

NUMATICS®

PG Series

Low Profile Grippers



www.numatics.com


EMERSON
Industrial Automation

BCAE
Automation Solutions

青岛秉诚自动化设备有限公司
地址：中国·青岛市重庆南路99号海尔云街甲3号楼7F

服务热线：4006-918-365
网址：<http://www.ivalve.cc>

传真：(86-532)585-10-365
Email：sales@bechinas.com

PG Series Parallel Gripper

| | |
|--------------------------|-----|
| Features and Benefits | 3 |
| How To Order | 3 |
| PGS25 & PGL25 Dimensions | 4 |
| Technical Specifications | 4 |
| PGS35 & PGL35 Dimensions | 5 |
| Technical Specifications | 5 |
| Switch Information | 6-7 |
| Quick Disconnect Cables | 7 |

Gripper summary of Operation

PG-Series has true parallel motion that is generated by a pinion mechanism powered by a double acting piston.

A. Body

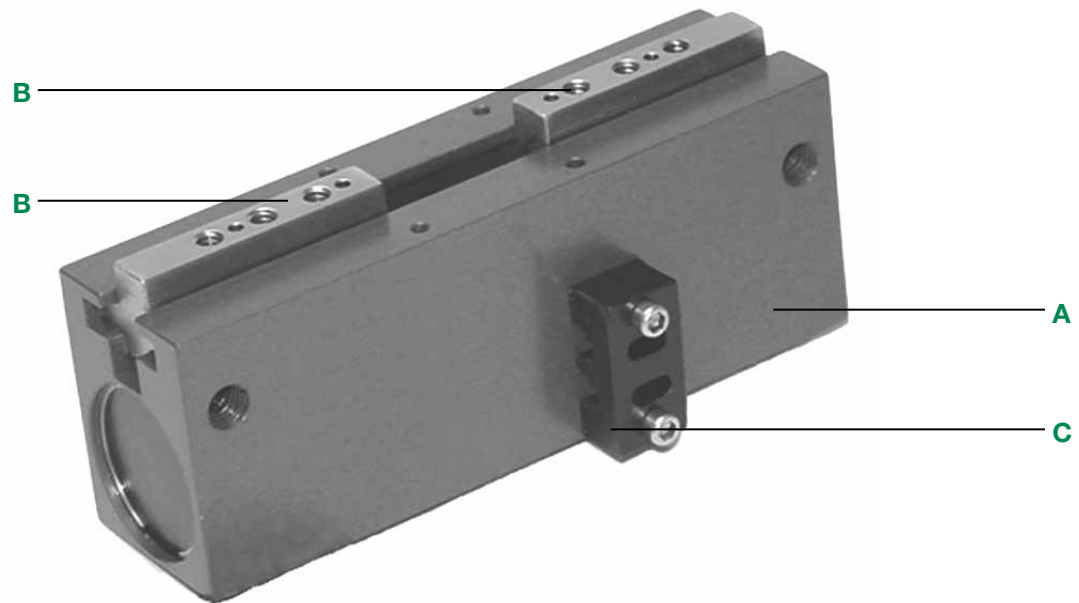
Hardcoat Anodized, PTFE impregnated inside and out.
Two different strokes with the same size low profile body.

B. Jaws

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

C. Sensing

Reed & Hall effect sensing is available to sense open and closed position.



How to Order

PG S 35 1 1 C X

Gripper Stroke
S = Short Stroke
L = Long Stroke

Gripper Series
25
35

Seal Type
1 = Buna-N
2 = FKM

Special Options
X = Standard

Sensing Position
A = Single Position Open
B = Single Position Closed
C = Two Position Sensing
D = No Sensing

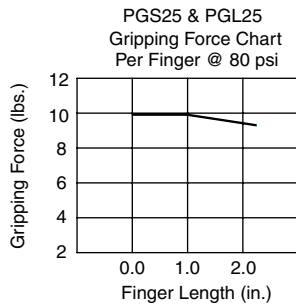
Sensing Type
Standard Cord Set
1 = Hall Switch - PNP (sourcing)
2 = Hall Switch - NPN (sinking)
6 = No Sensing
Quick Disconnect Cord Set
Z = Hall Switch - PNP (sourcing)
Y = Hall Switch - NPN (sinking)
See Sensor section.

