

- > Ø 20 mm
- > Compact and impact resilient design
- > Spring-driven locking function averts undesired change of position
- > Pneumatic control function can be fully automated via central valve



### Technical features

#### Medium:

Compressed air, filtered, lubricated or non-lubricated

#### Standard:

Based on ISO 21287

Note: The basic length of the single acting version is slightly longer than its double acting equivalent

#### Operation:

Double acting piston chamber, adjusting position of a threaded shaft to control stroke length of a cylinder by means of a coupling plate

#### Operating pressure:

3 ... 8 bar (43 ... 116 psi)

#### Port size:

M5

#### Cylinder diameters:

20 mm

#### Standard strokes:

15 ... 200 mm (single acting)  
30 ... 200 mm (double acting)

#### Adjustable intervals:

(Stroke/1,5) - 2 (rounded) [mm]  
Adjustable length:  
Adjustable intervals x 1,5 mm

#### Weight:

Cylinder:

0,17 kg (0 mm stroke)

0,01 kg (per 5 mm stroke)

Stepper unit: approx 0,27 kg

#### Operating temperature:

-5 ... +80°C ( +23 ... +176°F)max.

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

#### Materials:

##### Cylinder:

Profile barrel: Anodised aluminium

End covers: Pressure diecast aluminium

Piston rod: Stainless steel

Piston rod seals: PUR

Piston seals: NBR

O-rings: NBR

##### Stepper unit:

Housing: Anodised aluminium

Threaded shaft: Stainless steel

Bushing & catch: Polymer

### Technical data

Cylinder Ø (mm)	20
Port size	M 5
Piston rod Ø (mm)	10
Piston rod thread	M6
Energy (J) max.	0,2
Theoretical thrusts at 6 bar outstroke (N)	161
Theoretical thrusts F1 instroke (N)	14,5 (120)
Air consumption at 6 bar outstroke (l/step)	0,037
Air consumption at 6 bar instroke (l/step)	0,004 (0,028)





( ) Values for double acting cylinder

### Option selector




SPC/★★★★★/★★★

Action	Substitute	Strokes (mm)
Single	110162	15 ... 200 (single acting)
Double	130165	30 ... 200 (double acting)

