

numatics®

PBS Series

Power Block Slide



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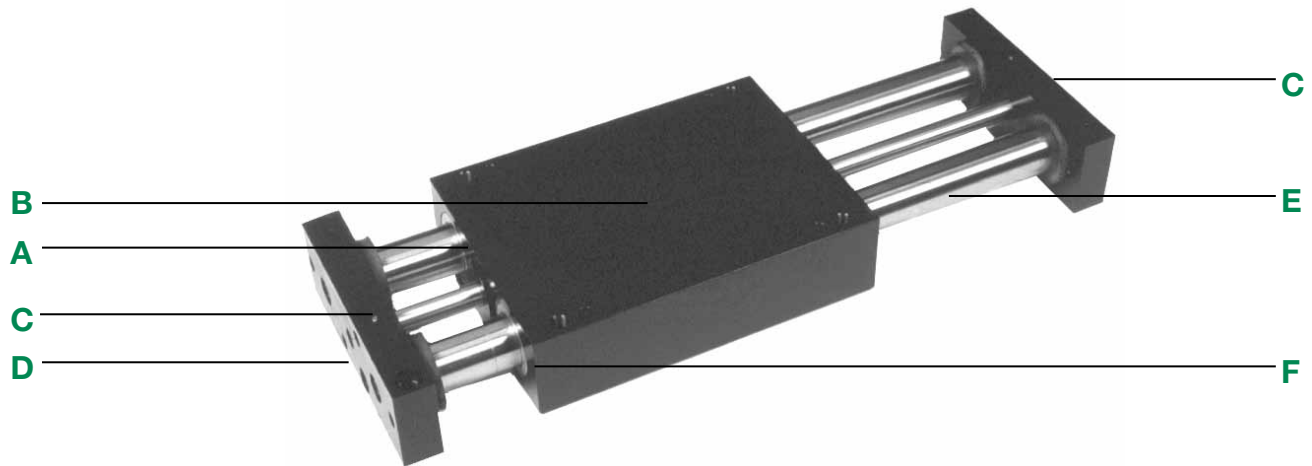
PBS Series

Features and Benefits	3
How To Order	4
Technical Specifications	4
Dimensions	5
Quick Disconnect Cables	6
Switch Information	6-7

PBS-Series Power Block Slides

Designed for applications where space is at a minimum.

The PBS-Series has an internally built-in air cylinder in the carriage assembly, reducing overall length. The carriage assembly is supported by four recirculating linear ball bearings and two hardened guide shafts.



A. Carriage:

Four recirculating linear ball bearings. Easy access mounting and dowel location holes.

B. Air Cylinder:

Internally housed in carriage. Low friction U-cup lip seals for long service life.

C. Tool Bars:

Standard dowel locating holes and accurately milled locating slots. Machined to accept industry standard shock absorbers, and position proximity switch sensors.

D. Stroke Adjusting Screw:

Easy access stroke adjusting screws for exact carriage stroke. Adjustable in both directions.

E. Guide Shafts:

Hardened Steel to RC 60-65

F. Bearings: (Two Choices)

Four linear ball bearings...greatest load capacity, factory lubricated, built-in wipers, self-aligning.
Four PTFE ball bearings...self-lubricating, self-aligning, long service life, ideal for cleanroom.

How to Order

PBS 075 03 LB 1 4 C 4

Bore Sizes

- 075 = 3/4 Inch
- 100 = 1 Inch
- 125 = 1-1/4 Inches

Standard Stroke

- 01 = 1"
- 02 = 2"
- 03 = 3"
- 04 = 4"
- 05 = 5"
- 06 = 6"

NOTE: Max. stroke
PBS075-4.0
PBS100-5.0
PBS125-6.0

Bearing Option

- LB = Linear Ball
- TB = PTFE Bearing

Seal Option

- 1 = Buna-N Seals
- 2 = FKM Seals

Shock Absorbers

- 1 = Extend
- 2 = Retract
- 3 = Extend and Retract
- 4 = No Shocks

Sensing Position

- A = Single Position Extend
- B = Single Position Retract
- C = Two Position Sensing
- D = No Sensing

Sensing Type

Standard Cord Set

- 4 = Prox Switch - PNP (sourcing)
- 5 = Prox Switch - NPN (sinking)
- 6 = No Sensing

Quick Disconnect Cord Set

- W = Prox Switch - PNP (sourcing) Straight
- V = Prox Switch - NPN (sinking) Straight
- U = Prox Switch - PNP (sourcing) 90 Deg.
- T = Prox Switch - NPN (sinking) 90 Deg.

