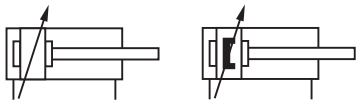
PRA/822000/M/EX, PRA/822000/EX
Smooth Line cylinder
Magnetic or non-magnetic piston, double acting

- Ø 32 ... 100 mm
- These cylinders are applicable in zones 1 & 2 (gas), 21 & 22 (dust): ATEX Cat. II 2G and 2D Cylinder with bellows in zones 2 & 22: ATEX Cat. II 3G and 3D
- With food grade lubricant (white-listed NSF H1 lubricant and certified according to ISO 21469)
- Reed or solid state switches can be mounted flush with the profile barrel
- Polyurethane seals provide high performance and long life
- Alternative air ports as standard
- Wide range of cylinder variants
- Cylinder and mounting conform to ISO 15552



Technical features

Medium:
Compressed air, filtered, lubricated or non-lubricated

Standard:
Based on ISO 15552
(length , mounting pitch and thread
dimensions according to ISO 15552. Some outside dimension different form ISO 15552)

Operation:
Double acting, magnetic or non magnetic piston, adjustable cushioning

Operating pressure:
1 ... 10 bar (14 ... 145 psi)

Port size:
G1/8, G1/4 , G3/8

Cylinder diameters:
32, 40, 50, 63, 80, 100 mm

Standard strokes:
See below

Non-standard strokes:
Available (10 ... 2000 mm)

Ambient temperature:
-20° ... +60°C max. (-4° ... +140°F)

Operating temperature:
-20° ... +80°C max. (-4° ... +176°F)
Air supply must be dry enough to avoid ice formation at temperatures below +2°C. (+35°F)

ATEX marking:
Ex II 2G Ex h IIC T4 Gb
Ex II 2D Ex h IIIC T120°C Db

Cylinder with bellows:
Ex II 3G Ex h IIC T4 Gc
Ex II 3D Ex h IIIC T120°C Dc

Materials:
Profile barrel:
anodised aluminium
End covers: pressure diecast anodised aluminium
Piston rod: stainless steel
see page 3
Piston rod seals: PUR
Piston seals: PUR
O-rings: NBR

Technical data

Cylinder Ø (mm)	32	40	50	63	80	100
Port size	G1/8	G1/8	G1/8	G1/4	G1/4	G3/8
Piston rod Ø (mm)	12	16	20	20	25	25
Piston rod thread	M10 x 1,25	M12 x 1,25	M16 x 1,5	M16 x 1,5	M20 x 1,5	M20 x 1,5
Cushion length (mm)	11	14	14	19	19	26
Theoretical thrusts at 6 bar outstroke (N)	482	754	1178	1870	3016	4710
Theoretical thrusts at 6 bar instroke (N)	414	633	990	1680	2722	4416
Air consumption at 6 bar outstroke (l/cm)	0,056	0,088	0,137	0,218	0,35	0,55
Air consumption at 6 bar instroke (l/cm)	0,05	0,076	0,117	0,198	0,324	0,514

Standard strokes

Cylinder Ø (mm)	Stroke length (mm) 25	50	80	100	125	160	200	250	320	400	500
32	•	•	•	•	•	•	•	•	•	•	•
40	•	•	•	•	•	•	•	•	•	•	•
50	•	•	•	•	•	•	•	•	•	•	•
63	•	•	•	•	•	•	•	•	•	•	•
80	•	•	•	•	•	•	•	•	•	•	•
100	•	•	•	•	•	•	•	•	•	•	•
125	•	•	•	•	•	•	•	•	•	•	•

Our policy is one of continued research and development. We therefore reserve the right to amend, without notice, the specifications given in this document. (2015 - 5254d) © 2015 Norgren GmbH

Explosion protection according ATEX directive 2014/34/EU
EN ISO 80079 Non-electrical equipment for potentally explosive atmospheres

Range of application		All range of application other than mines		
Equipment group		II		
Potentially explosive atmosphere		Mixture of air and gases, vapours, mists G (gas)		
(compustible materials)		Dust/air - mixture D (dust)		
Probability risk for a potentially explosive atmosphere		Continuous or long-term or frequent	Occasional	Rarely and briefly
Equipment categories		1	2	3
Equipment safety		very high	high	normal
Gas	Equipment-identification Ex...	Ex II 1G	Ex II 2G	Ex II 3G
	ATEX-zone	Zone 0	Zone 1	Zone 2
Dust	Equipment-identification Ex...	Ex II 1D	Ex II 2D	Ex II 3D
	ATEX-zone	Zone 20	Zone 21	Zone 22

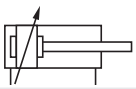
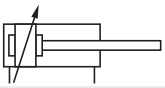
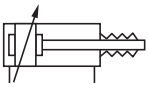
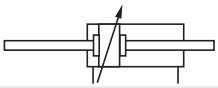
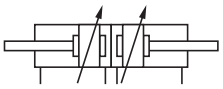
Equipment identification for IMI Norgren pneumatic cylinder:
(Example for standard cylinder)

II 2G Ex h IIC T4 Gb
II 2D Ex h IIIC T120°C Db

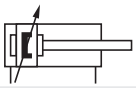
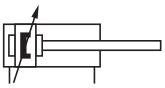
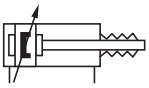
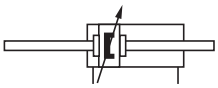
Equipment group:	II	All application other than mines
Equipment categorie:	2	High level of equipment safety
Usability for zones:	G and D	Gas and dust
Explosions groups	IIC and IIIC	Max. ignitability gas- and dust groups
Temperature class for gas:	T4	Max. surface temperature 135°C
Temperature data for dust:	120°C	Max. surface temperature
Equipment Protection Level (EPL)	Gb and Db	Gas and dust, save by normal operation and expected equipment fault

Our policy is one of continued research and development. We therefore reserve the right to amend, without notice, the specifications given in this document. (2015 - 5254d) © 2015 Norgren GmbH

Cylinder variants - non-magnetic piston

Symbol	R	S	C	D	V	E	Model Non-magnetic piston	Description	Dimensions Page
	•	•	•	•	•	•	P../822000/EX	Standard cylinder	7
	•	•	•	•			P../822000/W1/EX	Cylinder with special wiper/seal (suitable for applications with cement, plaster (stucco), arizona sand,hoar-frost or ice)	
	•	•	•	•	•	•	P../822000/IU/EX	Cylinder with extended piston rod	7
	•	•	•	•			P../822000/W5/EX	Cylinder with extended piston rod and special wiper/seal (suitable for applications with cement, plaster (stucco), arizona sand, hoar-frost or ice)	
	•	•	•	•	•	•	P../822000/G/EX	Cylinder with piston rod bellows	8
	•	•	•	•	•	•	P../822000/J/EX	Cylinder with double ended piston rod	8
	•	•	•	•			P../822000/W3/EX	Cylinder with double ended piston rod and special wiper/seal (suitable for applications with cement, plaster (stucco), arizona sand, hoar-frost or ice)	
	•	•	•	•	•	•	P../822000/IT/EX	Four position cylinders	9