When ordering additional switches:

| Switch Description | Standard Part No. | Quick Disconnect Part No. |
|------------------------------|-------------------|---------------------------|
| Hall Effect - PNP (Sourcing) | CS-20TP | CS-18P-QD |
| Hall Effect - NPN (Sinking) | CS-20TN | CS-20TN-QD |

Specifications

| | PGS25 | PGL25 |
|-----------------------|---------------|---------------|
| Grip Force @ 100 psi | 27 lbs | 27 lbs |
| Stroke | 0.25 | 0.50 |
| Repeatability | +/- .001 | +/- .001 |
| Bore Dia. | 0.625 | 0.625 |
| Operating Temperature | | |
| Buna-N | -30° to 180°F | -30° to 180°F |
| FKM | -20° to 300°F | -20° to 300°F |
| Max. Actuation Speed | 0.12 sec | 0.12 sec |
| Displacement | 0.3 cu in | 0.3 cu in |
| Maximum Pressure | 120 psi | 120 psi |
| Unit Weight | 2 oz | 2 oz |



Grip Force vs. Finger Length

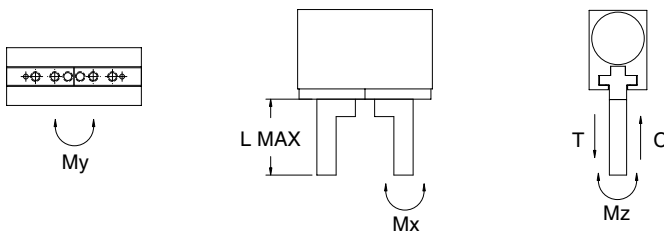
| L-Finger Length | PGS25 | PGL25 |
|-----------------|---------|---------|
| 1 | 25 lbs. | 25 lbs. |
| 2 | 20 lbs. | 20 lbs. |
| 3 | 15 lbs. | 15 lbs. |
| 4 | N/A | N/A |
| 5 | N/A | N/A |

Static Condition

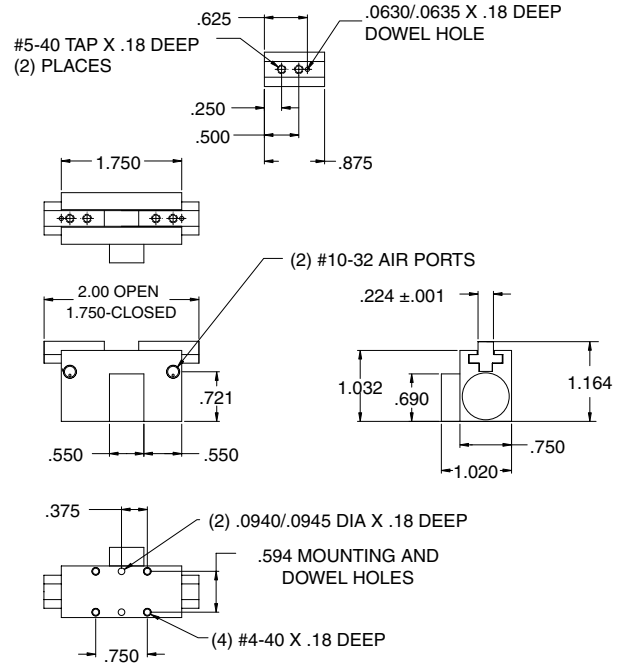
| Load Capacity | PGS25 | PGL25 |
|---------------|---------|---------|
| C-compression | 65 lbs. | 65 lbs. |
| T-tension | 65 lbs. | 65 lbs. |
| Mx | 45 lbs. | 45 lbs. |
| My | 60 | 60 |
| Mz | 40 | 40 |