### Mountings

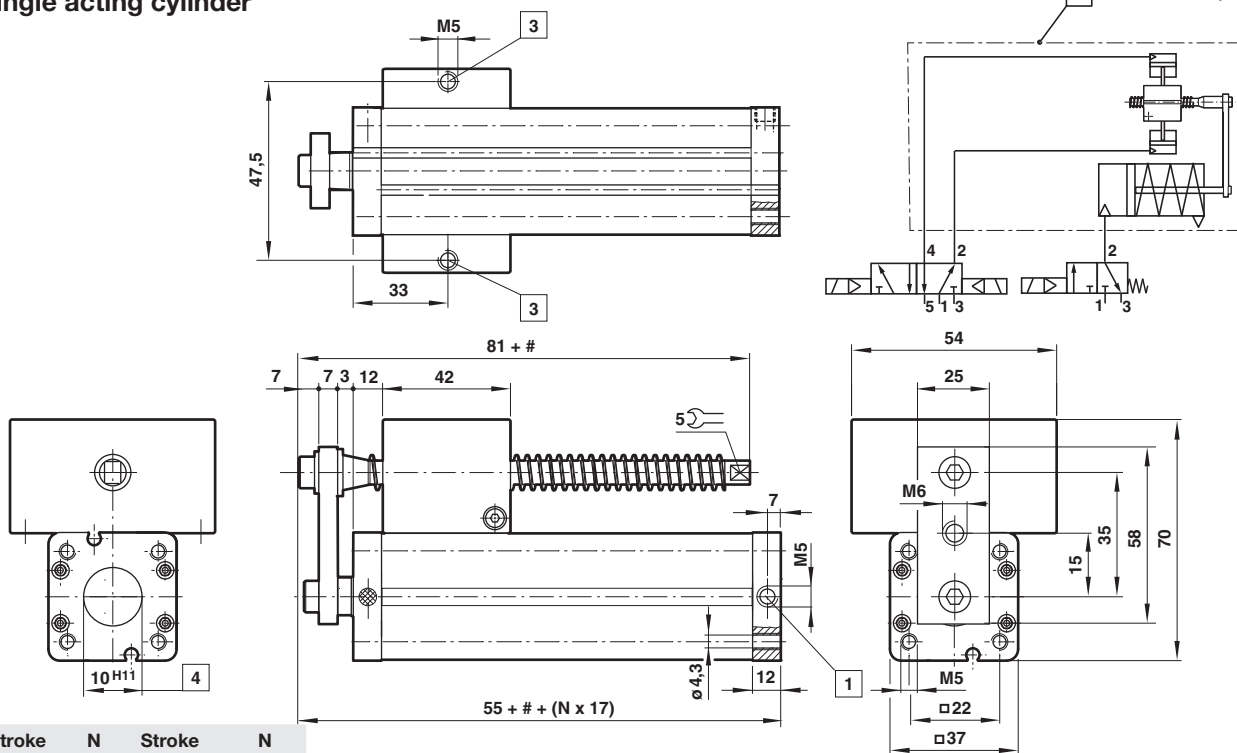
Model	B	C	L2	R
				
Ø	Page 3	Page 3	Page 3	Page 3
20	QA/192020/22	QM/192020/21	QM/8020/44	QM/192020/27

### Accessories

Model	Groove cover	Groove key	Magnetically operated switches
			
Ø	Page 3	Page 3	Page 4 & 5
20	M/P72725/1000	M/P72816	

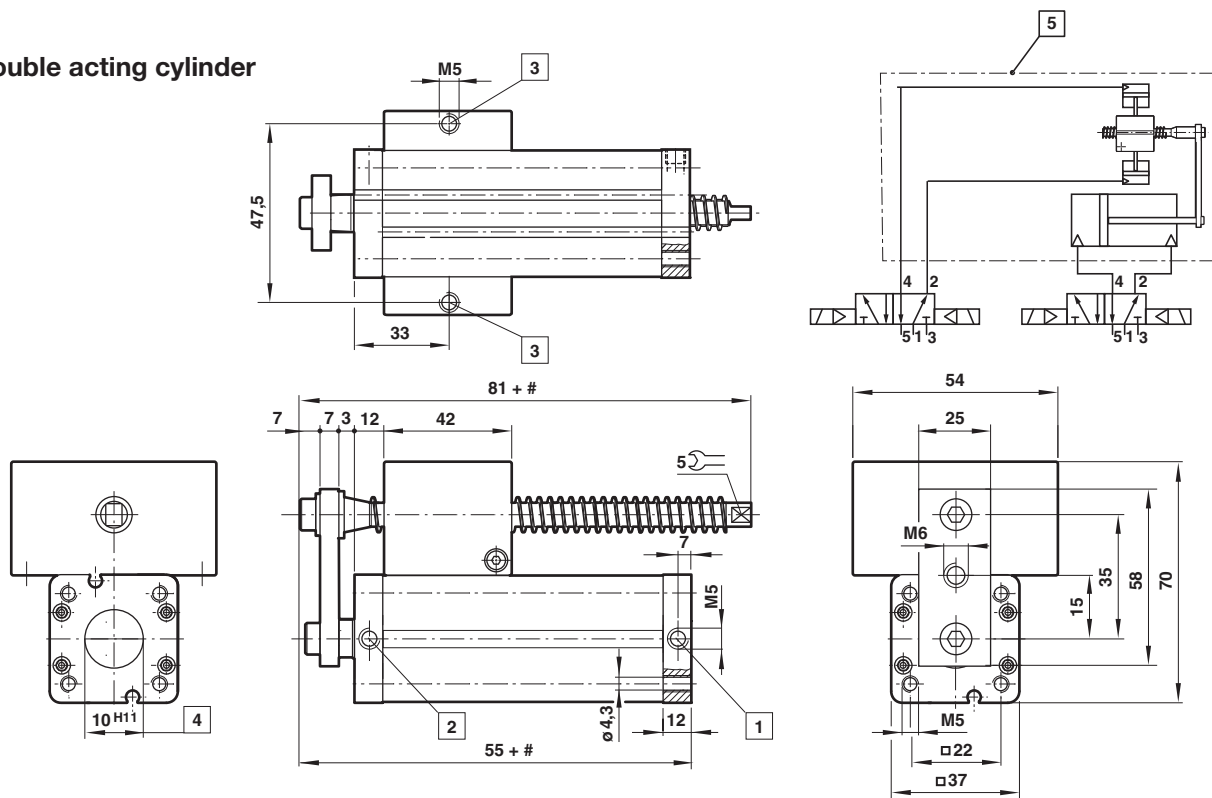
**Dimensions**  
**Single acting cylinder**