Cylinder variants - magnetic piston

Symbol	R	S	C	D	V	E	Model magnetic piston	Description	Dimensions Page
	•	•	•	•	•	•	P../822000/M/EX	Standard cylinder	7
	•	•	•	•			P../822000/W2/EX	Cylinder with special wiper/seal (suitable for applications with cement, plaster (stucco), arizona sand,hoar-frost or ice)	
	•	•	•	•	•	•	P../822000/MU/EX	Cylinder with extended piston rod	7
	•	•	•	•			P../822000/W6/EX	Cylinder with extended piston rod and special wiper/seal (suitable for applications with cement, plaster (stucco), arizona sand, hoar-frost or ice)	
	•	•	•	•	•	•	P../822000/MG/EX	Cylinder with piston rod bellows	8
	•	•	•	•	•	•	P../822000/JM/EX	Cylinder with double ended piston rod	8
	•	•	•	•			P../822000/W4/EX	Cylinder with double ended piston rod and special wiper/seal (suitable for applications with cement, plaster (stucco), arizona sand, hoar-frost or ice)	
	•	•	•	•	•	•	P../822000/MT/EX	Four position cylinders	9

For the cylinder models style R, S, C, D, V and E see options selector

Our policy is one of continued research and development. We therefore reserve the right to amend, without notice, the specifications given in this document. (2015 - 5254d) © 2015 Norgren GmbH

Option selector

P★A/822★★★/★★/EX/★★★★

Piston rod material	Substitute
Stainless steel (martensitic); Standard wiper seal	R
Stainless steel (austenitic); Standard wiper seal	S
Hard chromium plated; Standard wiper seal	C
Stainless steel (austenitic); hard chromium plated; Standard wiper seal	D
Stainless steel (austenitic); Smooth wiper seal	V
Stainless steel (austenitic); hard chromium plated; Smooth wiper seal	E

Cylinder Ø (mm)	Substitute
032, 040, 050, 063, 080, 100	

Note: If option is not required, disregard option position within part number, eg. PRA/822032/EX/100.
For combinations of cylinder variants consult our Technical Service.
This options selector explains only the cylinder variants. Additional variants/options can not be derived from.

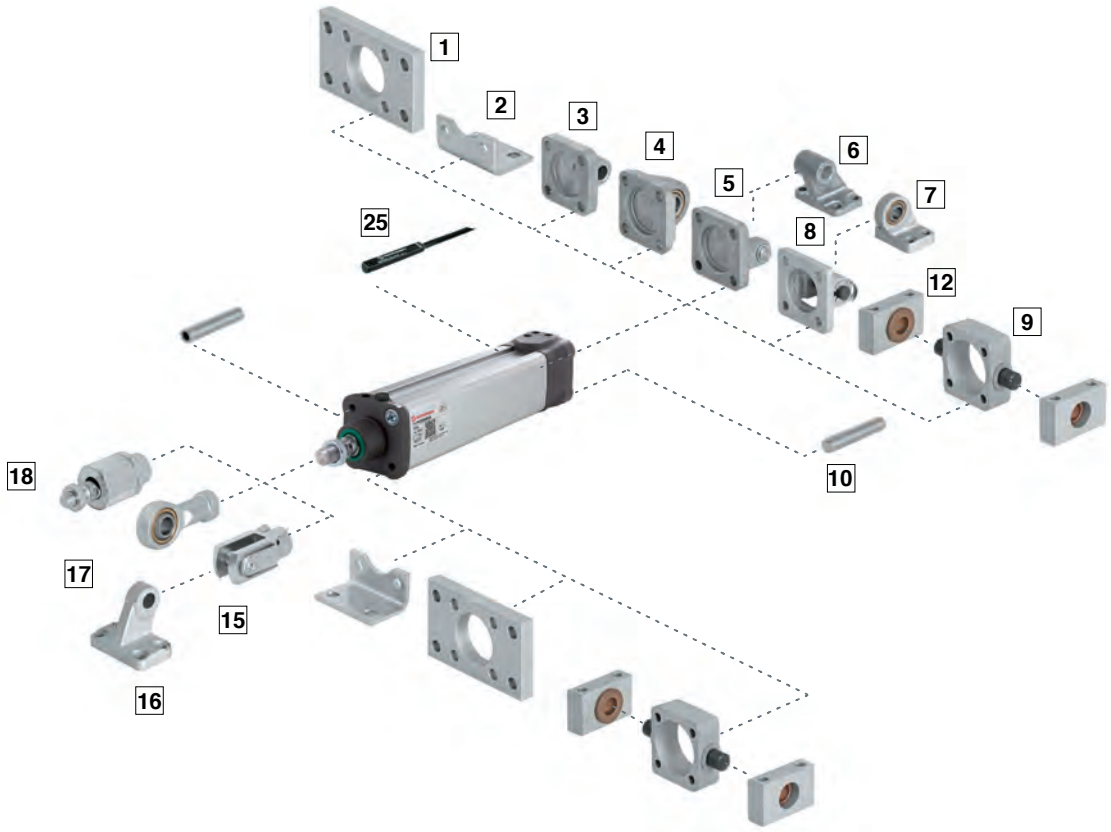
Strokes (mm)	
2000 max.	

Variants (magnetic piston)	Substitute
Standard	M
Double ended piston rod	JM
Four position	MT
Special wiper seal	W2
Double ended piston rod; special wiper seal	W4
Piston rod bellow	MG
Extended piston rod	MU
Special wiper seal, extended piston rod	W6
P**/822***/W6*/EX/****/***	Extension (mm)

Variants (non-magnetic piston)	Substitute
Standard	None
Double ended piston rod	J
Four position	IT
Special wiper seal	W1
Double ended piston rod, special wiper seal	W3
Piston rod bellow	G
Extended piston rod	IU
Special wiper seal, extended piston rod	W5
P**/822***/W6*/EX/****/***	Extension (mm)

Our policy is one of continued research and development. We therefore reserve the right to amend, without notice, the specifications given in this document. (2015 - 5254d) © 2015 Norgren GmbH

Mountings

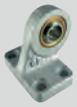


Position	Style	Standard	Corrosion protected
1	B, G	Clear anodised aluminium	Clear anodised aluminium. Screws: A2
2	C	Galvanized steel (ø 32 ... 63 mm) Painted steel (ø 80 & 100 mm)	–
3	R	Diecast aluminium	Black corrosion protected diecast aluminium. Certified for the food industry. Screws: A2
4	UR	Galvanized aluminium Inner ring: steel Outer ring: brass	Black corrosion protected diecast aluminium Certified for the food industry Inner ring: stainless Steel (austenitic) Outer ring: nickel plated hardened steel
5	D	Diecast aluminium Bolt: galvanized steel (martensitic) Circlip: galvanized steel	Black corrosion protected diecast aluminium Certified for the food industry Bolt: X 10 Cr Ni S 18 9 (1.4305, AISI 303) Circlip: Stainless steel (martensitic). Screws: A2
6	SW	Diecast aluminium	Black corrosion protected diecast aluminium Certified for the food industry
7	US	Galvanized aluminium. Inner ring: steel Outer ring: brass	–
8	D2	Painted cast iron. Bolt: stainless steel (martensitic) Circlip: galvanized steel	–
9	FH	Cast iron	–
10	A	Galvanized steel	–
11	Screw	–	–
12	S	Clear anodised aluminium Bearing: brass	
15	F	Galvanized steel Bolt: galvanized steel Circlip: Galvanized steel	Nickel plated steel Circlip: X 10 Cr Ni S 18 9 (1.4305, AISI 303) Bolt: X 10 Cr Ni S 18 9 (1.4305, AISI 303)
16	SS	Painted cast iron	–
17	UF	Galvanized steel. Inner ring: steel Outer ring: brass	Nickel plated steel. Inner ring: stainless steel (austenitic) Outer ring: nickel plated hardened steel.
18	AK	Galvanized steel	–