Dynamic Condition

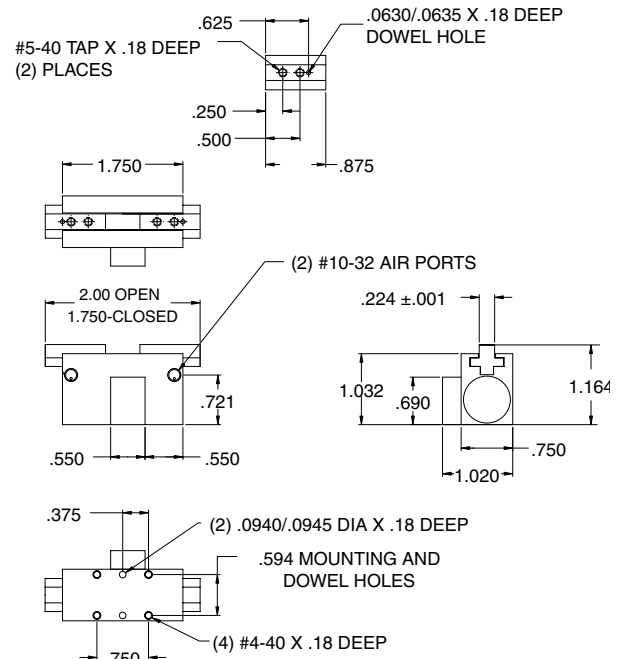
| Load Capacity | PGS25 | PGL25 |
|---------------|-------------|-------------|
| C-compression | 25 lbs. | 25 lbs. |
| T-tension | 25 lbs. | 25 lbs. |
| Mx | 20 in.-lbs. | 20 in.-lbs. |
| My | 25 in.-lbs. | 25 in.-lbs. |
| Mz | 20 in.-lbs. | 20 in.-lbs. |



PGS25

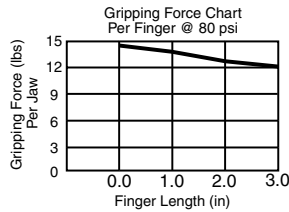


PGL25



Specifications

| | PGS35 | PGL35 |
|-----------------------|---------------|---------------|
| Grip Force @ 100 psi | 35 lbs | 35 lbs |
| Stroke | 0.75 | 0.75 |
| Repeatability | +/- .001 | +/- .001 |
| Bore Dia. | 0.70 | 0.70 |
| Operating Temperature | | |
| Buna-N | -30° to 180°F | -30° to 180°F |
| FKM | -20° to 300°F | -20° to 300°F |
| Max. Actuation Speed | 0.12 sec | 0.12 sec |
| Displacement | 0.38 cu in | 0.38 cu in |
| Maximum Pressure | 120 psi | 120 psi |
| Unit Weight | 5 oz | 5 oz |



Grip Force vs. Finger Length

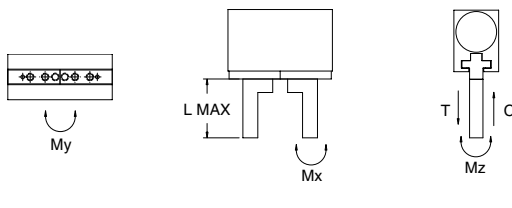
| L-Finger Length | PGS35 | PGL35 |
|-----------------|---------|---------|
| 1 | 28 lbs. | 28 lbs. |
| 2 | 26 lbs. | 26 lbs. |
| 3 | 24 lbs. | 24 lbs. |
| 4 | 19 lbs. | 19 lbs. |
| 5 | 8 lbs. | 8 lbs. |