Dimensions in mm  
Projection/First angle



Stroke	N	Stroke	N
15 ... 25	1	101 ... 125	5
26 ... 50	2	126 ... 150	6
51 ... 75	3	151 ... 175	7
75 ... 100	4	176 ... 200	8

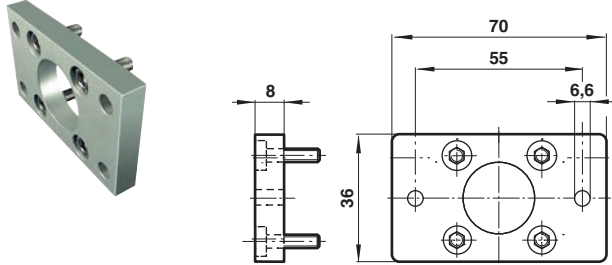
**Double acting cylinder**



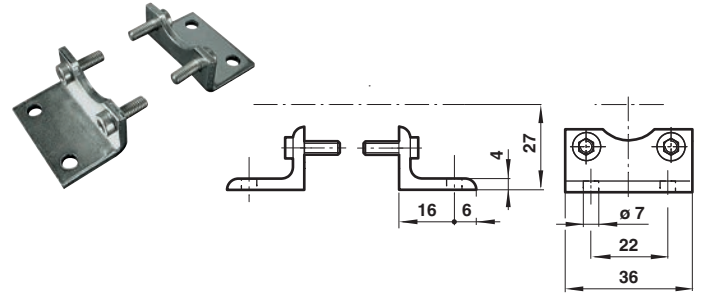
- # Stroke
- 1 Cylinder port outstroke
  - 2 Cylinder port instroke
  - 3 Stepper ports
  - 4 2,5 mm deep
  - 5 Cylinder with stepper unit

**Mountings**
**Rear flange B; Model: QA/192020/22**

Conforms to ISO 21 287  
Type MF1 and MF2  
Weight: 0,16 kg


**Foot C; Model: QM/192020/21**

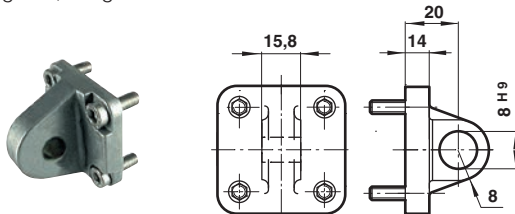
Conforms to ISO 21 287  
Type MS1  
Weight: 0,03 kg



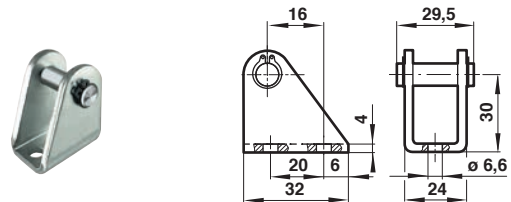
Dimensions in mm  
Projection/First angle


**Rear eye R; Model: QM/192020/27**

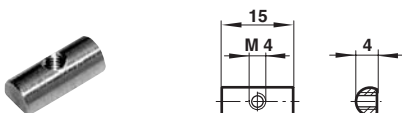
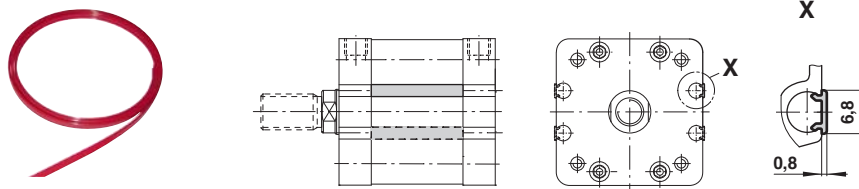
Conforms to ISO 21 287  
Type MP4  
Weight: 0,02 kg


**Bracket hinge L2; Model: QM/8020/44**

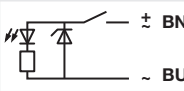
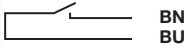
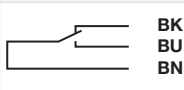