Our policy is one of continued research and development. We therefore reserve the right to amend, without notice, the specifications given in this document. (2015 - 5254d) © 2015 Norgren GmbH

Mountings

Model	A	AK	B, G	C	D	D2	F	FH
Cyl. Ø	10 Page 10	18 Page 10	1 Page 10	2 Page 10	5 Page 11	8 Page 11	15 Page 11	9 Page 11
32	QM/8032/35	QM/8025/38	QA/8032/22	QA/8032/21	QA/8032/23	QA/8032/42	QM/8025/25	QA/8032/34
40	QM/8032/35	QM/8040/38	QA/8040/22	QA/8040/21	QA/8040/23	QA/8040/42	QM/8040/25	QA/8040/34
50	QM/8050/35	QM/8050/38	QA/8050/22	QA/8050/21	QA/8050/23	QA/8050/42	QM/8050/25	QA/8050/34
63	QM/8050/35	QM/8050/38	QA/8063/22	QA/8063/21	QA/8063/23	QA/8063/42	QM/8050/25	QA/8063/34
80	QM/8080/35	QM/8080/38	QA/8080/22	QA/8080/21	QA/8080/23	QA/8080/42	QM/8080/25	QA/8080/34
100	QM/8080/35	QM/8080/38	QA/8100/22	QA/8100/21	QA/8100/23	QA/8100/42	QM/8080/25	QA/8100/34
Corrosion protected								
32	–	–	PVQA/8032/22	–	PVQA/8032/23	–	PVQM/8025/25	–
40	–	–	PVQA/8040/22	–	PVQA/8040/23	–	PVQM/8040/25	–
50	–	–	PVQA/8050/22	–	PVQA/8050/23	–	PVQM/8050/25	–
63	–	–	PVQA/8063/22	–	PVQA/8063/23	–	PVQM/8050/25	–
80	–	–	PVQA/8080/22	–	PVQA/8080/23	–	PVQM/8080/25	–
100	–	–	PVQA/8100/22	–	PVQA/8100/23	–	PVQM/8080/25	–

	R	S	SS	SW	UF	UR	US	Assembly kit for four-position cylinder
								
Cyl. Ø	3 Page 12	12 Page 12	16 Page 13	6 Page 12	17 Page 12	4 Page 13	7 Page 13	Page 13
32	QA/8032/27	QA/8032/41	M/P19931	M/P19493	QM/8025/32	QA/8032/33	M/P40310	QM/192032/55
40	QA/8040/27	QA/8040/41	M/P19932	M/P19494	QM/8040/32	QA/8040/33	M/P40311	QM/192040/55
50	QA/8050/27	QA/8040/41	M/P19933	M/P19495	QM/8050/32	QA/8050/33	M/P40312	QM/192050/55
63	QA/8063/27	QA/8063/41	M/P19934	M/P19496	QM/8050/32	QA/8063/33	M/P40313	QM/192063/55
80	QA/8080/27	QA/8063/41	M/P19935	M/P19497	QM/8080/32	QA/8080/33	M/P40314	QM/192080/55
100	QA/8100/27	QA/8100/41	M/P19936	M/P19498	QM/8080/32	QA/8100/33	M/P40315	QM/192100/55
Corrosion protected								
32	PVQA/8032/27	–	–	M/P40459	PVQM/8025/32	PVQA/8032/33	–	
40	PVQA/8040/27	–	–	M/P40460	PVQM/8040/32	PVQA/8040/33	–	
50	PVQA/8050/27	–	–	M/P40461	PVQM/8050/32	PVQA/8050/33	–	
63	PVQA/8063/27	–	–	M/P40462	PVQM/8050/32	PVQA/8063/33	–	
80	PVQA/8080/27	–	–	M/P40463	PVQM/8080/32	PVQA/8080/33	–	
100	PVQA/8100/27	–	–	M/P40464	PVQM/8080/32	PVQA/8100/33	–	

Accessories

Magnetically operated switches M/50 *1)

25

Pages 14 and 15

*1) Switches can be mounted flush with the profile!

Service kit

Service kit

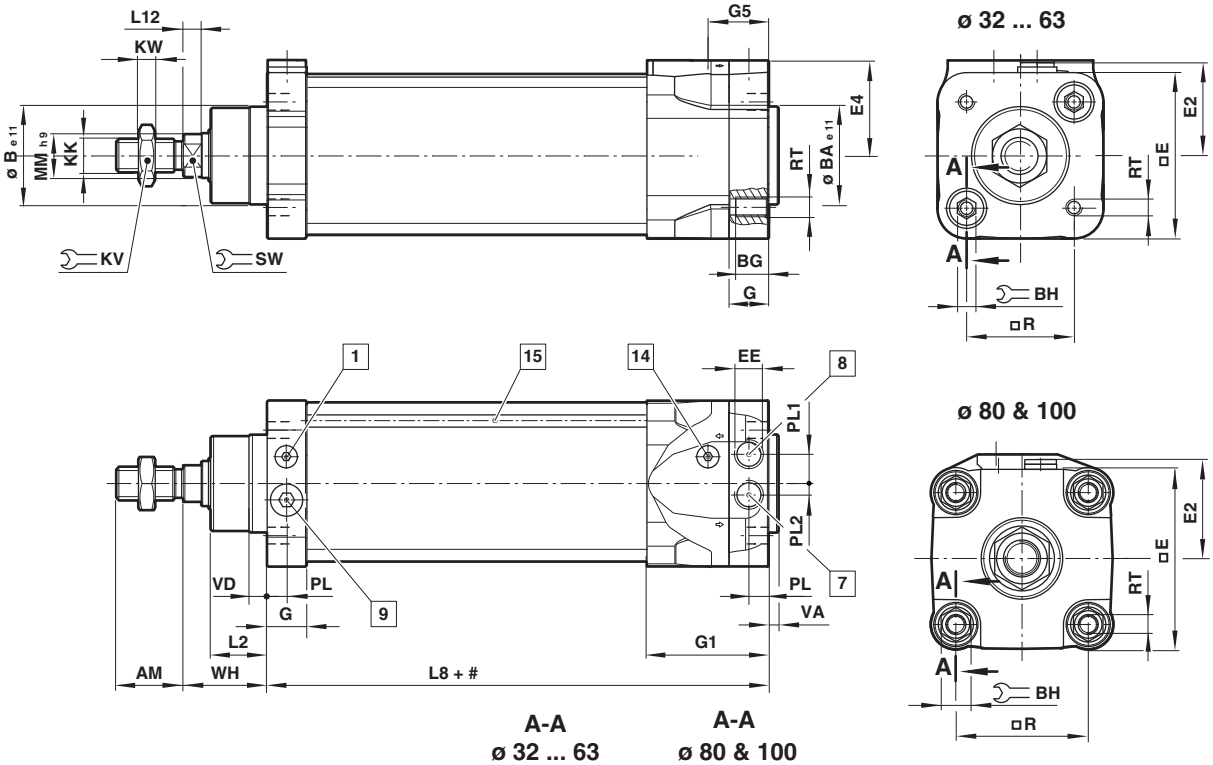
Cyl. Ø	
32	PRQA/822032/00
40	PRQA/822040/00
50	PRQA/822050/00
63	PRQA/822063/00
80	PRQA/822080/00
100	PRQA/822100/00