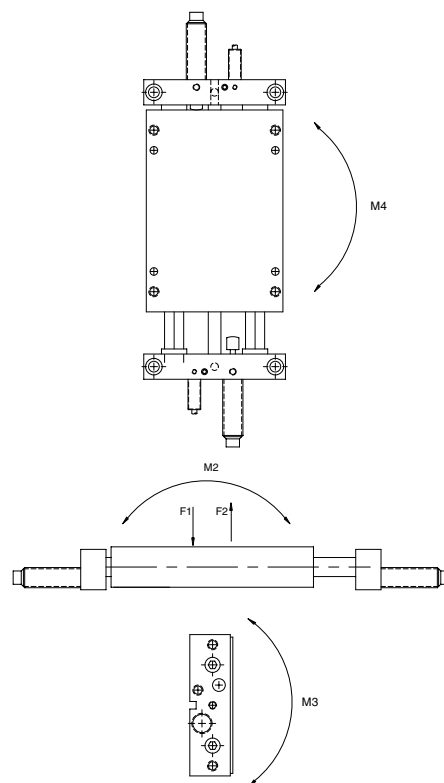
Prox switches are 8 mm diameter.

When ordering additional switches:

Switch Description	Standard Part No.	Quick Disconnect Part No.
Prox Switch - PNP (Sourcing)	PROX-8FL2-PN	PROX-8QDS-PN
Prox Switch - NPN (Sinking)	PROX-8FL2-PN	PROX-8QDS-PN
Quick Disconnect Cable	-	PXCST
90° 5 meter cable	-	PXC90

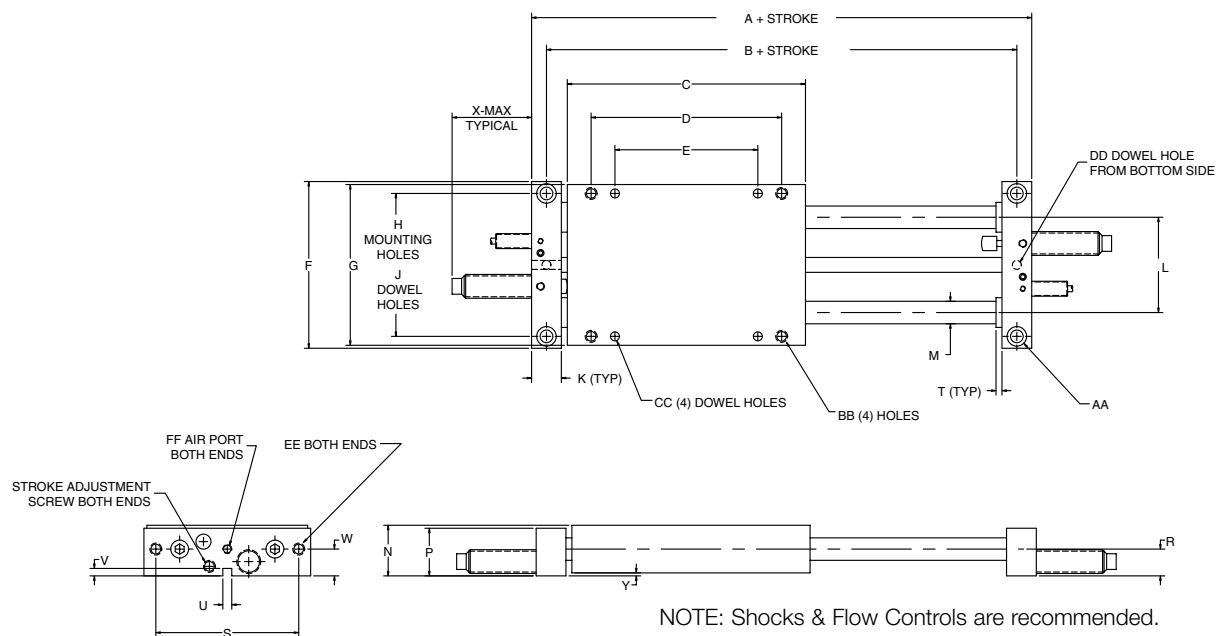
Technical Specifications

	PBS075	PBS100	PBS125
Max. Air Pressure	120 psi	120 psi	120 psi
Thrust force @ 100 psi	31 lbs	62 lbs	100 lbs
Maximum Stroke	4.00	5.00	6.00
Cylinder Bore Dia.	0.75	1.00	1.25
F1 Load	90 lbs	275 lbs	520 lbs
F2 Load	90 lbs	275 lbs	520 lbs
Deflection @ max Load & Stk	0.003	0.003	0.003
M2 Moment	120 in.-lbs.	275 in.-lbs.	450 in.-lbs.
M3 Moment	200 in.-lbs.	750 in.-lbs.	1590 in.-lbs.
M4 Moment	200 in.-lbs.	750 in.-lbs.	1590 in.-lbs.