For rear eye mounting R  
Weight: 0,08 kg


**Groove key M/P72816**

Weight: 0,01 kg


**Groove cover M/P72725/1000**


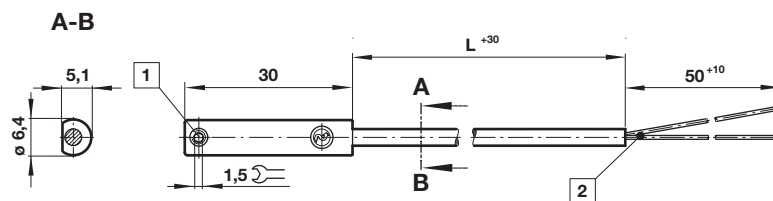
Technical data - Reed switches - additional informations see data sheet N/en 4.3.005

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 ... +150	—	IP66	—	2	Silicon 2 x 0,25	37	TM/50/RAU/2S
	10 ... 240	10 ... 170										
	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

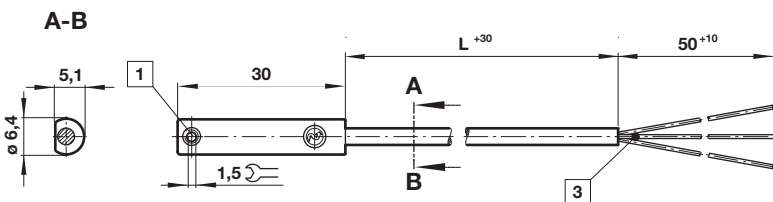
M/50/LSU/\*V, M/50/LSU/5U,  
TM/50/RAU/2S  
Cable length L = 2, 5 or 10 m



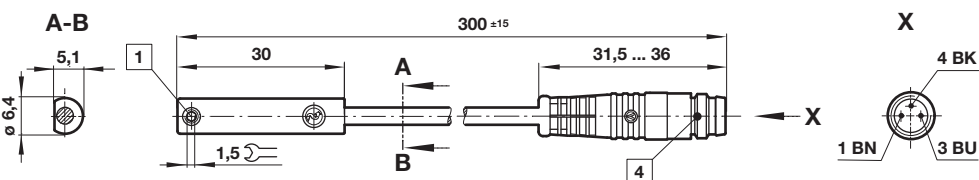
Dimensions in mm  
Projection/First angle



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

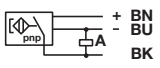
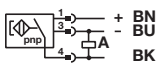
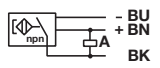
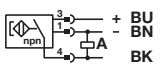
Accessories

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

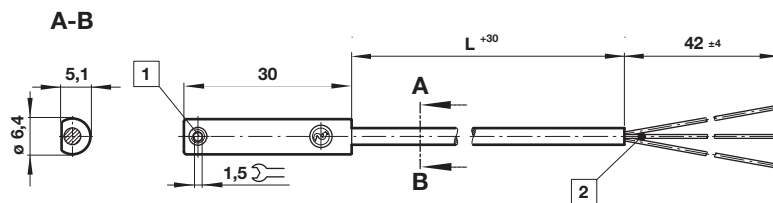
**Technical data - Solid state - additional informations see data sheet N/en 4.3.007**

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**

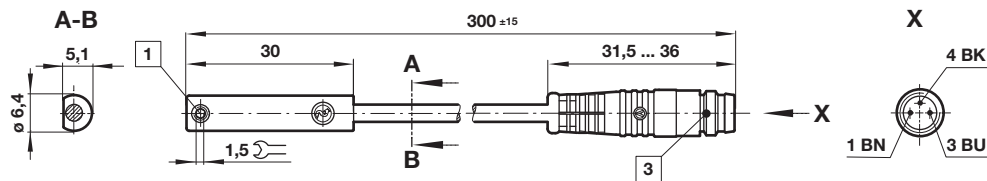
M/50/EAP/\*V,  
M/50/EAN/\*V  
Cable length L = 2, 5 or 10 m



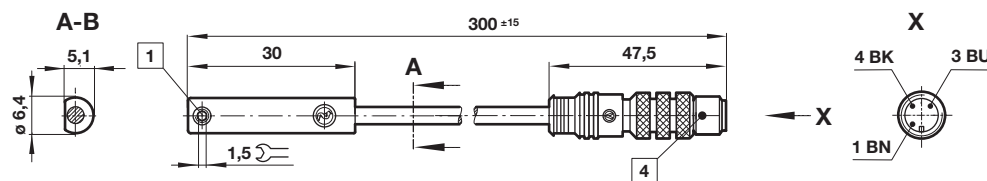
Dimensions in mm  
Projection/First angle



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

**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 NORGRN.

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.