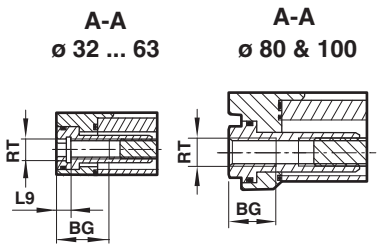
Our policy is one of continued research and development. We therefore reserve the right to amend, without notice, the specifications given in this document. (2015 - 5254d) © 2015 Norgren GmbH

Dimensions

PRA/822000/EX, PRA/822000/M/EX

Dimensions in mm
Projection/First angle





Stroke
1 Cushion adjustment front end cover
7 Air supply, cylinder instroke
8 Air supply, cylinder outstroke
9 Alternative air supply, cylinder instroke
14 Cushion adjustment rear end cover
15 M/50 switches can be mounted flush with the profile
Attention: Reed switches for Ø 40 ... 100 mm useable only

Cyl Ø	AM	ØBe11	ØBAe11	BG	BH	□E	E2	E4	EE	G	G1	G5	KK	KW	L2	L8	L9	L12	Ø MMh9
32	22	30	30	16	6	53	31	32	G1/8	14	47	20,5	M10x1,25	5	20	94	4	4,5	12
40	24	35	35	16	6	60	34,5	34	G1/8	14	53	22,5	M12x1,25	6	21	105	4	6,5	16
50	32	40	40	16	8	71,5	40	39	G1/8	14	55,5	24,5	M16x1,5	8	28	106	5	6,5	20
63	32	45	45	16	8	82	46	45,5	G1/4	19	58	29,5	M16x1,5	8	28	121	5	6,5	20
80	40	45	45	17	16	99	54	57	G1/4	19	63	31	M20x1,5	10	35	128	-	7,5	25
100	40	55	55	17	16	119	65	65	G3/8	24,5	67	36,5	M20x1,5	10	38	138	-	10	25

Cyl Ø	PL	PL1	PL2	□R	RT	VA	VD	WH	KV	SW	at 0 mm	per 25 mm	Model; non-magnetic piston	Model; magnetic piston
32	7	10,5	4	32,5	M 6	3	6	26	17	10	0,56 kg	0,07 kg	PRA/822032/EX/*	PRA/822032/M/EX/*
40	7	10,5	4	38	M 6	3,5	6	30	19	13	0,93 kg	0,11 kg	PRA/822040/EX/*	PRA/822040/M/EX/*
50	7	12,5	4	46,5	M 8	3,5	6	37	24	17	1,48 kg	0,18 kg	PRA/822050/EX/*	PRA/822050/M/EX/*
63	9,5	14,5	6	56,5	M 8	4	6	37	24	17	2,32 kg	0,19 kg	PRA/822063/EX/*	PRA/822063/M/EX/*
80	9,5	14	6	72	M 10	4	6	46	30	22	4,02 kg	0,29 kg	PRA/822080/EX/*	PRA/822080/M/EX/*
100	12	16,5	8,5	89	M 10	4	6	51	30	22	6,24 kg	0,35 kg	PRA/822100/EX/*	PRA/822100/M/EX/*

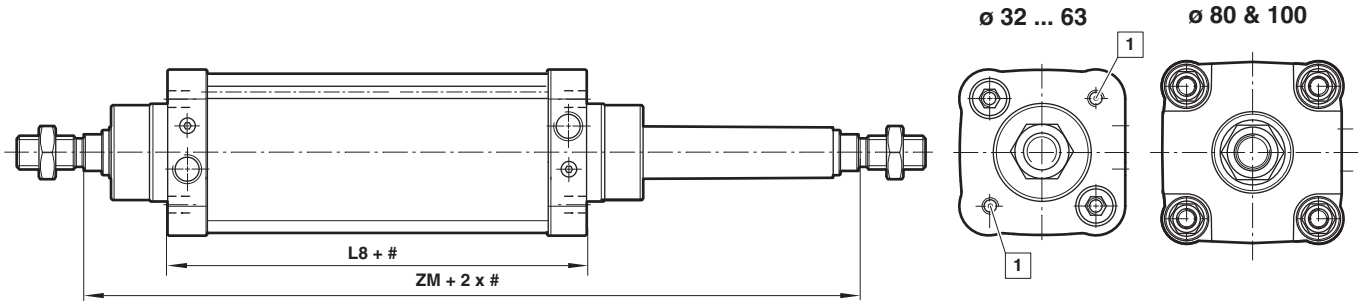
* Please insert standard stroke length

Our policy is one of continued research and development. We therefore reserve the right to amend, without notice, the specifications given in this document. (2015 - 5254d) © 2015 Norgren GmbH

Cylinder variants

PRA/822000/J/EX, PRA/822000/JM/EX – Cylinder double ended piston rod

Dimensions in mm
Projection/First angle

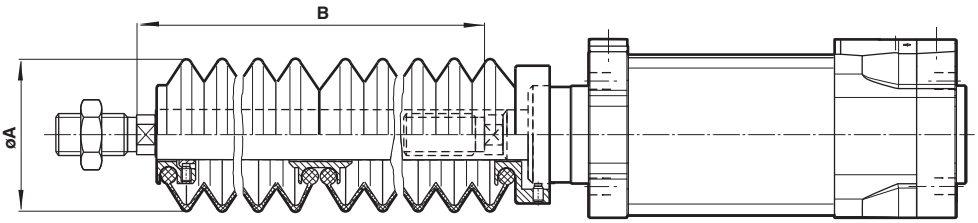


Stroke
1 Two threads can't be used for mountings

Cyl. Ø	L8	ZM	Model Non-magnetic piston	Model Magnetic piston
32	94	146	PRA/822032/J/EX/*	PRA/822032/JM/EX/*
40	105	165	PRA/822040/J/EX/*	PRA/822040/JM/EX/*
50	106	180	PRA/822050/J/EX/*	PRA/822050/JM/EX/*
63	121	195	PRA/822063/J/EX/*	PRA/822063/JM/EX/*
80	128	220	PRA/822080/J/EX/*	PRA/822080/JM/EX/*
100	138	240	PRA/822100/J/EX/*	PRA/822100/JM/EX/*

