

NUMATICS®

RPG Series

Parallel Grippers



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EMERSON
Industrial Automation

BCAE
Automation Solutions

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RPG Series

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Gripper Summary of Operation

RPG-Series has true parallel motion that is generated by a double acting piston attached to the pinion mechanism with a linkage that is guided in the body for precise centering.

A. Body

Hardcoat Anodized, PTFE impregnated inside and out. High force to weight ratio.

B. Jaws

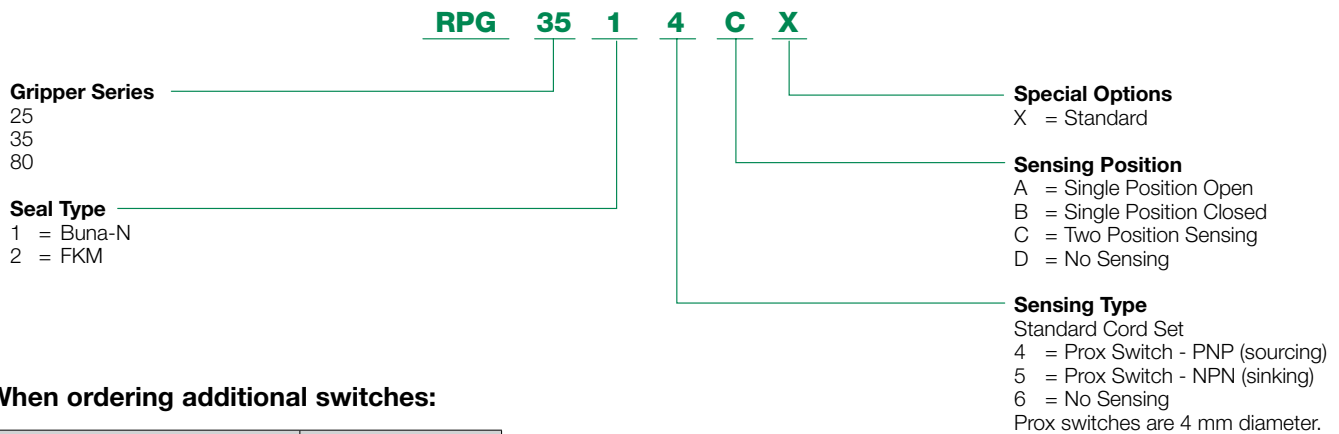
Jaws are aluminum bronze alloy to prevent jaw breakage. T-Slot style jaws offers superior load bearing capabilities.

C. Sensing

Proximity switches available for sensing open and closed positions.



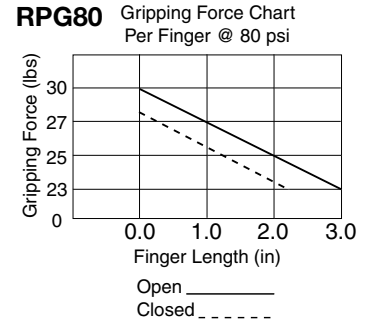
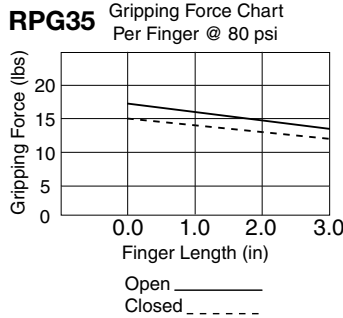
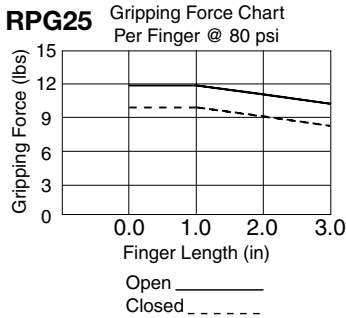
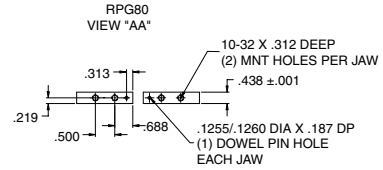
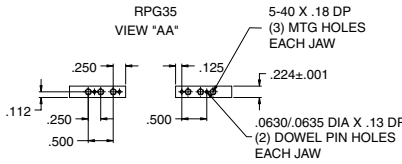
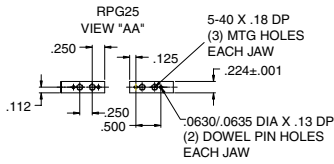
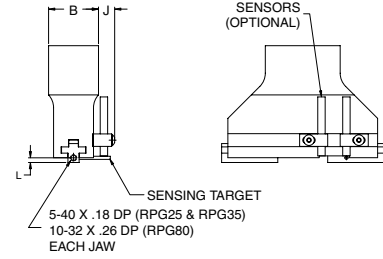
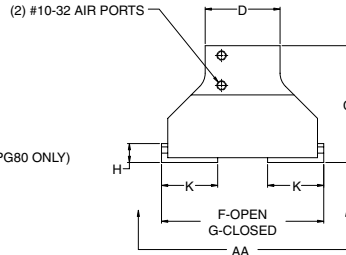
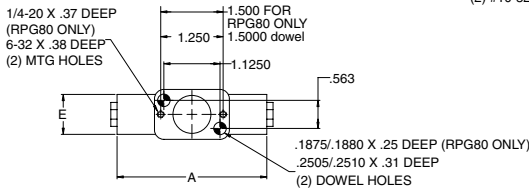
How to Order



