



MOTION SENSOR SERIES

CYLINDER & ACTUATORS



NUMATICS

MOTION SENSOR SERIES

PRODUCT LEAFLET

Sensor Bracket & Sensor Part Numbers

NFPA Interchangeable Cylinders

A, EQ, F, & S Series (Tie Rod)

Bore	Bracket P/N
1 1/2"	P4995051680N001
2"	P4995051670N001
2 1/2"	P4995051670N001
3 1/4"	P499440617MN001
4"	P499440617MN001
5"	P4994406183N001
6"	P4994406183N001
8"	P4994406183N001
10"	P4995051660N001
12"	P4995051660N001
14"	P4995078930N001



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00

A & F Series (Profile Tube)

Bore	Bracket P/N
1 1/2"	P4994406190N001
2"	P4994406190N001
2 1/2"	P4994406190N001



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00

Compact Cylinders

C Series (Profile Tube) 2 in magnet code

Bore	Bracket P/N
3/4"	P4994406190N001
1 1/8"	P4994406190N001
1 1/2"	P4994406190N001
2"	P4994406190N001
2 1/2"	P4994406190N001



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00

C Series (Profile Tube) 4 in magnet code

Direct Mount
No Bracket Required



Sensor Description	Standard Cord Set	Quick Disconnect
Hall PNP	SH6-031	SH6-021
Hall NPN	SH6-032	SH6-022

C Series (Tie Rod) 2 in magnet code

Bore	Bracket P/N
3"	P4995051670N001
4"	P499440617MN001



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00



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MOTION SENSOR SERIES

PRODUCT LEAFLET

Sensor Bracket & Sensor Part Numbers

Compact Cylinders

C Series (Tie Rod) 4 in magnet code

Bore	Bracket P/N
3"	SB6-L01
3-1/4" - 4"	SB6-P01



Sensor Description	Standard Cord Set	Quick Disconnect
Hall PNP	SH6-031	SH6-021
Hall NPN	SH6-032	SH6-022

See page 16 for sensor specifications

NB Series

Bore	Bracket P/N
1/2"	SC-1
3/4"	SC-2
1 1/16"	SC-3
1 1/2"	SC-5
2"	SC-5
2 1/2"	SC-7
3"	SC-7
4"	SC-8



Sensor Description	Standard Cord Set	Quick Disconnect
Hall PNP	949-200-031	949-200-331
Hall NPN	949-200-032	949-200-332

Universal Series

Direct Mount
No Bracket Required



Sensor Description	Standard Cord Set	Quick Disconnect
Hall PNP	949-200-031	949-200-331
Hall NPN	949-200-032	949-200-332



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MOTION SENSOR SERIES

PRODUCT LEAFLET

Sensor Bracket & Sensor Part Numbers

Non-Repairable Cylinders

M Series

Bore	Bracket P/N
9/16"	P494AK129600A00
3/4"	P494AL129600A00
7/8"	P494AL129600A00
1 1/16"	P494A3129600A00
1 1/4"	P494A3129600A00
1 1/2"	P4995051700N001
1 3/4"	P494A4129600A00
2"	P494A4129600A00
2 1/2"	P4995051710N001
3"	P4995051720N001



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00

ISO Standard Cylinders

- 452 Series
- 453 Series
- 449 Series



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00

ISO VDMA (Tie Rod) Style, 450 Series

Bore	Bracket P/N
32mm	P4995051680N001
40mm	P4995051670N001
50mm	P499440617MN001
63mm	P499440617MN001
80mm	P499440617MN001
100mm	P499440617MN001
125mm	P4994406183N001
160mm	P4994406183N001
200mm	P4995051660N001



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00



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PRODUCT LEAFLET

Sensor Bracket & Sensor Part Numbers

Specialty Cylinders

E Series (Tie Rod)

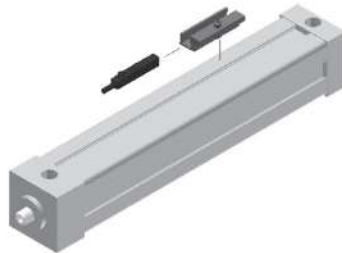
Bore	Bracket P/N
1 1/4"	P4995051680N001
1 3/4"	P4995051670N001
2"	P4995051680N001
2 1/2"	P4995051670N001
3"	P4995051670N001
3 1/2"	P499440617MN001
4 1/2"	P4994406183N001
5"	P4994406183N001
6"	P4994406183N001
8"	P4994406183N001



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00

Tiny Titan Series (Profile)

Bore	Bracket P/N
3/4"	P4994406190N001
1"	P4994406190N001
1 1/8"	P4994406190N001

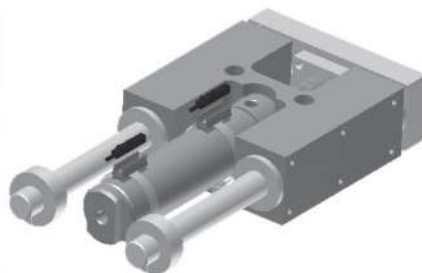


Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00

SH Series Slide, LC Series, LCX Series

SH Series Slide

Bore	Bracket P/N
SH056	P494AK129600A00
SH075	P494AL129600A00
SH106	P494A3129600A00
SH150	P4995051700N001
SH200	P494A4129600A00
SH250	P4995051710N001
SH300	P4995051720N001



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00

B Series Slide

BORE	BRACKET P/N
B04	P4994406190N001
B06	P4994406190N001
B08	P4994406190N001



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00



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PRODUCT LEAFLET

Sensor Bracket & Sensor Part Numbers

Linear Slides

CGT Series Slides

Direct Mount
No Bracket Required



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P4995051740N001	P4995058110N001
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00

PST Series Slide

PST08 30mm stroke or less,
Only available with single position sensing

Direct Mount
No Bracket Required



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00

GS Series Gantry

Bore	Bracket P/N
GS075	P494AL129600A00
GS106	P494A3129600A00
GS150	P4995051700N001
GS200	P494A4129600A00



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00

PBS Series Gantry

Direct Mount
No Bracket Required

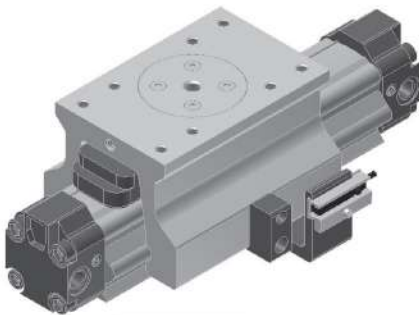


Sensor Description	Standard Cord Set	Quick Disconnect
Prox PNP	PROX-8FL2-PN	PROX-8QDS-PN
Prox NPN	PROX-8FL2-PN	PROX-8QDS-PN

Rodless Cylinders

Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00

See page 13, 14, & 15 for sensor specifications



See Rodless catalog on how to order.

Rodless Cylinder (S1 and G Series)

Bore	Bracket P/N
25mm	US1RB
32mm	US1RB
40mm	US1RB
50mm	US1RB



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00

MCR (Magnetically Coupled Non-Guided)

Bore	Bracket P/N
12mm	P4995051680N001
16mm	P4995051680N001
20mm	P4995051680N001
25mm	P4995051680N001
32mm	P4995051680N001
40mm	P4995051680N001



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00

MCR (Magnetically Coupled Guided)

Bore	Bracket P/N
12mm	P4994406190N001
16mm	P4994406190N001
20mm	P4994406190N001
25mm	P4994406190N001
32mm	P4994406190N001
40mm	P4994406190N001



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00



NUMATICS

MOTION SENSOR SERIES

PRODUCT LEAFLET

Sensor Bracket & Sensor Part Numbers

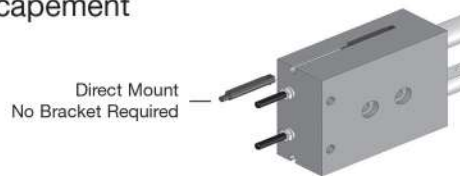
Specialty Actuator Products

SC Series Swing Clamp



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P4995051740N001	P4995058110N001
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00

FE Series Feed Escapement



Sensor Description	Standard Cord Set	Quick Disconnect
Hall PNP	CS-20TP	CS-20TP-QD
Hall NPN	CS-20TN	CS-20TN-QD

CST Series Stopper Cylinder



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	9C49-000-002	Not available
Hall PNP	9C49-000-031	9C49-000-331
Hall NPN	Not available	9C49-000-332

Grippers

NRG Series Gripper

Series	Bracket P/N
NRG010	P4994406190N001
NRG025	P4994406190N001
NRG050	P4994406190N001
NRG150	P4994406190N001



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00



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MOTION SENSOR SERIES

PRODUCT LEAFLET

Sensor Bracket & Sensor Part Numbers

Grippers

PG Series Gripper

Series	Bracket P/N
PG	SB-PG



Sensor Description	Standard Cord Set	Quick Disconnect
Hall PNP	CS-20TP	CS-20TP-QD
Hall NPN	CS-20TN	CS-20TN-QD