* Standard stroke length

PRA/822000/G/EX,, PRA/822000/MG/EX – Cylinder with piston rod bellow

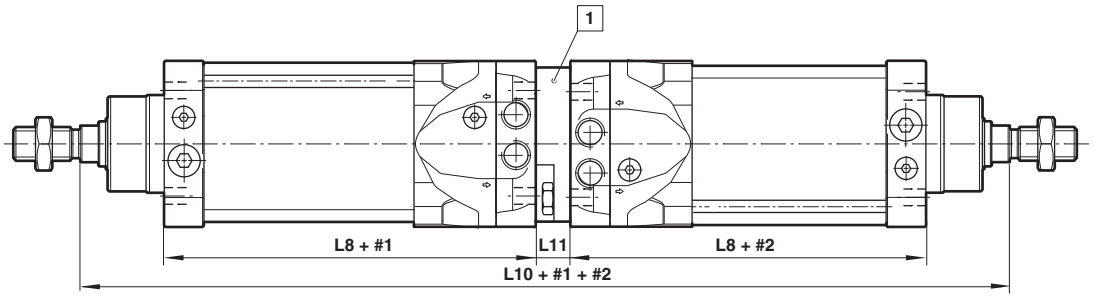


Cyl. Ø	Ø A	Max. stroke per bellow	Piston rod extention B for first bellow	for further bellows	Model Non-magnetic piston	Model Magnetic piston
32	40	60	30	25	PRA/822032/G/EX/*	PRA/822032/MG/EX/*
40	63	145	50	32	PRA/822040/G/EX/*	PRA/822040/MG/EX/*
50	63	145	40	32	PRA/822050/G/EX/*	PRA/822050/MG/EX/*
63	63	145	40	32	PRA/822063/G/EX/*	PRA/822063/MG/EX/*
80	80	250	50	45	PRA/822080/G/EX/*	PRA/822080/MG/EX/*
100	80	250	50	45	PRA/822100/G/EX/*	PRA/822100/MG/EX/*

* Standard stroke length

Our policy is one of continued research and development. We therefore reserve the right to amend, without notice, the specifications given in this document. (2015 - 5254d) © 2015 Norgren GmbH

PRA/822000/IT/EX, PRA/822000/MT/EX – Four position cylinder



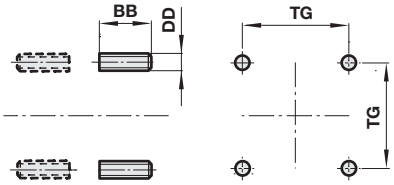
#1 Stroke 1
#2 Stroke 2
1 Assembly kit

Cyl. Ø	L8	L10	L11	Model Non-magnetic piston	Model Magnetic piston
32	94	252,5	12,5	PRA/822032/IT/EX/*/**	PRA/822032/MT/EX/*/**
40	105	282,5	12,5	PRA/822040/IT/EX/*/**	PRA/822040/MT/EX/*/**
50	106	301	15	PRA/822050/IT/EX/*/**	PRA/822050/MT/EX/*/**
63	121	331	15	PRA/822063/IT/EX/*/**	PRA/822063/MT/EX/*/**
80	128	368	20	PRA/822080/IT/EX/*/**	PRA/822080/MT/EX/*/**
100	138	398	20	PRA/822100/IT/EX/*/**	PRA/822100/MT/EX/*/**

* Please insert standard stroke 1 length
** Please insert standard stroke 2 length

Our policy is one of continued research and development. We therefore reserve the right to amend, without notice, the specifications given in this document. (2015 - 5254d) © 2015 Norgren GmbH

Mountings
Front or rear stud mounting A
Conforms to ISO 15552, type MX1

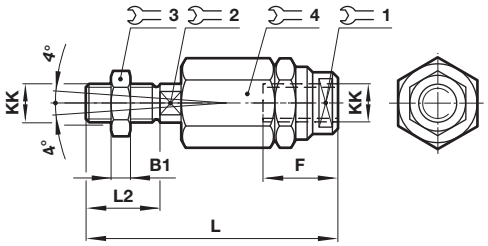


Standard

Ø	BB	DD	TG	kg	Model (A)
32/40	17	M6	32,5/38	0,02	QM/8032/35
50/63	23	M8	46,5/56,5	0,05	QM/8050/35
80/100	28	M10	72/89	0,08	QM/8080/35

Piston rod swivel AK

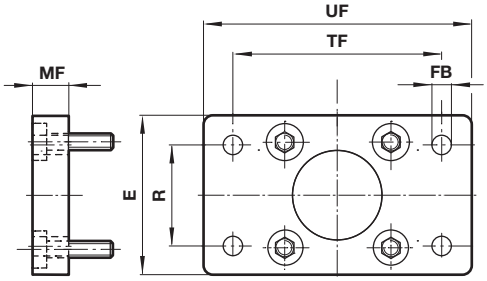
Dimensions in mm
Projection/First angle



Standard

Ø	KK	B1	F	L	L2	1	2	3	4	kg	Model (AK)
32	M10x1,25	5	26	73	20	19	12	17	30	0,20	QM/8025/38
40	M12x1,25	6	26	77	24	19	12	19	30	0,20	QM/8040/38
50/63	M16x1,5	8	34	106	32	30	19	24	42	0,65	QM/8050/38
80/100	M20x1,5	10	42	122	40	30	19	30	42	0,72	QM/8080/38

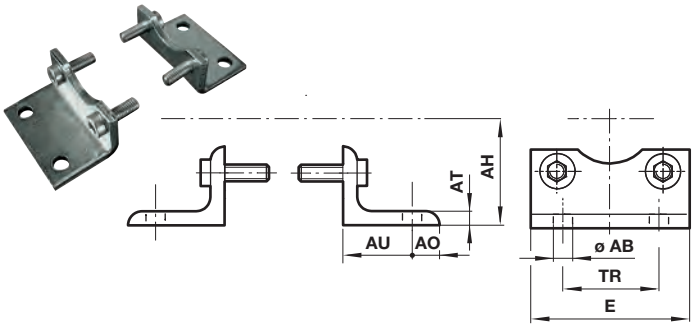
Front flange B, G
Conforms to ISO 15552, type MF1 and MF2



Standard

Ø	E	Ø FB	MF	R	TF	UF	kg	Model (B, G)
32	50	7	10	32	64	80	0,25	QA/8032/22
40	55	9	10	36	72	90	0,35	QA/8040/22
50	65	9	12	45	90	110	0,70	QA/8050/22
63	75	9	12	50	100	125	0,80	QA/8063/22
80	100	12	16	63	126	154	1,35	QA/8080/22
100	120	14	16	75	150	186	2,20	QA/8100/22
Corrosion protected version								
32	50	7	10	32	64	80	0,25	PVQA/8032/22
40	55	9	10	36	72	90	0,35	PVQA/8040/22
50	65	9	12	45	90	110	0,7	PVQA/8050/22
63	75	9	12	50	100	125	0,8	PVQA/8063/22
80	100	12	16	63	126	154	1,35	PVQA/8080/22
100	120	14	16	75	150	186	2,2	PVQA/8100/22

Foot mounting C
Conforms to ISO 15552, type MS1

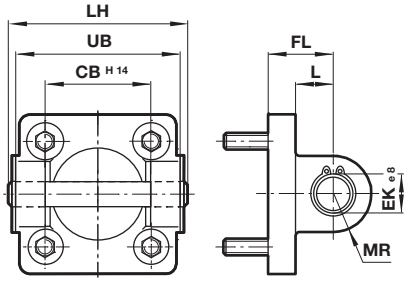


Standard

Ø	Ø 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	5	41	98	63	0,80	QA/8080/21
100	14	71	19	5	41	115	75	0,95	QA/8100/21

Our policy is one of continued research and development. We therefore reserve the right to amend, without notice, the specifications given in this document. (2015 - 5254d) © 2015 Norgren GmbH