When ordering additional switches:

Switch Description	Standard Part No.
Hall Effect - PNP (Sourcing)	PROX-4FL2-P
Hall Effect - NPN (Sinking)	PROX-4FL2-N

RPG Series Dimensions and Technical Specifications



RPG Series Dimensions

Load Capacity	RPG25	RPG35	RPG80
A	2.000	2.750	3.000
B	1.000	1.000	1.250
C	1.840	2.340	3.192
D	1.500	1.500	2.000
E	0.800	0.800	1.062
F	2.250	3.250	4.250
G	1.750	2.250	3.125
H	0.400	0.470	0.741
J	0.390	0.390	0.390
K	0.870	1.120	1.563
L	0.094	0.004	0.210

Specifications

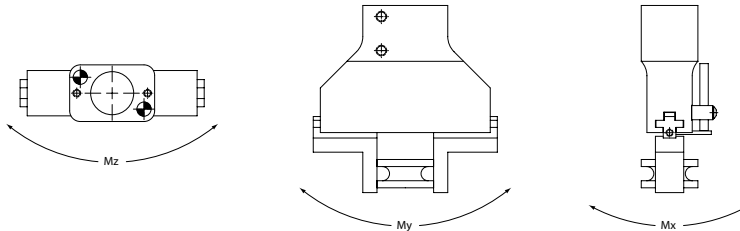
Load Capacity	RPG25	RPG35	RPG80
Grip Force @ 100 psi	25 lbs	36 lbs	80 lbs
Stroke	0.5	1.0	1.125
Repeatability	+/- .001	+/- .001	+/- .001
Bore Dia.	0.625	0.750	1.000
Operating Temp.			
Buna-N	-30° to 180°F	-30° to 180°F	-30° to 180°F
FKM	-20° to 350°F	-20° to 350°F	-20° to 350°F
Max. Actuation Speed	0.12 sec	0.15 sec	0.21 sec
Displacement	0.10 cu in	0.22 cu in	0.5 cu in
Maximum Pressure	120 psi	120 psi	120 psi
Unit Weight	5 oz	8 oz	1.0 lbs

Static Condition

Load Capacity	RPG25	RPG35	RPG80
C-compression	50 lbs.	60 lbs.	100 lbs.
T-tension	50 lbs.	60 lbs.	100 lbs.
Mx	50 in.-lbs.	100 in.-lbs.	200 in.-lbs.
My	60 in.-lbs.	120 in.-lbs.	250 in.-lbs.
Mz	50 in.-lbs.	100 in.-lbs.	200 in.-lbs.

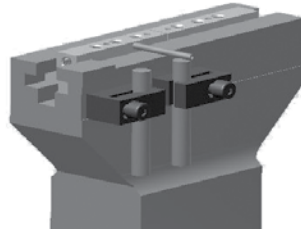
Dynamic Condition

Load Capacity	RPG25	RPG35	RPG80
C-compression	15 lbs.	20 lbs.	30 lbs.
T-tension	15 lbs.	20 lbs.	30 lbs.
Mx	12 in.-lbs.	25 in.-lbs.	50 in.-lbs.
My	15 in.-lbs.	30 in.-lbs.	60 in.-lbs.
Mz	12 in.-lbs.	25 in.-lbs.	50 in.-lbs.