RPG Series Gripper

Series	Bracket P/N
RPG	CT-500



Sensor Description	Standard Cord Set	Quick Disconnect
Prox PNP	PROX-4FL2-P	PROX-4QDS-P
Prox NPN	PROX-4FL2-N	Not Available

PG6J80 Series O-Ring Gripper

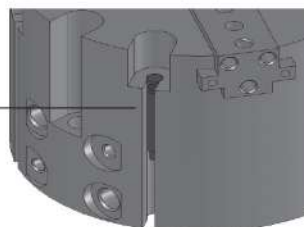
Series	Bracket P/N
PG6J80	N99-1202



Sensor Description	Standard Cord Set	Quick Disconnect
Prox PNP	PROX-65FL2-PN	PROX-65QDS-P
Prox NPN	PROX-65FL2-PN	Not Available

TJ200 Series Gripper

Direct Mount
No Bracket Required



Sensor Description	Standard Cord Set	Quick Disconnect
Hall PNP	CS-20TP	CS-20TP-QD
Hall NPN	CS-20TN	CS-20TN-QD

GR1400 Series Gripper

Direct Mount
No Bracket Required



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00



NUMATICS

MOTION SENSOR SERIES

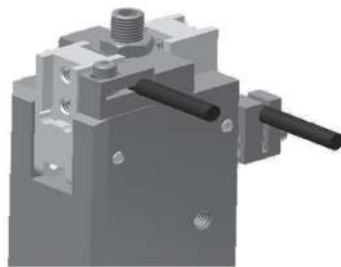
PRODUCT LEAFLET

Sensor Bracket & Sensor Part Numbers

Grippers

GR90 Series Gripper

Series	Bracket P/N
GR90	CT-500



Sensor Description	Standard Cord Set	Quick Disconnect
Prox PNP	PROX-4FL2-P	PROX-4QDS-P
Prox NPN	PROX-4FL2-N	Not Available

See page 19 for sensor specifications

WG Series Gripper

Series	Bracket P/N
WGS90	CT-500
WGL50	CT-500



Sensor Description	Standard Cord Set	Quick Disconnect
Prox PNP	PROX-4FL2-P	PROX-4QDS-P
Prox NPN	PROX-4FL2-N	Not Available

See page 19 for sensor specifications

WBG Series Gripper

Series	Bracket P/N
WBG	CT-500



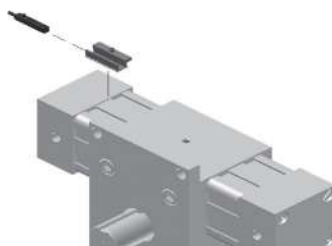
Sensor Description	Standard Cord Set	Quick Disconnect
Prox PNP	PROX-4FL2-P	PROX-4QDS-P
Prox NPN	PROX-4FL2-N	Not Available

See page 19 for sensor specifications

Rotary Actuators

R Series Rotary (Profile)

Series	Bracket P/N
1"	P4994406190N001
1 1/2"	P4994406190N001
2"	P4994406190N001
2 1/2"	P4994406190N001



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00

See page 13, 14, & 15 for sensor specifications



NUMATICS MOTION SENSOR SERIES

PRODUCT LEAFLET

Sensor Bracket & Sensor Part Numbers

Sensing Bracket

Tie Rod Bracket

Bracket P/N

- P4995051680N001
- P4995051670N001
- P499440617MN001
- P4994406183N001
- P4995051660N001
- P4995078930N001



Non-Repairable Bracket

Bracket P/N

- P494AK129600A00
- P494AL129600A00
- P494A3129600A00
- P4995051700N001
- P494A4129600A00
- P4995051710N001
- P4995051720N001



NB Sqare (Tie Rod) Bracket, B Square

Bracket P/N

- 900-F00-000
- 900-G00-000
- 900-H00-000



C Series (Tie Rod) 4 in magnet code

Bracket P/N

- SB6-L01
- SB6-P01



1/2" Dove Tail Bracket

Bracket P/N

- P4994406190N001



NB Series (Tie Rod) Bracket

Bracket P/N

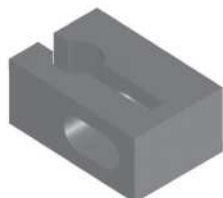
- SC-1
- SC-2
- SC-3
- SC-5
- SC-7
- SC-8



4mm Prox Bracket

Bracket P/N

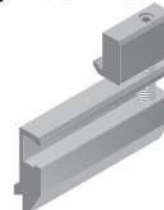
- CT-500



S1, G Series Rodless Cylinder Bracket

Bracket P/N

- US1RB



5mm Prox Housing

Bracket P/N

- RSH05



S5 Rodless Cylinder Bracket

Bracket P/N

Bracket P/N

- SG-PG





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MOTION SENSOR SERIES

PRODUCT LEAFLET

Sensor Bracket & Sensor Part Numbers

Grippers

PG Series Gripper

Series	Bracket P/N
PG	SB-PG



Sensor Description	Standard Cord Set	Quick Disconnect
Hall PNP	CS-20TP	CS-20TP-QD
Hall NPN	CS-20TN	CS-20TN-QD

RPG Series Gripper

Series	Bracket P/N
RPG	CT-500



Sensor Description	Standard Cord Set	Quick Disconnect
Prox PNP	PROX-4FL2-P	PROX-4QDS-P
Prox NPN	PROX-4FL2-N	Not Available

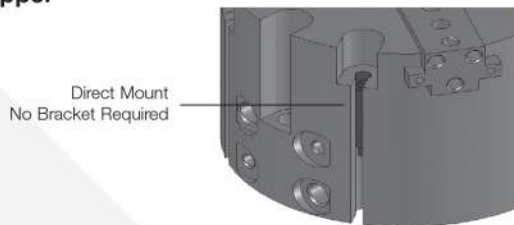
PG6J80 Series O-Ring Gripper

Series	Bracket P/N
PG6J80	N99-1202



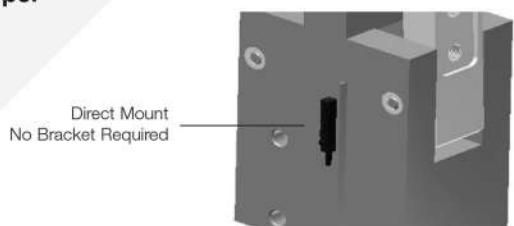
Sensor Description	Standard Cord Set	Quick Disconnect
Prox PNP	PROX-65FL2-PN	PROX-65QDS-P
Prox NPN	PROX-65FL2-PN	Not Available

TJ200 Series Gripper



Sensor Description	Standard Cord Set	Quick Disconnect
Hall PNP	CS-20TP	CS-20TP-QD
Hall NPN	CS-20TN	CS-20TN-QD

GR1400 Series Gripper



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00



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MOTION SENSOR SERIES

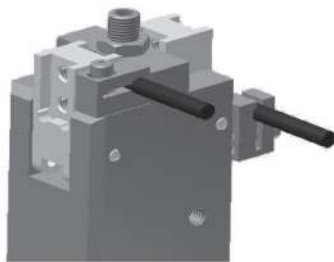
PRODUCT LEAFLET

Sensor Bracket & Sensor Part Numbers

Grippers

GR90 Series Gripper

Series	Bracket P/N
GR90	CT-500



Sensor Description	Standard Cord Set	Quick Disconnect
Prox PNP	PROX-4FL2-P	PROX-4QDS-P
Prox NPN	PROX-4FL2-N	Not Available

WG Series Gripper

Series	Bracket P/N
WGS90	CT-500
WGL50	CT-500



Sensor Description	Standard Cord Set	Quick Disconnect
Prox PNP	PROX-4FL2-P	PROX-4QDS-P
Prox NPN	PROX-4FL2-N	Not Available

WBG Series Gripper

Series	Bracket P/N
WBG	CT-500

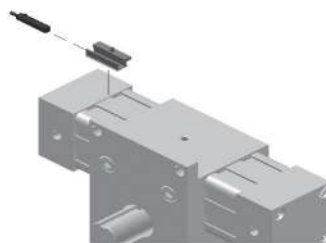


Sensor Description	Standard Cord Set	Quick Disconnect
Prox PNP	PROX-4FL2-P	PROX-4QDS-P
Prox NPN	PROX-4FL2-N	Not Available

Rotary Actuators

R Series Rotary (Profile)

Series	Bracket P/N
1"	P4994406190N001
1 1/2"	P4994406190N001
2"	P4994406190N001
2 1/2"	P4994406190N001



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00

Rotary Actuators

AR Series Rotary

Series	Bracket P/N
AR020	P4994406190N001
AR025	P4994406190N001
AR032	P4994406190N001



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00

RW Series Rotary

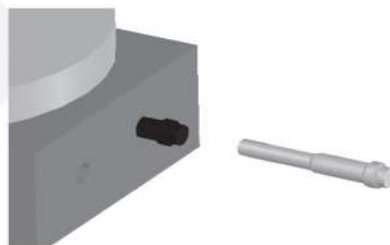
Series	Bracket P/N
RW030	P4994406190N001
RW075	P4994406190N001
RW125	P4994406190N001



Sensor Description	Standard Cord Set	Quick Disconnect
Reed Switch	P494A0021300A00	P494A0021600A00
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00