Rear clevis D
Conforms to ISO 15552, type MP2

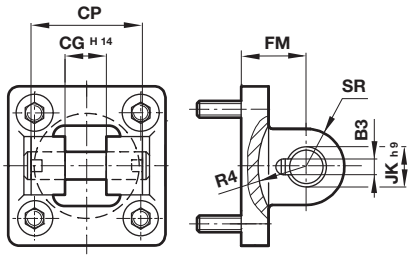


Standard

Ø	CB H14	Ø EK e8	FL	L	LH	MR	UB	kg	Model (D)
32	26	10	22	13	52	9	45	0,11	QA/8032/23
40	28	12	25	16	60	12	52	0,16	QA/8040/23
50	32	12	27	17	68	12	60	0,22	QA/8050/23
63	40	16	32	22	79	15	70	0,34	QA/8063/23
80	50	16	36	22	99	15	90	0,54	QA/8080/23
100	60	20	41	27	119	20	110	0,90	QA/8100/23
Corrosion protected version									
32	26	10	22	13	52	9	45	0,11	PVQA/8032/23
40	28	12	25	16	60	12	52	0,16	PVQA/8040/23
50	32	12	27	17	68	12	60	0,22	PVQA/8050/23
63	40	16	32	22	79	15	70	0,34	PVQA/8063/23
80	50	16	36	22	99	15	90	0,54	PVQA/8080/23
100	60	20	41	27	119	20	110	0,9	PVQA/8100/23

Rear clevis D2
Conforms to ISO 15552, type AB6

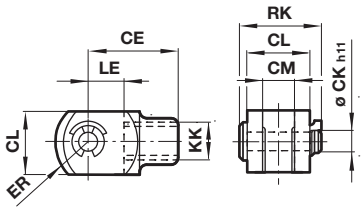
Dimensions in mm
Projection/First angle



Standard

Ø	B1 H14	B2	B3	Ø EK h9	FL	R1	R2	kg	Model (D2)
32	14	34	3,3	10	22	11	17	0,20	QA/8032/42
40	16	40	4,3	12	25	12	20	0,23	QA/8040/42
50	21	45	4,3	16	27	14,5	22	0,36	QA/8050/42
63	21	51	4,3	16	32	18	25	0,55	QA/8063/42
80	25	65	4,3	20	36	22	30	0,90	QA/8080/42
100	25	75	4,3	20	41	22	32	1,45	QA/8100/42

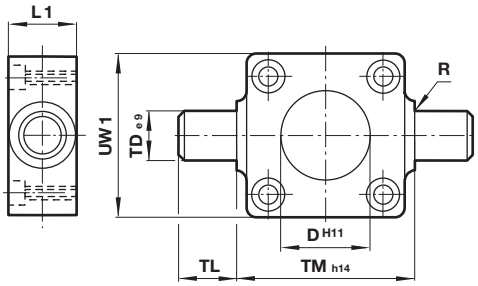
Piston rod clevis F
Conforms to DIN ISO 8140



Standard

Ø	KK	CE	Ø CKh11	CL	CM	ER	LE	RK	kg	Model (F)
32	M10x1,25	40	10	20	10	16	20	28	0,09	QM/8025/25
40	M12x1,25	48	12	24	12	19	24	32	0,13	QM/8040/25
50/63	M16x1,5	64	16	32	16	25	32	41,5	0,33	QM/8050/25
80/100	M20x1,5	80	20	40	20	32	40	50	0,67	QM/8080/25
Corrosion protected version										
32	M10x1,25	40	10	20	10	16	20	28	0,09	PVQM/8032/25
40	M12x1,25	48	12	24	12	19	24	32	0,13	PVQM/8040/25
50/63	M16x1,5	64	16	32	16	25	32	41,5	0,33	PVQM/8050/25
80/100	M20x1,5	80	20	40	20	32	40	50	0,67	PVQM/8080/25

Front or rear detachable trunnion FH
Conforms to VDMA 24562 part 2, type MT 5/6

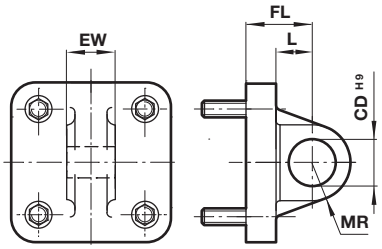


Standard

Ø	Ø D h11	L1	R	Ø TD e9	TL	TM h14	UW1	kg	Model (FH)
32	30	16	1	12	12	50	45	0,20	QA/8032/34
40	35	20	1,6	16	16	63	55	0,38	QA/8040/34
50	40	24	1,6	16	16	75	65	0,60	QA/8050/34
63	45	24	1,6	20	20	90	75	1,10	QA/8063/34
80	45	28	1,6	20	20	110	100	1,90	QA/8080/34
100	55	38	2	25	25	132	120	3,50	QA/8100/34

Our policy is one of continued research and development. We therefore reserve the right to amend, without notice, the specifications given in this document. (2015 - 5254d) © 2015 Norgren GmbH

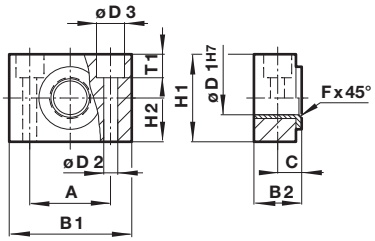
Rear eye R
Conforms to ISO 15552, type MP4



Standard

Ø	Ø CD H9	EW	FL	L	MR	kg	Model (R)
32	10	25,8	22	13	9	0,09	QA/8032/27
40	12	27,8	25	16	12	0,11	QA/8040/27
50	12	31,7	27	17	12	0,17	QA/8050/27
63	16	39,7	32	22	15	0,24	QA/8063/27
80	16	49,7	36	22	15	0,37	QA/8080/27
100	20	59,7	41	27	20	0,59	QA/8100/27
Corrosion protected version							
32	10	25,8	22	13	9	0,09	PVQA/8032/27
40	12	27,8	25	16	12	0,11	PVQA/8040/27
50	12	31,7	27	17	12	0,17	PVQA/8050/27
63	16	39,7	32	22	15	0,24	PVQA/8063/27
80	16	49,7	36	22	15	0,37	PVQA/8080/27
100	20	59,7	41	27	20	0,59	PVQA/8100/27

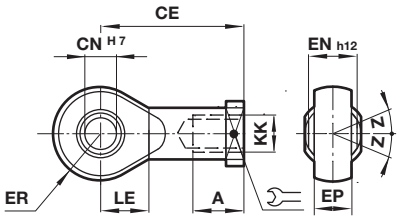
Trunnion support S
Conforms to ISO 15552, type AT4



Standard

Ø	A	B 1	B 2	C	Ø D1H7	Ø D2	Ø D3	F x 45°	H 1	H 2	T1	kg	Model (S)
32	32	46	18	10,5	12	6,6	11	1	30	15	6,8	0,10	QA/8032/41
40/50	36	55	21	12	16	9	15	1,6	36	18	9	0,14	QA/8040/41
63/80	42	65	23	13	20	11	18	1,6	40	20	11	0,18	QA/8063/41
100	50	75	28,5	16	25	14	20	2	50	25	13	0,34	QA/8100/41

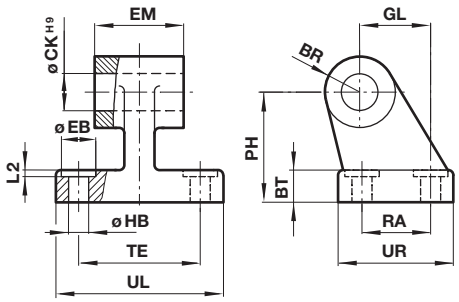
Universal piston rod eye UF
Conforms to DIN ISO 8139



