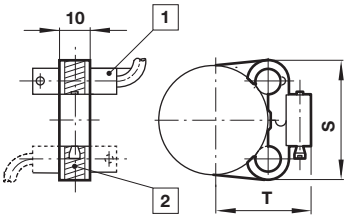


1 Magnetically operated switch
2 Switch mounting bracket

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

Switch mounting brackets - Brackets < 15 mm stroke



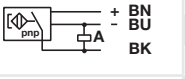
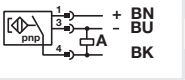
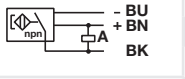
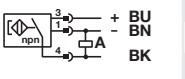


1 Magnetically operated switch
2 Switch mounting bracket

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

Our policy is one of continued research and development. We therefore reserve the right to amend, without notice, the specifications given in this document. (1998 - 1202e) © 2015 Norgren GmbH

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)

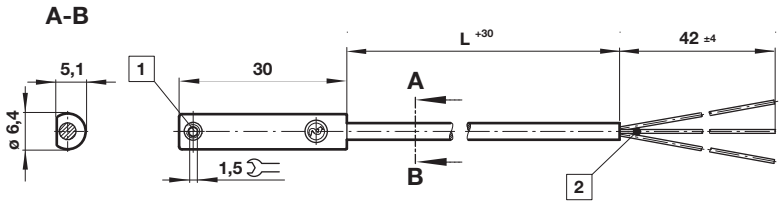
* Insert cable length; *1) Plug-in connector below; Color code: BK = black, BN = brown, BU = blue

Drawings

Dimensions in mm
Projection/First angle

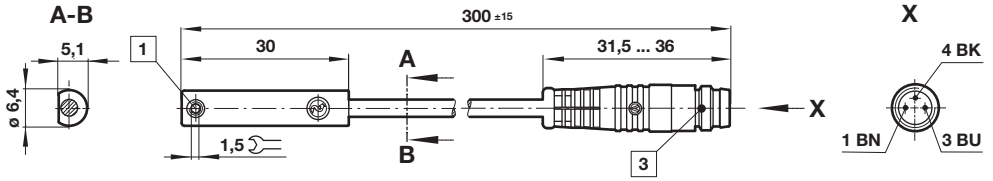
M/50/EAP/*V,
M/50/EAN/*V
Cable length L = 2, 5 or 10 m





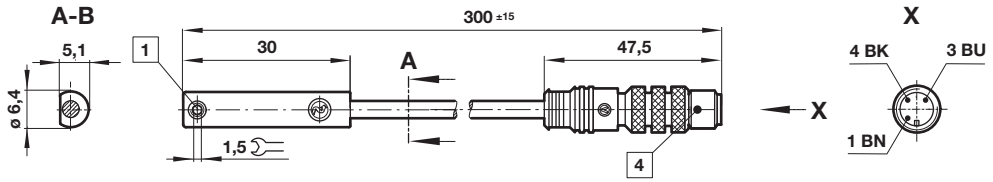
M/50/EAP/CP,
M/50/EAN/CP





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.

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