LR Series Rotary

Series	Bracket P/N
LR06	RSH05
LR20	RSH05
LR60	RSH05
LR125	RSH05



Sensor Description	Standard Cord Set	Quick Disconnect
Prox PNP	PROX-5FL2-P	PROX-5QDS-P
Prox NPN	PROX-5FL2-N	Not Available

RM Series Rotary

Series	Bracket P/N
RM1	RSH05
RM2	RSH05
RM3	RSH05
RM4	RSH05
RM5	RSH05
RM6	RSH05
RM8	RSH05
RM9	RSH05



Sensor Description	Standard Cord Set	Quick Disconnect
Prox PNP	PROX-5FL2-P	PROX-5QDS-P
Prox NPN	PROX-5FL2-N	Not Available

Sensing Bracket

Tie Rod Bracket

Bracket P/N

- P4995051680N001
- P4995051670N001
- P499440617MN001
- P4994406183N001
- P4995051660N001
- P4995078930N001



NB Square (Tie Rod) Bracket, B Square

Bracket P/N

- 900-F00-000
- 900-G00-000
- 900-H00-000



1/2" Dove Tail Bracket

Bracket P/N

- P4994406190N001



4mm Prox Bracket

Bracket P/N

- CT-500



5mm Prox Housing

Bracket P/N

- RSH05



Bracket P/N

- SG-PG



Non-Repairable Bracket

Bracket P/N

- P494AK129600A00
- P494AL129600A00
- P494A3129600A00
- P4995051700N001
- P494A4129600A00
- P4995051710N001
- P4995051720N001



C Series (Tie Rod) 4 in magnet code

Bracket P/N

- SB6-L01
- SB6-P01



NB Series (Tie Rod) Bracket

Bracket P/N

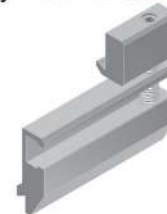
- SC-1
- SC-2
- SC-3
- SC-5
- SC-7
- SC-8



S1, G Series Rodless Cylinder Bracket

Bracket P/N

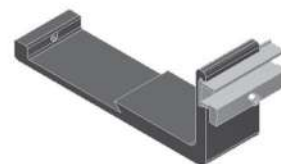
- US1RB



S5 Rodless Cylinder Bracket

Bracket P/N

See Rodless catalog





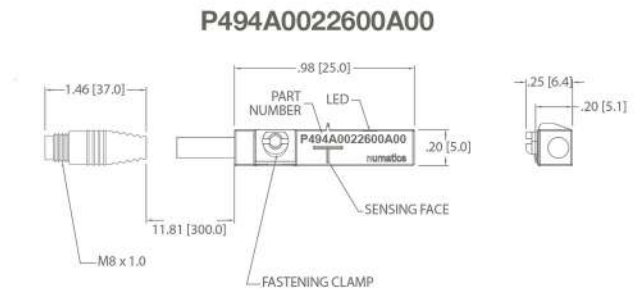
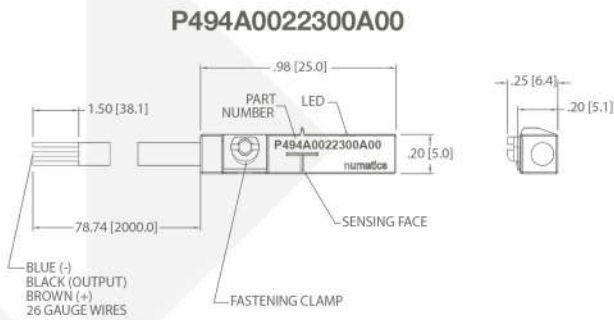
NUMATICS

MOTION SENSOR SERIES

PRODUCT LEAFLET

Sensor Bracket & Sensor Part Numbers

Sensing Part Numbers



ELECTRICAL DESIGN	DC PNP
OUTPUT	Normally Open
OPERATING VOLTAGE	10-30 VDC
CURRENT RATING	100 mA
SHORT-CIRCUIT PROTECTION	Yes
OVERLOAD PROTECTION	Yes
REVERSE POLARITY PROTECTION	Yes
VOLTAGE DROP	< 2.5 V
CURRENT CONSUMPTION	< 12 mA
REPEATABILITY	< .2mm
POWER-ON DELAY TIME	< 30 ms
SWITCH FREQUENCY	> 3000 Hz
AMBIENT TEMPERATURE	-25°C to 85°C
PROTECTION	IP 67, III
HYSTERESIS	1.0mm
MAGNETIC SENSITIVITY	2.0 mT
TRAVEL SPEED	> 10 m/s
HOUSING MATERIAL	PA (Polyamide) Black; Fastening Clamp: Stainless Steel
FUNCTION DISPLAY SWITCHING STATUS	Yellow LED
CONNECTION	Flying Leads, Pur Cable (2m Long, 3 x26 Gauge Wire)
REMARKS	Clamping Screw with Combined Slot/Hexagon Socket Head AF 1.5 cULus - Class 2 Source Required
ACCESSORIES	Rubber Placeholder, Cable Clip, and Cut Sheet To Be Provided with Every Switch

ELECTRICAL DESIGN	DC PNP
OUTPUT	Normally Open
OPERATING VOLTAGE	10-30 VDC
CURRENT RATING	100 mA
SHORT-CIRCUIT PROTECTION	Yes
OVERLOAD PROTECTION	Yes
REVERSE POLARITY PROTECTION	Yes
VOLTAGE DROP	< 2.5 V
CURRENT CONSUMPTION	< 12 mA
REPEATABILITY	< .2mm
POWER-ON DELAY TIME	< 30 ms
SWITCH FREQUENCY	> 3000 Hz
AMBIENT TEMPERATURE	-25°C to 85°C
PROTECTION	IP 67, III
HYSTERESIS	1.0mm
MAGNETIC SENSITIVITY	2.0 mT
TRAVEL SPEED	> 10 m/s
HOUSING MATERIAL	PA (Polyamide) Black; Fastening Clamp: Stainless Steel
FUNCTION DISPLAY SWITCHING STATUS	Yellow LED
CONNECTION	M8 Connector, Pur Cable (.3 m)
REMARKS	Clamping Screw with Combined Slot/Hexagon Socket Head AF 1.5 cULus - Class 2 Source Required
ACCESSORIES	Rubber Placeholder, Cable Clip, and Cut Sheet To Be Provided with Every Switch

AGENCY APPROVALS



AGENCY APPROVALS





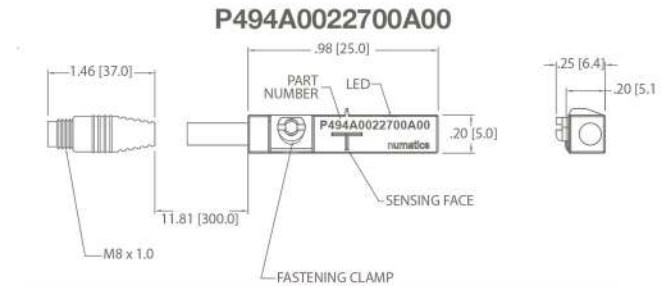
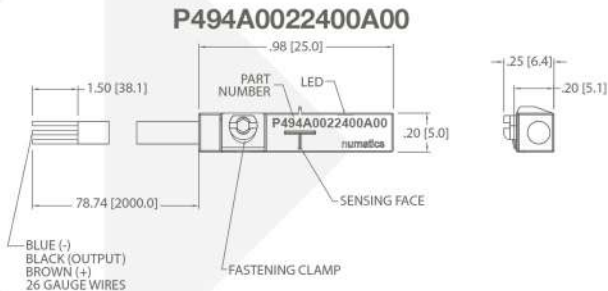
NUMATICS

MOTION SENSOR SERIES

PRODUCT LEAFET

Sensor Bracket & Sensor Part Numbers

Sensing Part Numbers



ELECTRICAL DESIGN	DC NPN
OUTPUT	Normally Open
OPERATING VOLTAGE	10-30 VDC
CURRENT RATING	100 mA
SHORT-CIRCUIT PROTECTION	Yes
OVERLOAD PROTECTION	Yes
REVERSE POLARITY PROTECTION	Yes
VOLTAGE DROP	< 2.5 V
CURRENT CONSUMPTION	< 12 mA
REPEATABILITY	< .2mm
POWER-ON DELAY TIME	< 30 ms
SWITCH FREQUENCY	> 3000 Hz
AMBIENT TEMPERATURE	-25°C to 85°C
PROTECTION	IP 67, III
HYSTERESIS	1.0mm
MAGNETIC SENSITIVITY	2.0 mT
TRAVEL SPEED	> 10 m/s
HOUSING MATERIAL	PA (Polyamide) Black; Fastening Clamp: Stainless Steel
FUNCTION DISPLAY SWITCHING STATUS	Yellow LED
CONNECTION	Flying Leads, Pur Cable (2m Long, 3 x26 Gauge Wire)
REMARKS	Clamping Screw with Combined Slot/Hexagon Socket Head AF 1.5 cULus - Class 2 Source Required
ACCESSORIES	Rubber Placehold, Cable Clip, and Cut Sheet To Be Provided with Every Switch