Dimensions: Inches

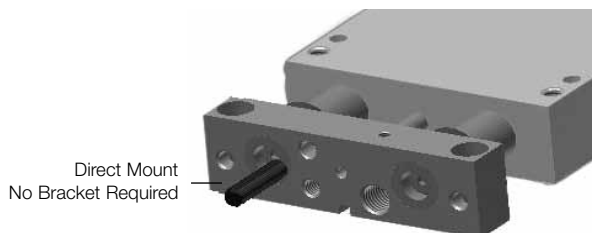
PBS-Series Power Block Slide Dimensions



	PBS075	PBS100	PBS125
A	6.500	8.000	9.000
B	5.875	7.250	8.250
C	5.000	6.000	7.000
D	4.000	5.000	5.750
E	3.000	4.000	4.750
F	3.500	4.500	5.000
G	3.375	4.375	4.870
H	3.000	3.875	4.375
J	2.999/3.001	3.874/3.876	4.374/4.376
K	0.625	0.750	0.750
L	2.000	2.440	2.730
M	.472	0.788	0.985
N	1.060	1.313	1.813
P	1.000	1.250	1.750
R	0.563	0.687	0.938
S	3.000	3.875	4.375
T	0.125	0.250	0.250
U	0.1877/0.1892	0.1877/0.1892	0.1877/0.1892
V	0.156	0.156	0.156
W	0.563	0.688	0.938
X	2.200	2.200	2.200
Y	0.063	0.063	0.063
AA	CLEARANCE FOR 1/4 SHCS	CLEARANCE FOR 5/16 SHCS	CLEARANCE FOR 5/16 SHCS
BB	1/4-20 X 0.50 DEEP	5/16-18 X 0.63 DEEP	5/16-18 X 0.63 DEEP
CC	0.1892/0.1877 THRU	0.2505/0.2510 THRU	0.2505/0.2510 THRU
DD	0.1877/0.1892 X 0.25 DEEP	0.1877/0.1892 X 0.25 DEEP	0.1877/0.1892 X 0.25 DEEP
EE	1/4-20 THRU	5/16-18 THRU	5/16-18 THRU
FF	#10-32	#10-32	1/8 NPTF

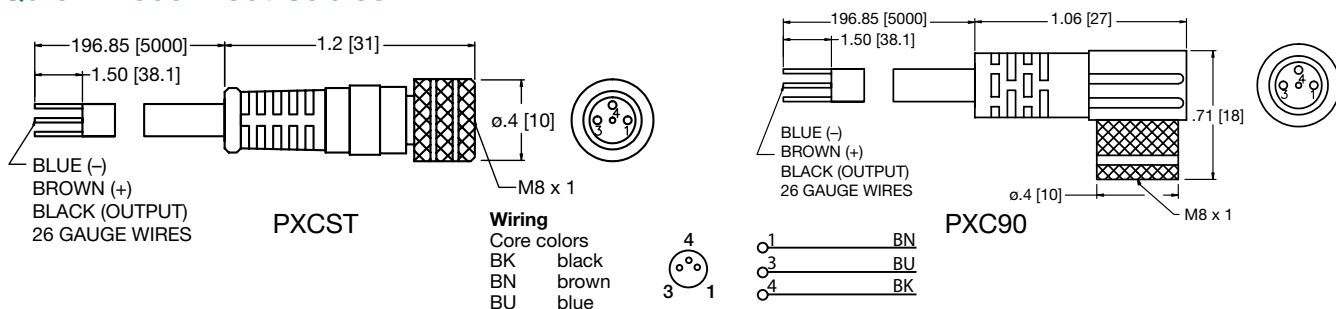
PBS Series Switch Information

PBS Series Gantry



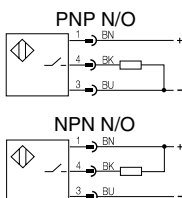
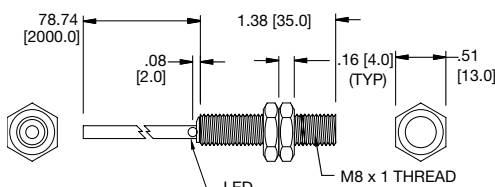
Sensor Description	Standard Cord Set	Quick Disconnect
Prox PNP	PROX-8FL2-PN	PROX-8QDS-PN
Prox NPN	PROX-8FL2-PN	PROX-8QDS-PN

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

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



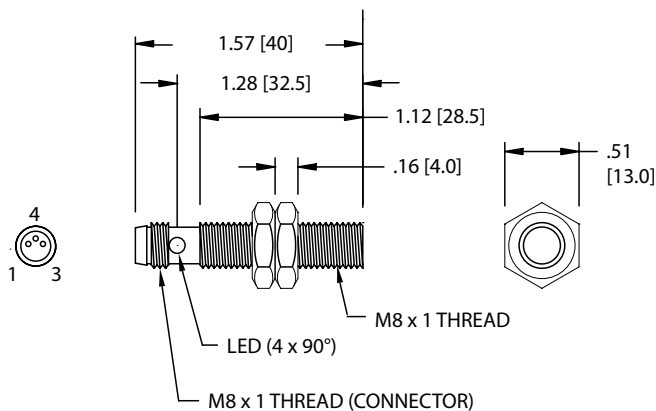
Electrical Design

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

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

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

Accessories
Agency Approvals



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 60°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;
Active Face: LCP
Yellow LED (4 x 90°)
M8 Connector
*Only in 2-Wire Operation
**Only in 3-Wire Operation
2 M8 Lock Nuts Included

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



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