RPG Series Gripper

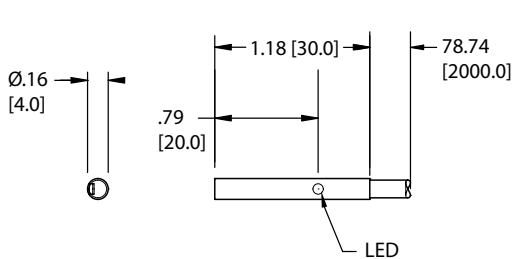
Series	Bracket P/N
RPG	N5103-1018



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

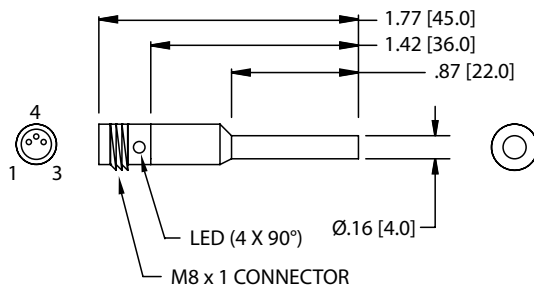
See page 19 for sensor specifications

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



<p>PNP N/O</p> <p>1 → BN</p> <p>4 → BK</p> <p>3 → BU</p> <p>NPN N/O</p> <p>1 → BN</p> <p>4 → BK</p> <p>3 → BU</p>	<p>Electrical Design</p> <p>Output</p> <p>Operating Voltage</p> <p>Current Rating</p> <p>Short Circuit Protection</p> <p>Overload Protection</p> <p>Reverse Polarity Protection</p> <p>Voltage Drop</p> <p>Current Consumption</p> <p>Real Sensing Range</p> <p>Switching Frequency</p> <p>Ambient Temperature Protection</p> <p>Switch-Point Drift</p> <p>Hysteresis</p> <p>Operating Distance</p> <p>Correction Factor</p> <p>Housing Material</p> <p>Function Display Switching Status</p> <p>Connection</p>	<p>3-Wire DC PNP/NPN</p> <p>Normally Open</p> <p>10-36 VDC</p> <p>100 mA</p> <p>Yes (Non-Latching)</p> <p>Yes</p> <p>Yes</p> <p>< 2.5V</p> <p>< 15 mA @ 24V</p> <p>.8mm ± 10%</p> <p>> 2000 Hz</p> <p>-25°C to 70°C</p> <p>IP 65, III</p> <p>-10 - 10% OF Sr</p> <p>1 - 15% OF Sr</p> <p>0 - .65mm</p> <p>Mild Steel=.1, Stainless Steel=.7, Brass=.5, Alum.=.4, Copper=.3</p> <p>Housing; Stainless Steel: POM</p> <p>Yellow LED</p> <p>PVC Cable, 2m, 3 x .14mm2</p>
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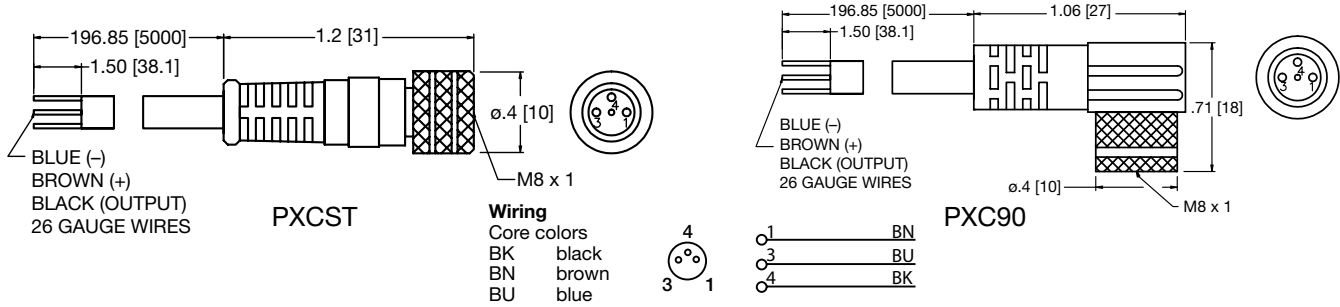
Prox Switch (PNP NO), 8 mm connector - PROX-4QDS-P



<p>Electrical Design</p> <p>Output</p> <p>Operating Voltage</p> <p>Current Rating</p> <p>Short Circuit Protection</p> <p>Overload Protection</p> <p>Reverse Polarity Protection</p> <p>Voltage Drop</p> <p>Current Consumption</p> <p>Real Sensing Range</p> <p>Switching Frequency</p> <p>Ambient Temperature Protection</p> <p>Switch-Point Drift</p> <p>Hysteresis</p> <p>Operating Distance</p> <p>Correction Factor</p> <p>Housing Material</p> <p>Function Display Switching Status</p> <p>Connection</p> <p>Remarks</p> <p>Accessories</p> <p>Agency Approvals</p>	<p>3-Wire DC PNP</p> <p>Normally Open</p> <p>10-36 VDC</p> <p>100 mA</p> <p>Yes (Non-Latching)</p> <p>Yes</p> <p>Yes</p> <p>< 2.5V</p> <p>< 15 mA @ 24V</p> <p>.8mm ± 10%</p> <p>> 2000 Hz</p> <p>-25°C to 70°C</p> <p>IP 65, III</p> <p>-10 - 10% OF Sr</p> <p>1 - 15% OF Sr</p> <p>0 - .65mm</p> <p>Mild Steel=.1, Stainless Steel=.7, Brass=.5, Alum.=.4, Copper=.3</p> <p>Housing; Stainless Steel: POM</p> <p>Red LED (4 x 90°)</p> <p>M8 Connector</p> <p>cULus-Class 2 Source Required</p> <p>Mounting Clamp</p>
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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

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