ELECTRICAL DESIGN	DC NPN
OUTPUT	Normally Open
OPERATING VOLTAGE	10-30 VDC
CURRENT RATING	100 mA
SHORT-CIRCUIT PROTECTION	Yes
OVERLOAD PROTECTION	Yes
REVERSE POLARITY PROTECTION	Yes
VOLTAGE DROP	< 2.5 V
CURRENT CONSUMPTION	< 12 mA
REPEATABILITY	< .2mm
POWER-ON DELAY TIME	< 30 ms
SWITCH FREQUENCY	> 3000 Hz
AMBIENT TEMPERATURE	-25°C to 85°C
PROTECTION	IP 67, III
HYSTERESIS	1.0mm
MAGNETIC SENSITIVITY	2.0 mT
TRAVEL SPEED	> 10 m/s
HOUSING MATERIAL	PA (Polyamide) Black; Fastening Clamp: Stainless Steel
FUNCTION DISPLAY SWITCHING STATUS	Yellow LED
CONNECTION	M8 Connector, Pur Cable (.3 m)
REMARKS	Clamping Screw with Combined Slot/Hexagon Socket Head AF 1.5 cULus - Class 2 Source Required
ACCESSORIES	Rubber Placehold, Cable Clip, and Cut Sheet To Be Provided with Every Switch

AGENCY APPROVALS    

AGENCY APPROVALS    

*Switches are not designed for wet environments. Please see your distributor for additional information.



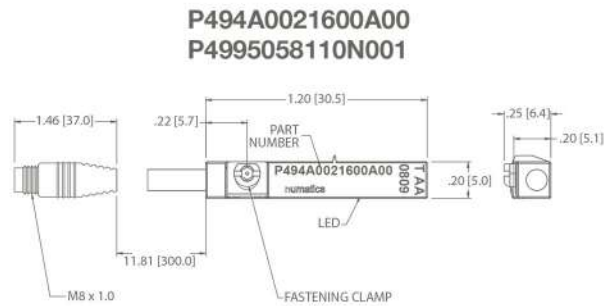
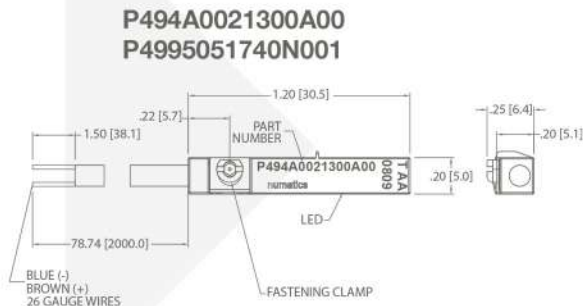
NUMATICS

MOTION SENSOR SERIES

PRODUCT LEAFET

Sensor Bracket & Sensor Part Numbers

Sensing Part Numbers



ELECTRICAL DESIGN	AC/DC REED
OUTPUT	Normally Open
OPERATING VOLTAGE	5-120 VAC/DC
CURRENT RATING	100 mA*
SHORT-CIRCUIT PROTECTION	No
OVERLOAD PROTECTION	No
REVERSE POLARITY PROTECTION	Yes
VOLTAGE DROP	< 5 V
REPEATABILITY	± .2mm
MAKETIME INCLUDING BOUNCE	< .6 ms
BREAKTIME	< .1 ms
SWITCHING POWER (MAX)	5 W
SWITCH FREQUENCY	1000 Hz
AMBIENT TEMPERATURE	-25°C to 70°C
PROTECTION	IP 67, II
HYSTERESIS	.9mm
HOUSING MATERIAL	PA (Polyamide) Black; Fastening Clamp: Stainless Steel
FUNCTION DISPLAY SWITCHING STATUS	Yellow LED
CONNECTION	Flying Leads, Pur Cable (2m Long, 2 x26 Gauge Wire)

REMARKS

*External Protective Circuit for Inductive Load (Valve, Contactor, Etc..) Necessary. Conforms to 2008 NEC Section 725 III, Class 2 Circuits

Clamping Screw with Combined Slot/Hexagon Socket Head AF 1.5.
No LED Function in case of Polarity in DC Operation

ACCESSORIES Rubber Placehold, Cable Clip, and Cut Sheet To Be Provided with Every Switch

AGENCY APPROVALS

ELECTRICAL DESIGN	AC/DC REED
OUTPUT	Normally Open
OPERATING VOLTAGE	*5-60 VDC / 5-50 VAC
CURRENT RATING	100 mA
SHORT-CIRCUIT PROTECTION	No
OVERLOAD PROTECTION	No
REVERSE POLARITY PROTECTION	Yes
VOLTAGE DROP	< 5 V
REPEATABILITY	± .2mm
MAKETIME INCLUDING BOUNCE	< .6 ms
BREAKTIME	< .1 ms
SWITCHING POWER (MAX)	5 W
SWITCH FREQUENCY	1000 Hz
AMBIENT TEMPERATURE	-25°C to 70°C
PROTECTION	IP 67, II
HYSTERESIS	.9mm
HOUSING MATERIAL	PA (Polyamide) Black; Fastening Clamp: Stainless Steel
FUNCTION DISPLAY SWITCHING STATUS	Yellow LED
CONNECTION	M8 Connector, Pur Cable (.3m)

REMARKS

*External Protective Circuit for Inductive Load (Valve, Contactor, Etc..) Necessary. Conforms to 2008 NEC Section 725 III, Class 2 Circuits

M8 Connector voltage limited to 5-60 vdc / 5-50 vac to conform with 2008 IEC 61076-2-104

Clamping Screw with Combined Slot/Hexagon Socket Head AF 1.5.
No LED Function in case of Polarity in DC Operation

ACCESSORIES Rubber Placehold, Cable Clip, and Cut Sheet To Be Provided with Every Switch

AGENCY APPROVALS

*Switches are not designed for wet environments. Please see your distributor for additional information.

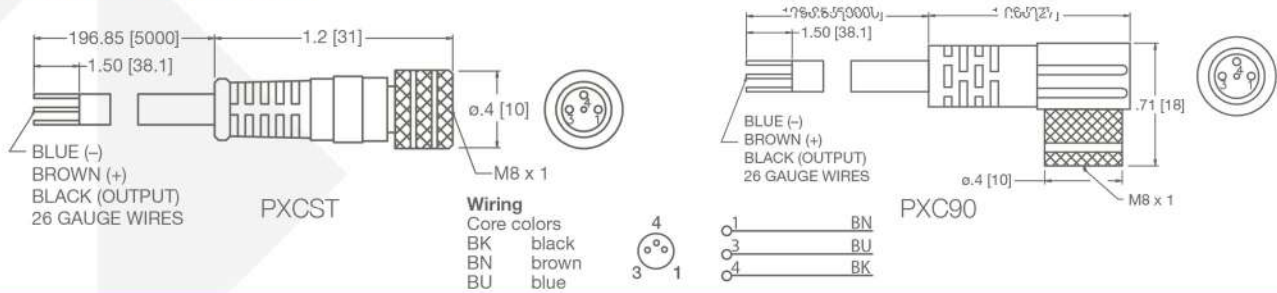
NUMATICS

MOTION SENSOR SERIES

PRODUCT LEAFLET

Additional Sensors

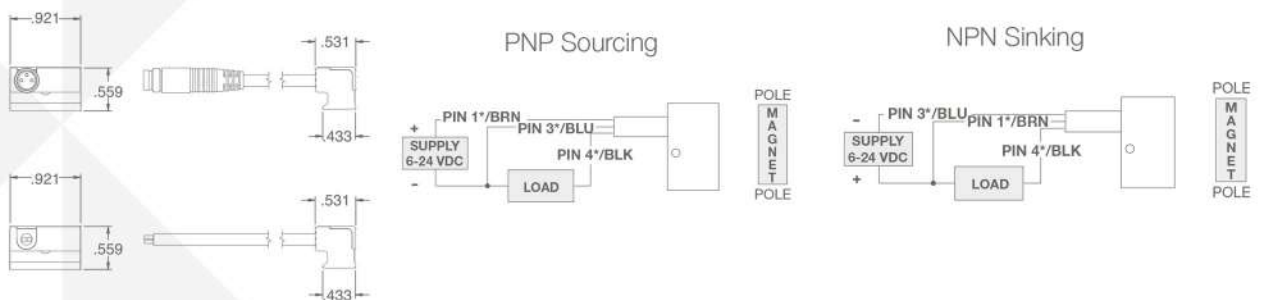
Quick Disconnect Cables



Order Code	Type	Operating Voltage	Current Rating	Cable Material	Protection	Connector
PXCST	Straight 5 m Cable (3 x 26 Gauge wire)	60 AC/75 DC	3 A	PUR	IP 68, III	M8
PXC90	90° 5 m Cable (3 x 26 Gauge wire)	60 AC/75 DC	3 A	PUR	IP 68, III	M8

World Switch Hall Effect Part Numbers

P/N	Switch Style	Switch Type	Function	Switching Voltage	Switching Current	Switching Power	Voltage Drop
SH6-031	3m Wire Version	Hall Effect for Reed Magnet & Light Sourcing	Normally Open Sourcing (PNP)	6-24 VDC	0.3 Amps Max.	7.2 Watts Max.	0.5 Volts
SH6-021	8m Connector Pigtail	Hall Effect for Reed Magnet & Light Sourcing	Normally Open Sourcing (PNP)	6-24 VDC	0.3 Amps Max.	7.2 Watts Max.	0.5 Volts
SH6-032	3m Wire Version	Hall Effect for Reed Magnet & Light Sourcing	Normally Open Sourcing (NPN)	6-24 VDC	0.3 Amps Max.	7.2 Watts Max.	0.5 Volts
SH6-022	8m Connector Pigtail	Hall Effect for Reed Magnet & Light Sourcing	Normally Open Sourcing (NPN)	6-24 VDC	0.3 Amps Max.	7.2 Watts Max.	0.5 Volts



Dove tail Sensor with 45 Degree Wire

- Encased in a plastic housing, dovetail style electronic sensors are corrosion resistant. 45° wire outlet allows close mounting.