Standard

Ø	Thread KK	AX	CE	Ø CN H7	EN -0,1	ER	LE	Z	kg	Model (UF)
32	M10x1,25	20	43	10	14	14	15	13°	0,09	QM/8025/32
40	M12x1,25	22	50	12	16	16	17	13°	0,13	QM/8040/32
50/63	M16x1,5	28	64	16	21	21	22	15°	0,33	QM/8050/32
80/100	M20x1,5	33	77	20	25	25	26	15°	0,67	QM/8080/32
Corrosion protected version										
32	M10x1,25	20	43	10	14	14	15	13°	0,09	PVQM/8025/32
40	M12x1,25	22	50	12	16	16	17	13°	0,13	PVQM/8040/32
50/63	M16x1,5	28	64	16	21	21	22	15°	0,33	PVQM/8050/32
80/100	M20x1,5	33	77	20	25	25	26	15°	0,4	PVQM/8080/32

Wide hinge SW
Conforms to ISO 15552, type AB7

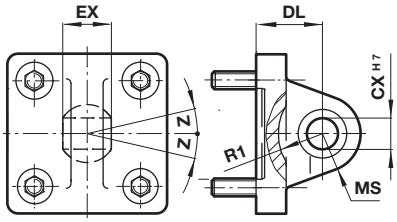


Standard

Ø	CA	Ø CKH9	Ø D	H2	EM	G1	G2	G3	K1	K2	L1	R	Ø S	kg	Model (SW)
32	32	10	11	7	25,5	21	18	31	38	50	1,6	10	6,6	0,05	M/P19493
40	36	12	11	9	27,5	24	22	35	41	54	1,6	11	6,6	0,07	M/P19494
50	45	12	15	11	31,5	33	30	45	50	65	1,6	13	9	0,14	M/P19495
63	50	16	15	12	39,5	37	35	50	52	67	1,6	15	9	0,18	M/P19496
80	63	16	18	14	49,5	47	40	60	66	84	2,5	15	11	0,28	M/P19497
100	71	20	18	15	59,5	55	50	70	76	94	2,5	19	11	0,42	M/P19498
Corrosion protected version															
32	32	10	11	8	26,5	21	18	31	38	51	1,6	10	6,6	0,05	M/P40459
40	36	12	11	10	28,5	24	22	35	41	54	1,6	11	6,6	0,07	M/P40460
50	45	12	15	12	32,5	33	30	45	50	65	1,6	13	9	0,14	M/P40461
63	50	16	15	12	40,5	37	35	50	52	67	1,6	15	9	0,18	M/P40462
80	63	16	18	14	50,5	47	40	60	66	86	2,5	15	11	0,28	M/P40463
100	71	20	18	15	60,5	55	50	70	76	96	2,5	19	11	0,42	M/P40464

Our policy is one of continued research and development. We therefore reserve the right to amend, without notice, the specifications given in this document. (2015 - 5254d) © 2015 Norgren GmbH

Universal rear eye UR
Conforms to ISO 15552, type MP6

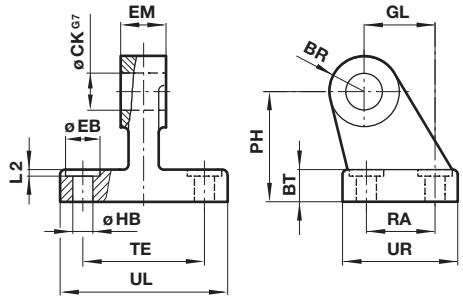


Standard

Ø	Ø CN H7	EN	ER	FL	R	Z	kg	Model (UR)
32	10	14	16	22	14,5	13°	0,15	QA/8032/33
40	12	16	18	25	18	13°	0,25	QA/8040/33
50	16	21	21	27	19	15°	0,40	QA/8050/33
63	16	21	23	32	24	15°	0,55	QA/8063/33
80	20	25	28	36	24	15°	0,90	QA/8080/33
100	20	25	30	41	29	15°	1,50	QA/8100/33
Corrosion protected version								
32	10	14	16	22	14,5	13°	0,15	PVQA/8032/33
40	12	16	19	25	18	13°	0,25	PVQA/8040/33
50	16	21	21	27	19	13°	0,4	PVQA/8050/33
63	16	21	24	32	24	15°	0,55	PVQA/8063/33
80	20	25	28	36	24	15°	0,9	PVQA/8080/33
100	20	25	30	41	29	15°	1,5	PVQA/8100/33

Narrow hinge SS

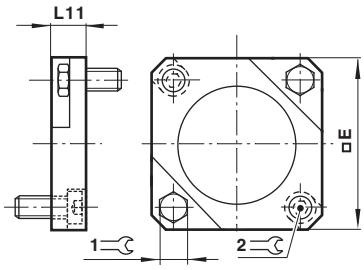
Dimensions in mm
Projection/First angle



Standard

Ø	CA	Ø CNG7	Ø D	H2	EM	G1	G2	G3	K1	K2	L1	R	Ø S	kg	Model (SS)
32	32	10	11	8	10	21	18	31	38	51	1,6	10	6,6	0,15	M/P19931
40	36	12	11	10	12	24	22	35	41	54	1,6	11	6,6	0,20	M/P19932
50	45	16	15	12	16	33	30	45	50	65	1,6	13	9	0,48	M/P19933
63	50	16	15	12	16	37	35	50	52	67	1,6	15	9	0,50	M/P19934
80	63	20	18	14	20	47	40	60	66	86	2,5	15	11	0,75	M/P19935
100	71	20	18	15	20	55	50	70	76	96	2,5	19	11	1,20	M/P19936

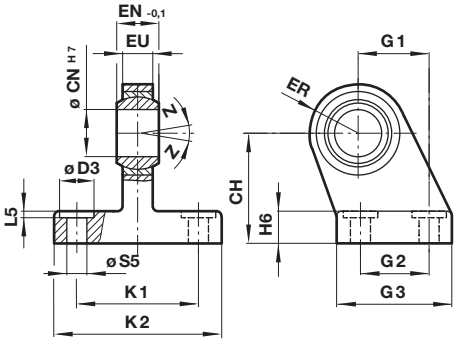
Assembly kit for four-position cylinder



Standard

Ø	E	L11	1	2	kg	Model
32	47	12,5	10	5	0,04	QM/192032/55
40	53	12,5	10	5	0,05	QM/192040/55
50	65,5	15	13	6	0,10	QM/192050/55
63	75	15	13	6	0,13	QM/192063/55
80	95	20	17	8	0,34	QM/192080/55
100	116	20	17	8	0,50	QM/192100/55

Swivel hinge US
Conforms to VDMA 24562 part 2



Standard

Ø	CH	Ø CNH7	Ø D	EN -0,1	ER	EU	G1	G2	G3	H2	K1	K2	L1	Ø S	Z	kg	Model (US)
32	32	10	11	14	16	10,5	21	18	31	10	38	51	1,6	6,6	13°	0,19	M/P40310
40	36	12	11	16	18	12	24	22	35	10	41	54	1,6	6,6	13°	0,24	M/P40311
50	45	16	15	21	21	15	33	30	45	12	50	65	1,6	9	13°	0,46	M/P40312
63	50	16	15	21	23	15	37	35	50	12	52	67	1,6	9	15°	0,59	M/P40313
80	63	20	18	25	28	18	47	40	60	14	66	86	2,5	11	15°	1,03	M/P40314
100	71	20	18	25	30	18	55	50	70	15	76	96	2,5	11	15°	1,40	M/P40315

Our policy is one of continued research and development. We therefore reserve the right to amend, without notice, the specifications given in this document. (2015 - 5254d) © 2015 Norgren GmbH

- ATEX - Magnetically operating switch, reed contact
- Suitable for all cylinder ranges with magnetic piston
- LED indicator
- CE verificated

Technical features

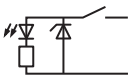
Operation:
Normal open with LED (yellow)
Switching voltage (Ub):
10 ... 240 V a.c./170 V d.c.
Switching voltage output:
Ub - 2,7 V
Switching current (see graph overleaf):
0,18 A max.