Dovetail Style Magnetic Sensor with LED

Sensor Type	Standard Cord Set	Quick Disconnect	Electrical Characteristics
Electronic	949-200-031	949-200-331	Sourcing PNP 6-24 VDC, 0.20 Amp Max current, 0.5 Voltage Drop
Electronic	949-200-032	949-200-332	Sinking NPN 6-24 VDC, 0.20 Amp Max current, 0.5 Voltage Drop

Note*: Quick disconnect styles are supplied with 6 inch pigtail with male connector. Order female cordsets separately.

Sensor Temperature Range
-20° to +80° C (-4° to +176° F)



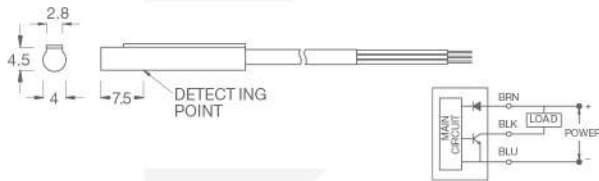
NUMATICS

MOTION SENSOR SERIES

PRODUCT LEAFLET

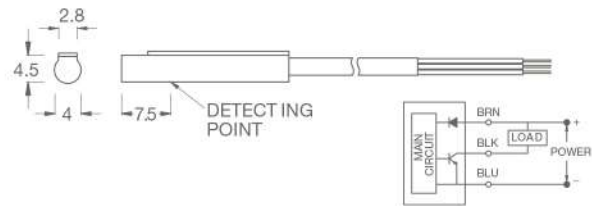
Additional Sensors

Electro Switch (NPN NO) Flying Lead - CS-20TN



Sensor Type	Solid State Output
Switching Logic	Normally Open
Output	NPN Current Sourcing
Operating Voltage	5-30 VDC
Switching Current	50mA max.
Power Rating*	1.5 Watts
Voltage Drop	0.5 V @ 25 mA max.
Current Consumption	12 mA @ 24 VDC max.
Leakage Current	0.01 mA max.
LED Indicator	Red
Cable	-
Operating Frequency	1000 Hz
Magnetic Requirement	40 Gauss parallel
Temperature Range	14 to 158°F (-10 to 70°C)
Shock / Vibration	50G/9G
Enclosure Classification	IEC 529 IP67 (NEMA 6)
Protection Circuit	Reverse Polarity, Surge Suppression
Set Screw Max. Torque	1.77 in-lbs (0.2 N-m)

Electro Switch (NPN NO) Flying Lead - CS-20TN



Sensor Type	Solid State Output
Switching Logic	Normally Open
Output	NPN Current Sourcing
Operating Voltage	5-30 VDC
Switching Current	50mA max.
Power Rating*	1.5 Watts
Voltage Drop	0.5 V @ 25 mA max.
Current Consumption	12 mA @ 24 VDC max.
Leakage Current	0.01 mA max.
LED Indicator	Red
Cable	-
Operating Frequency	1000 Hz
Magnetic Requirement	40 Gauss parallel
Temperature Range	14 to 158°F (-10 to 70°C)
Shock / Vibration	50G/9G
Enclosure Classification	IEC 529 IP67 (NEMA 6)
Protection Circuit	Reverse Polarity, Surge Suppression
Set Screw Max. Torque	1.77 in-lbs (0.2 N-m)



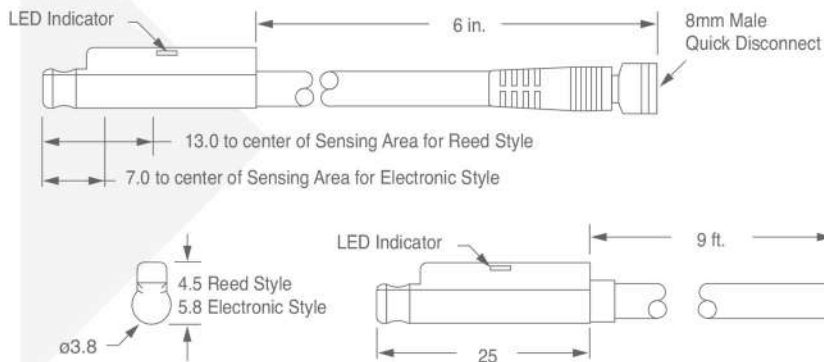
NUMATICS

MOTION SENSOR SERIES

PRODUCT LEAFLET

Additional Sensors

Sensor Dimensions (mm unless noted)



All sensors feature surge suppression, polarity protection, LED indicator, and extremely fast switching speeds.

Sensor Type	Function	Switching Voltage	Switching Current	Switching Power	Switching Speed	Voltage Drop	Standard Cord Set	Quick Connect Part No.
Reed Switch for PLC's w/LED (current limiting)	SPST Normally Open	50 - 60 VAC/DC	0.04 Amp max 0.005 Amp min.	4 Watts max.	0.5 ms operate 0.1 ms release	2.5 Volts	9C49-000-002	9C49-000-302 Requires 3 pin cordset
Electronic LED and Sourcing	PNP Normally Open	6-30 VDC	0.2 Amp max.	6 Watts max.	1.5µs operate 0.5µs release	1.5 Volts	9C49-000-031	9C49-000-331 Requires 3 pin cordset
Electronic LED and Sinking	NPN Normally Open	6-30 VDC	0.2 Amp max.	6 Watts max.	1.5µs operate 0.5µs release	1.5 Volts	9C49-000-032	9C49-000-332 Requires 3 pin cordset



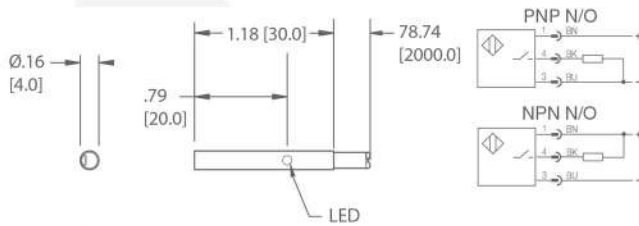
NUMATICS

MOTION SENSOR SERIES

PRODUCT LEAFLET

Additional Sensors

Prox Switch (NPN NO) Flying Lead - PROX-4FL2-N Prox Switch (PNP NO) Flying Lead - PROX-4FL2-P

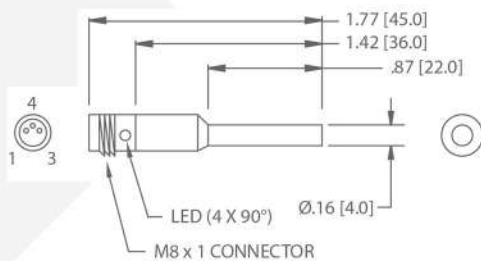


Electrical Design
Output
Operating Voltage
Current Rating
Short-Circuit Protection
Overload Protection
Reverse Polarity Protection
Voltage Drop
Current Consumption
Real Sensing Range
Switching Frequency
Ambient Temperature
Protection
Switch-Point Drift
Hysteresis
Operating Distance
Correction Factor

Housing Material
Function Display Switching Status
Connection

3-Wire DC PNP/NPN
Normally Open
10-36 VDC
100 mA
Yes (Non-Latching)
Yes
Yes
< 2.5V
< 15 mA @ 24V
.8mm ± 10%
> 2000 Hz
-25°C to 70°C
IP 65, III
-10 - 10% OF Sr
1 - 15% OF Sr
0 - .65mm
Mild Steel=1, Stainless Steel=.7,
Brass=.5, Alum.=.4, Copper=.3
Housing; Stainless Steel: POM
Yellow LED
PVC Cable, 2m, 3 x .14mm2

Prox Switch (PNP NO), 8 mm connector - PROX-4QDS-P

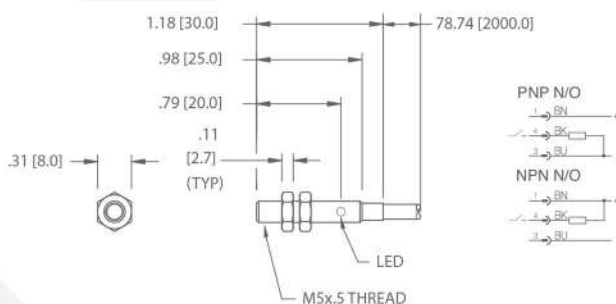


Mechanical Data
Degree of protection per IEC 529
Housing material
Material of sensing face
Connection
Approvals

IP 65
stainless steel
POM
M8 Connector



Prox Switch (NPN NO) Flying Lead - PROX-5FL2-N Prox Switch (PNP NO) Flying Lead - PROX-5FL2-P



Electrical Design
Output
Operating Voltage
Current Rating
Short-Circuit Protection
Overload Protection
Reverse Polarity Protection
Voltage Drop
Current Consumption
Real Sensing Range
Switching Frequency
Ambient Temperature
Protection
Switch-Point Drift
Hysteresis
Operating Distance
Correction Factor

Housing Material
Function Display Switching Status
Connection

3-Wire DC PNP/NPN
Normally Open
10-36 VDC
100 mA
Yes (Non-Latching)
Yes
Yes
< 2.5V
< 15 mA @ 24V
.8mm ± 10%
> 2000 Hz
-25°C to 70°C
IP 65, III
-10 - 10% OF Sr
1 - 15% OF Sr
0 - .65mm
Mild Steel=1, Stainless Steel=.7,
Brass=.5, Alum.=.4, Copper=.3
Housing; Stainless Steel: POM
Red LED
PVC Cable, 2m, 3 x .14mm2



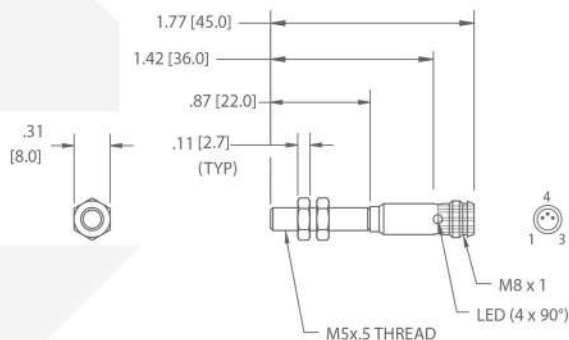
NUMATICS

MOTION SENSOR SERIES

PRODUCT LEAFLET

Additional Sensors

Prox Switch (PNP NO) 8 mm connector - PROX-5QDS-P



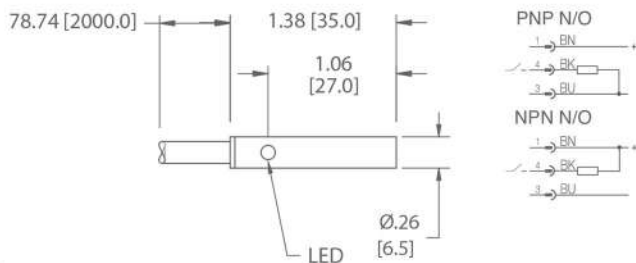
Mechanical Data

Degree of protection per IEC 529
Housing material
Material of sensing face
Connection
Approvals

IP 65
stainless steel
POM
M8 Connector



Prox Switch (PNP & NPN NO) Flying Leads - PROX-65FL2-PN



Electrical Design

Output
Operating Voltage
Current Rating
Minimum Load Current
Leakage Current
Short Circuit Protection
Overload Protection
Reverse Polarity Protection
Voltage Drop
Real Sensing Range
Switching Frequency
Ambient Temperature
Protection
Switch-Point Drift
Hysteresis
Operating Distance
Correction Factor

DC PNP/NPN

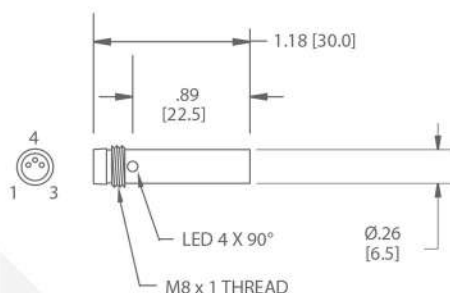
Normally Open
10-36 VDC
200 mA
4 mA
< .8mA
No
No
No
< 2.6V
1mm ± 10%
> 900 Hz
-25°C to 80°C
IP 67
-10 - 10% OF Sr
1 - 15% OF Sr
0 - .8mm



Housing Material
Function Display Switching Status
Connection

Mild Steel=.1, Stainless Steel=.7,
Brass=.5, Alum.=.4, Copper=.3
Brass with Bronze Coated
Yellow LED
PVC Cable, 2m, 3 x .14mm2

Prox Switch (PNP NO) 8 mm connector - PROX-65QDS-P



Mechanical Data

Degree of protection per IEC 529
Housing material
Material of sensing face
Connection
Approvals

IP 65
stainless steel
PA 12
M8 Connector/cULus



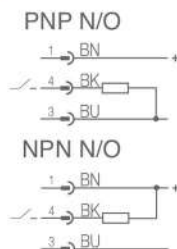
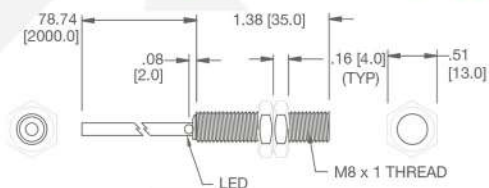


NUMATICS MOTION SENSOR SERIES

PRODUCT LEAFLET

Additional Sensors

Prox Switch (PNP & NPN NO) Flying Leads - PROX-8FL2-PN



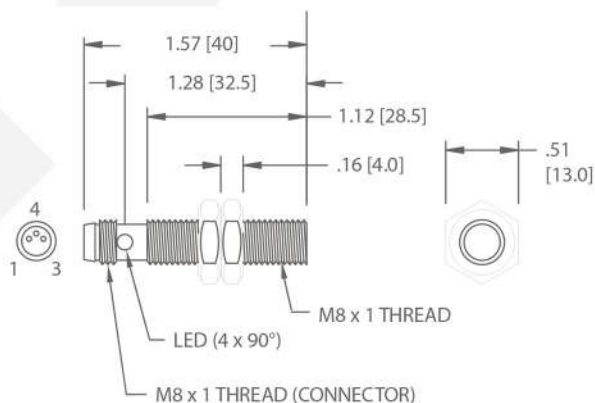
Electrical Design

- Output
- Operating Voltage
- Current Rating
- Minimum Load Current
- Leakage Current
- Short Circuit Protection
- Overload Protection
- Reverse Polarity Protection
- Voltage Drop
- Current Consumption
- Switching Frequency
- Ambient Temperature
- Protection
- Hysteresis
- Operating Distance
- Correction Factor

- Housing Material
- Function Display Switching Status
- Connection
- REMARKS

- 3-Wire DC PNP;
- 2-Wire DC PNP/NPN
- Normally Open
- 10-30 VDC
- 100 mA
- 2 mA*
- < .5 mA
- Yes (Non-Latching)
- Yes
- Yes
- < 2.8V
- < 10 mA**
- > 1000 Hz
- 0°C to 70°C
- IP 67, III
- 1 - 15% OF Sr
- 0 - 2.4mm
- Mild Steel=.1, Stainless Steel=.7,
- Brass=.5, Alum.=.4, Copper=.3
- Brass with Bronze Coated
- Yellow LED
- PVC Cable, 2m, 3 x .14mm2
- *ONLY IN 2-WIRE OPERATION
- **ONLY IN 3-WIRE OPERATION

Prox Switch (PNP & NPN NO) 8 mm connector - PROX-8QDS-PN



Mechanical Data

- Degree of protection per IEC 529
- Housing material
- Material of sensing face
- Connection
- Approvals

- IP 67
- stainless steel
- PBTP
- cable
- cULus



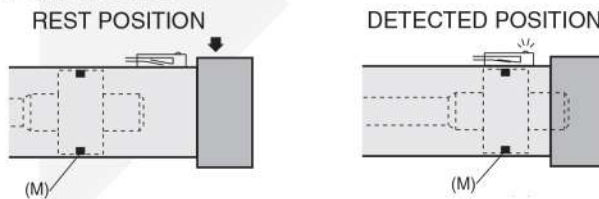


FEATURE

- **An universal detector** for any range of cylinders and actuators (cylinders with tie rods, profiled barrels, rounds...)

FUNCTIONAL DESCRIPTION

A permanent magnet (M) which is mounted on the piston of the air cylinder activates the reed switch of the non-contact magnetic position detector fastened on the outside of the non-magnetic cylinder barrel.