Switching power:
10 W/10 VA max.
Contact resistance:
150 mΩ
Response time:
1,8 ms
Operating temperatur:
-20 ... +50°C (-4 ... +122°F)
Ex-Identification:
II 3G Ex nC IIC T5 Gc X
II 3D Ex tc IIIC T120°C Dc X

Protection rating (EN 60529):
IP67
Cable type:
PVC 2 x 0,25 mm²
Cable length:
5 m
Electromagnetic compatibility according to:
EN 60947-5-2

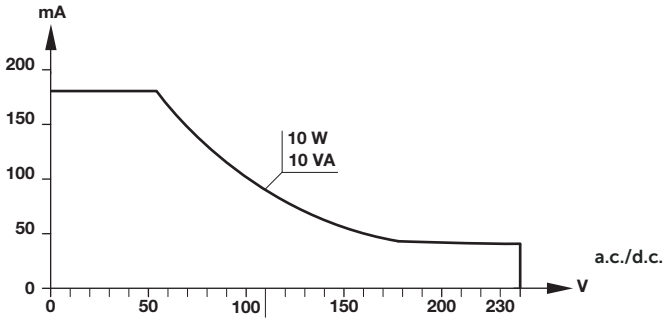
Materials:
Body: plastic
Cable: see table below

Technical data - Reed switches - additional information see data sheet en 4.3.015

Symbol	Voltage (V a.c.)	(V d.c.)	Current maximum (mA)	Function	Operating temperature (°C)	LED	Protection class	Cable length (m)	Cable type	Weight (g)	Model
 ± BN ~ BU	10 ... 240	10 ... 170	180	Closer	-20 ... +50	•	IP67	5	PVC 2 x 0,25	40	M/50/LXU/5V

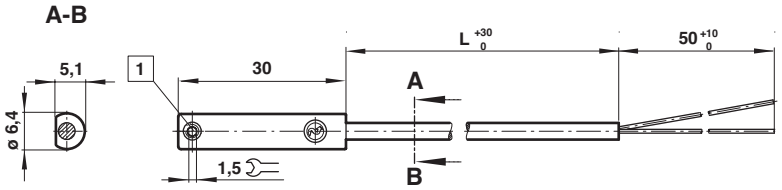
Color code: BN = brown, BU = blue

Switching current and switching voltage



Dimensions
Cable length L = 5 m

Dimensions in mm
Projection/First angle



1 Fixing screw

ATTENTION:
The setting of magnetic switches on a cylinder barrel forms an ATEX assembly:
- Each part is separate classified according ATEX for use in potentially explosive atmospheres.
- The resulting range of approved applications for the module corresponds to that of the individual part assigned to the lowest category.
- The result concerns the device category, potentially explosive atmosphere G or D, max. surface temperature and explosion classification if applicable.

Our policy is one of continued research and development. We therefore reserve the right to amend, without notice, the specifications given in this document. (2015 - 5254d) © 2015 Norgren GmbH

- ATEX - Magnetically operating switch, solid state
- Suitable for all cylinder ranges with magnetic piston
- LED indicator
- Resistant, reliable switching with a very fast response time
- Particularly suited for use in high levels of vibration
- CE verificated
- UL certificated

Technical features

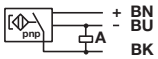
Operation:
PNP-output with LED (yellow)
Switching voltage (Ub):
10 ... 30 V d.c.
Switching voltage output:
Ub - 2 V
Switching current (see graph):
150 mA max.
Switching power:
4,5 W max.

Response time:
< 0,5 ms
Switching frequency:
1 kHz
Operating temperatur:
-20 ... +50°C (-4 ... +122°F)
Ex-Identification:
II 3G Ex nA IIC T4 Gc X
II 3D Ex tc IIIC T110°C Dc X
Protection rating (EN 60529):
IP67

Cable type:
PVC 3 x 0,25 mm²
Cable length:
5 m
Electromagnetic compatibility according to:
EN 60947-5-2

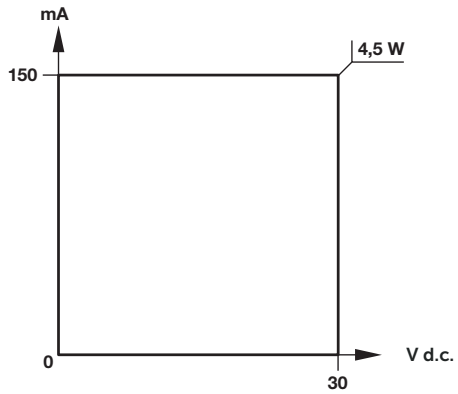
Materials:
Body: plastic
Cable: see table below

Technical data - Reed switches - additional information see data sheet en 4.3.017

Symbol	Voltage (V d.c.)	Current maximum (mA)	Function	Operating temperature (°C)	LED	Protection class	Cable length (m)	Cable type	Weight (g)	Model
	10 ... 30	150	PNP	-20 ... +50	•	IP67	5	PVC 3 x 0,25	40	M/50/EXP/5V

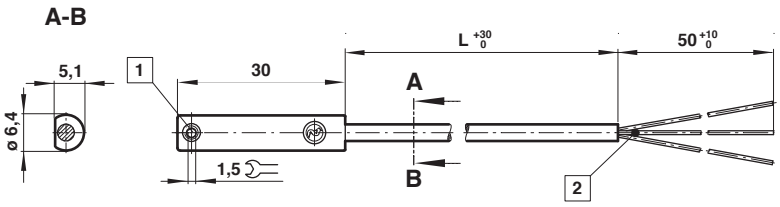
Color code: BK = black, BN = brown, BU = blue

Switching current and switching voltage



Dimensions
Cable length L = 5 m

Dimensions in mm
Projection/First angle



1 Fixing screw
2 Color code
BK = black
BN = brown
BU = blue

ATTENTION:
The setting of magnetic switches on a cylinder barrel forms an ATEX assembly:
- Each part is separate classified according ATEX for use in potentially explosive atmospheres.
- The resulting range of approved applications for the module corresponds to that of the individual part assigned to the lowest category.
- The result concerns the device category, potentially explosive atmosphere G or D, max. surface temperature and explosion classification if applicable.

Our policy is one of continued research and development. We therefore reserve the right to amend, without notice, the specifications given in this document. (2015 - 5254d) © 2015 Norgren GmbH

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.

Our policy is one of continued research and development. We therefore reserve the right to amend, without notice, the specifications given in this document. (2015 - 5254d) © 2015 Norgren GmbH