DETECTOR CHARACTERISTICS

MAX. SWITCHING POWER max.	DC = 5 W - AC = 5 VA
SWITCHING VOLTAGE	see below
MAX. SWITCHING CURRENT	100 mA
SHORT-CIRCUIT PROTECTION	no
REVERSE POLARITY PROTECTION	yes (without LED function)
OVERLOAD PROTECTION	no
VOLTAGE DROP (EN 60947-5-2)	< 5 volt
BREAKDOWN VOLTAGE	230 V DC
CONTACT RESISTANCE	0,2 ohm max.
INSULATION RESISTANCE	10 ⁸ ohms at 100 V
SENSITIVITY	2,1 mTesla (21 Gauss)
REPOSE TIME	0,1 ms opening - 0,6 ms closing
REPEATABILITY	< ± 0,2 mm
WORKING TEMPERATURE	- 25°C , + 70°C
HOUSING	PA + FG overmolding
CABLE	PUR, resistant to cutting oils
DEGREE OF PROTECTION (CEI 60529)	IP 67
PROTECTION CLASS	cable outlet: class II, M8 and M12 connection: class III
APPROVAL	CE
SIGNAL INDICATION	yellow diode (LED) which lights up when the contact is established

CHOICE OF DETECTOR

Voltage	5 to 120 Volt AC/DC		5 to 50 Volt CA 5 to 60 Volt CC			
	Raccordement	PUR lead, 2 or 5 m long, 2 wires 0.14 mm ² , stripped ends 	3 pin screw-type male connector Ø M8 	0.3 m PUR lead + 3-pin plug-in male connector and Ø M8 		0.3 m PUR lead + 3-pin screw-type male connector, Ø M12
			connection of pins			
			1 - 4	1 - 4	1 - 3	
weight (g)	22	50	-	0,3 m 7	0,3 m 7	0,3 m 16
compatible cylinders series:	STANDARD CATALOGUE NUMBER detector detector supplied with cable holding clip (versions with lead outlet only) and adjustment position stop (all versions)					
449 ⁽¹⁾ 453 ----- 435 - 438 ⁽²⁾ 441 - 447 (P2L-P2B) 450 - 454 437 (PCN)	P494A0021300A00	P494A0021100A00	P494A0021400A00	P494A0021500A00	P494A0021600A00 ⁽³⁾	P494A0021700A00

⁽¹⁾ Detector allow direct fitting on "T" cylinder grooves

⁽²⁾ Need a kit of fixation, see following pages (454 Series, see preceding pages)

⁽³⁾ U.S. market

MAXIMUM ELECTRICAL CHARACTERISTICS AND PROTECTION OF MAGNETIC DETECTOR (REED SWITCH)

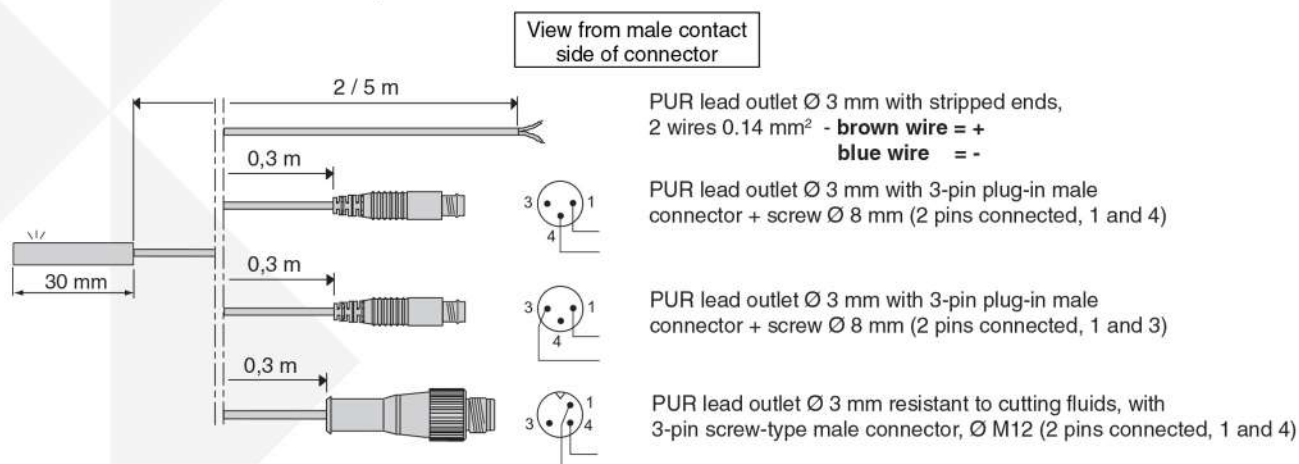
Maxi switching current : 100 mA

For inductive loads (valves, contactors, ...), external protection is required to avoid damage caused by switch-off voltage peaks. Use freewheeling diode, transil diode, varistor or similar.

PARTICULAR APPLICATIONS (valid for all models)

- Detectors used for direct control of incandescent lamps:
The capacity specified on the lamp is based on its resistance when hot. When switched on, the resistance of the cold lamp is very low. Therefore, the current rises quickly and may exceed the reed switch rating. Allowance should therefore be made for the real power of the cold lamp.
- With leads longer than 10 m, a 200 Ω resistor must be fitted in series with the detector to reduce the capacitive effect caused by the wiring.

REED SWITCH CONNECTION : 4 possibilities



Mounting recommendation:

Do not subject the detector's power supply cable to damaging traction / torsion during its service life.

ACCESSORIES

description	catalogue number
extension consisting of PVC, length 5 m, 3 wire conductors 0.25 mm ² with 1 screw-on female M8 connector (other end plain), IP67	P4994406200N001
extension consisting of PVC, length 5 m, 3 wire conductors 0.25 mm ² with 1 screw-on female M12 connector (other end plain), IP67	P4994406210N001
straight 3-pin female connector Ø M8, IP67	P4994406220N001
Right angle 3-pin female connector Ø M8, orientable 90° x 90°, IP67	P4994406230N001
Block of memorizing position of adjustment detector	P4994406160N001



FEATURE

- **An universal detector** for any range of cylinders and actuators (cylinders with tie rods, profiled barrels, rounds...)

PRINCIPLE

Static non-contact proximity switch on air cylinders equipped with built-in permanent magnets.

FUNCTIONAL DESCRIPTION

When the permanent magnet which is mounted on the piston approaches the detector the magnetic field it generates causes the semiconductors' resistors to change. This current variation increases the resistance and a switching signal is generated.



DETECTOR CHARACTERISTICS

MAX. SWITCHING POWER	3 W
SWITCHING VOLTAGE	10 to 30 V DC
MAX. SWITCHING CURRENT	100 mA
WIRING	PNP - NPN (3)
REVERSE POLARITY PROTECTION	yes
OVERLOAD PROTECTION	yes
SHORT-CIRCUIT PROTECTION	yes
VOLTAGE DROP (EN 60947-5-2)	< 1,5 volt (I = 50 mA) < 2,5 volts (I = 100 mA)
MAX. LEAKAGE CURRENT	< 50 µA
MAX. ALLOWABLE OVERVOLTAGE	32 VCC max. (100 ms)
SENSITIVITY	2 mTesla (20 Gauss)
RESPONSE TIME	110 µs opening - 220 µs closing
REPEATABILITY	< 0,2 mm
WORKING TEMPERATURE	- 25°C , + 85°C
HOUSING	PA + FG overmolding
CABLE	PUR, resistant to cutting oils (PVC for M12 IP69K version)
DEGREE OF PROTECTION (CEI 60529)	IP67 / IP69K
PROTECTION CLASS	class III
SIGNAL INDICATION	yellow diode (LED) which lights up during switching
APPROVAL	CE - UL and cUL for 2 m and M8 connection

CHOICE OF DETECTOR

Voltage		10 to 30 Volt DC					
Raccorde- ment		PUR lead, 2 or 5 m long, 3 wires 0.14 mm ² , stripped ends, IP67		3 pin screw-type male connector Ø M8	0,3 m PUR lead + 3-pin plug-in male connector and Ø M8, IP67	0,3 m PUR lead + 3-pin screw-type male connector, Ø M12, IP67	0,3 m PVC lead + 3-pin screw-type male connector, Ø M12, IP69K
		2 m	5 m	-	0,3 m	0,3 m	0,3 m
		PNP	NPN	PNP	PNP	NPN	PNP
weight (g)		22	22	50	5	7	7
compatible series:		STANDARD CATALOGUE NUMBER detector detector supplied with cable holding clip (versions with lead outlet only) and adjustment position stop (all versions)					
449 ⁽¹⁾							
453							
435 - 438 ⁽²⁾							
441 - 447	P494A0022300A00	P494A0022400A00	P494A0022100A00	P494A0022500A00	P494A0022600A00	P494A0022700A00	P494A0022800A00
450 - 454							
437 (PCN)							
431 (IP69K)							

⁽¹⁾ Detector allow direct fitting on "T" cylinder grooves

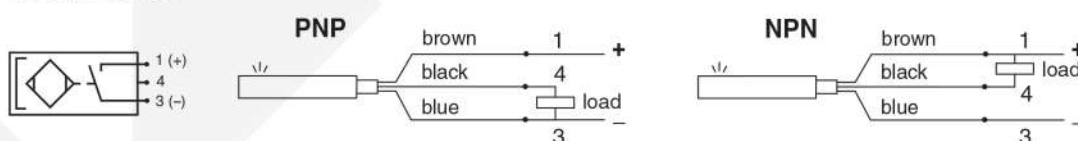
⁽²⁾ Need a kit of fixation, see following pages (454 Series, see preceding pages)

⁽³⁾ U.S. market

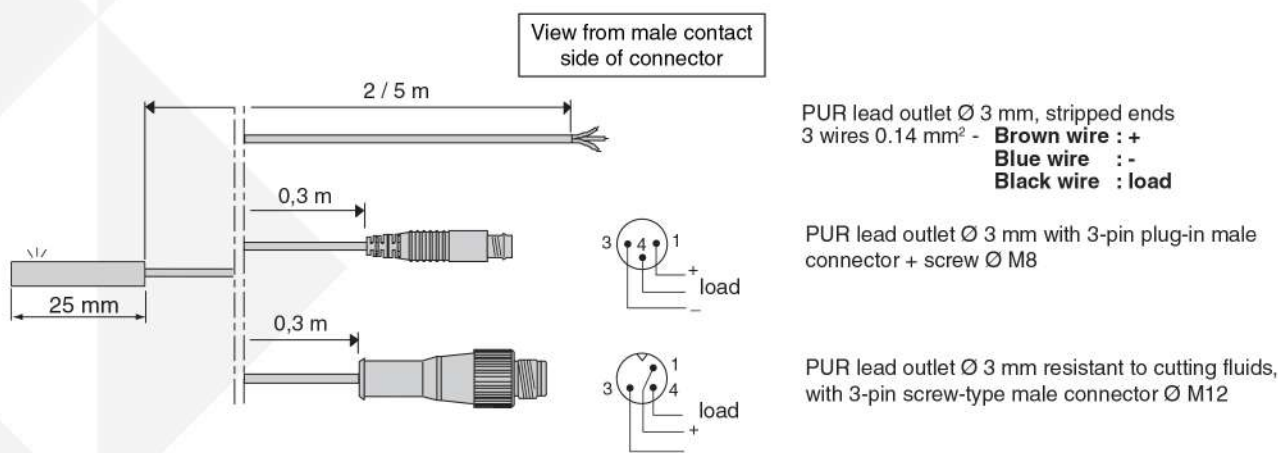
ELECTRICAL PROTECTION

- Output protected against short-circuit as long as the output current is restricted to 0.1 A.
- Improper wire connection may prevent the detector from operating or even destroy it.
- It is recommended to install a protection diode (mounted in parallel) on an inductive load in spite of the internal protection.

CONNECTION



CONNECTION OF MAGNETO-RESISTIVE DETECTORS: 3 possibilities



Mounting recommendation:

Do not subject the detector's power supply cable to damaging traction / torsion during its service life.

ACCESSORIES

description		catalogue number
extension consisting of PVC, length 5 m, 3 wire conductors 0.25 mm ² with 1 screw-on female M8 connector (other end plain) (1)		P4994406200N001
extension consisting of PVC, length 5 m, 3 wire conductors 0.25 mm ² with 1 screw-on female M12 connector (other end plain) (1)		P4994406210N001
straight 3-pin female connector Ø M8, IP67		P4994406220N001
Right angle 3-pin female connector Ø M8, orientable 90° x 90°, IP67		P4994406230N001
Block of memorizing position of adjustment detector		P4994406160N001

(1) Detector connection, brown wire = +, blue wire = -, black wire = load

FOR "T" GROOVE CYLINDERS

series	Ø (mm)	code fastening kit
441	32 ... 100	(1)
449	32 ... 100	
453	32 ... 100	

(1) Fastening mini-kit (special nut + screw) supplied **with** detectors



NOTE:

Series 441 cylinders Ø 32-100 mm : 6 "T" grooves

Series 449 cylinders Ø 20-25 mm : 4 "T" grooves
Ø 32-100 mm : 5 "T" grooves

Series 453 cylinders Ø 32-100 mm : 5 "T" grooves

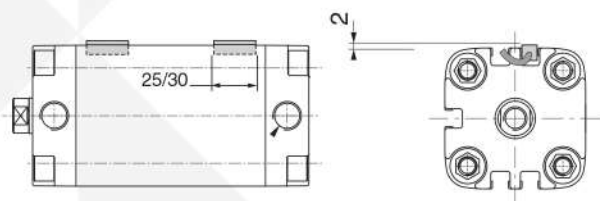
In order to control **the max. end** of cylinder stroke, the detectors must be mounted in the following direction:

Series 441-449 cylinders:

Ø32-40: cable oriented towards the middle of the cylinder
Ø50-100: any position

Series 453 cylinder:

Ø32-40: cable oriented towards the middle of the cylinder
Ø50-100: any position

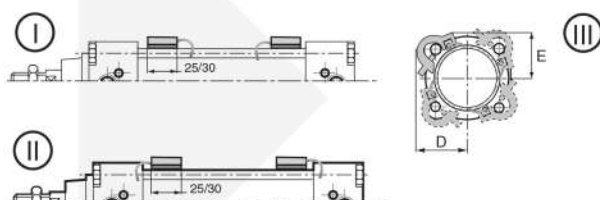


FOR TIE RODS CYLINDERS

series	Ø (mm)	code fastening kit	
		lead outlet version	M8 connector integrated version
437	25	P494AM129200A00	P499440617MN001
450	32-40	P494A3129200A00	
	50-63-80	P494A5129200A00	
437	100	P494A8129200A00	P4994406183N001
	125	P494AP129200A00	
	160-200	P494AP129200A00	-



Ø cylinder	25	32	40	50	63	80	100	125	160	200
D	24	30	33	38	44	50	69	77	89	104
E	24	26	30	35	39	49	61	69	87	101



Ⓘ It is possible to fasten the detector with its electric outlet to the centre of the cylinder (in order to be able to control the **max. end** of travel of the cylinder)

Ⓙ In order to fasten the detector with its electric outlet to the rear, rotate **the unit** detector + collar by 180°

Ⓚ The detectors can be mounted on any one of the 4 **tie rods**.

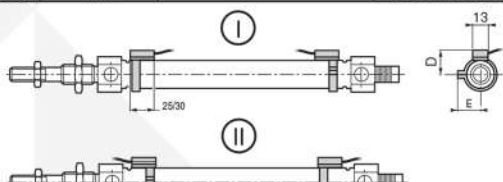
FOR ROUND CYLINDERS



series	Ø (mm)	code fastening kit	
		plastic	stainless steel (AISI 303 + 304)
435 438 431	8-10	-	P494AG129600A00
	12	P494AJ129300A00	P494AK129600A00
	16	P494AK129300A00	P494AK129600A00
	20	P494AL129300A00	P494AL129600A00
	25	P494AM129300A00	P494AL129600A00
	32	P494A3129300A00	P494A3129600A00
	40	P494A4129300A00	P494A4129600A00
	50	-	P494A5129600A00
	63	-	P494A6129600A00
80	-	P494A8129600A00	
436	250	-	P494AS129200A00

Ø 12 to 40 mm

Ø 8 to 80 mm



I On all diameters, it is possible to mount the detector with its electrical outlet facing towards the cylinder barrel (in order to be able to control the **max. end** of travel of the cylinder).

II In order to fasten the detector on cylinder diameters 25 to 63 with its electrical outlet facing towards the cylinder ends, rotate the detector + collar unit by 180°.

It is possible to mount magnetic detectors for **intermediate** position indication : mounting by collar

Ø 8-20 : any position.

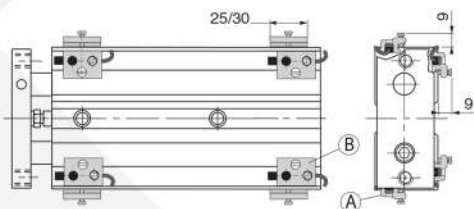
Ø 25-80 : cable oriented towards the cylinder ends

Ø cylinder	8	10	12	16	20	25	32	40	50	63
D	14,5	15,5	15	16,5	19	21,5	26,5	31	38	45
E	13,5	14,5	16,5	19	20,5	23	29,5	31,5	36,5	43,5

ACTUATORS

series	Ø (mm)	code fastening kit ⁽¹⁾
447 / 492	12 ... 32	P494A0029400A00

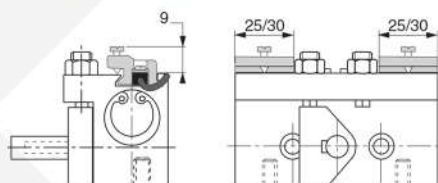
⁽¹⁾ Designed for "dove tail" grooves.



R (Ø12 - 20 mm)



series	Ø (mm)	code fastening kit
429	12-20 / 16-18-22	P4945256760N001



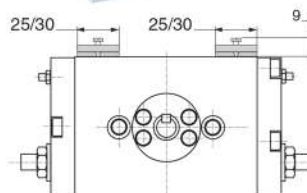
A - Lateral mounting of the detector
B - Upper mounting of the detector

(type ILS or MR)

- Detector, lead with stripped ends :
- stroke ≤ 25 mm: a detector following (A) mounting and the other following (B) mounting
- stroke > 25 mm: mounting of the 2 detectors following (A) and/or (B) mounting
- Detector with lead and connector: a detector following (A) mounting and the other following (B) mounting



RS





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Note: NUMATICS leads in quality management via initiatives such as ISO 9001:2008, 6 Sigma continuous improvement, and lean manufacturing. Our products are tested up to 500 million cycles, far beyond the operating requirements of their intended applications. In fact, NUMATICS is certified as a test data facility for UL and CSA-these agencies accept our test data for many parameters to grant their approval of our products.

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