Static Condition

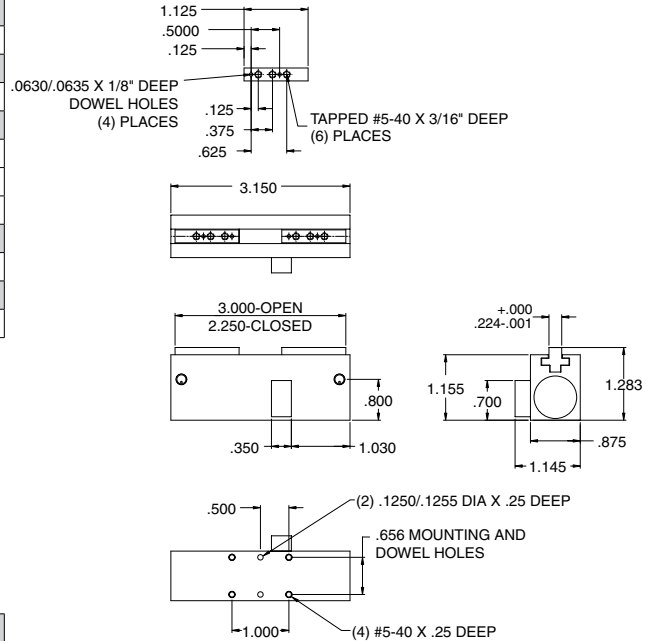
| Load Capacity | PGS35 | PGL35 |
|---------------|--------------|--------------|
| C-compression | 80 lbs. | 80 lbs. |
| T-tension | 80 lbs. | 80 lbs. |
| Mx | 80 in.-lbs. | 80 in.-lbs. |
| My | 100 in.-lbs. | 100 in.-lbs. |
| Mz | 80 in.-lbs. | 80 in.-lbs. |

Dynamic Condition

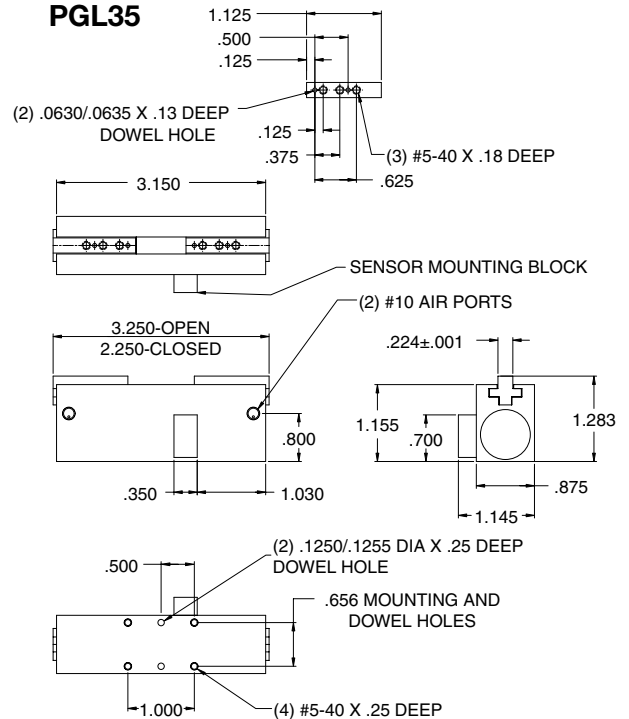
| Load Capacity | PGS35 | PGL35 |
|---------------|-------------|-------------|
| C-compression | 45 lbs. | 45 lbs. |
| T-tension | 45 lbs. | 45 lbs. |
| Mx | 30 in.-lbs. | 30 in.-lbs. |
| My | 40 in.-lbs. | 40 in.-lbs. |
| Mz | 30 in.-lbs. | 30 in.-lbs. |



PGS35



PGL35



Grippers

PG Series Gripper

| Series | Bracket P/N |
|--------|-------------|
| PG | SB-PG |

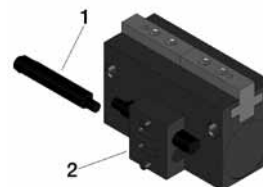


| Sensor Description | Standard Cord Set | Quick Disconnect |
|--------------------|-------------------|------------------|
| Hall PNP | CS-20TP | CS-20TP-QD |
| Hall NPN | CS-20TN | CS-20TN-QD |

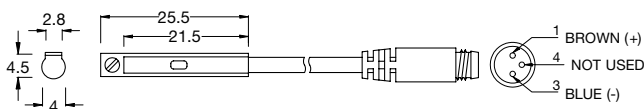
See page 17 for sensor specifications

PG Series Switch Information

| | Switch or Bracket Description | Standard Part No. | Quick Disconnect Part No. |
|---|--------------------------------|-------------------|---------------------------|
| 1 | Hall Effect PNP (Sourcing) 4mm | CS-20TP | CS-20TP-QD |
| 1 | Hall Effect NPN (Sinking) 4mm | CS-20TN | CS-20TN-QD |
| 2 | Switch Bracket | PGSB | PGSB |

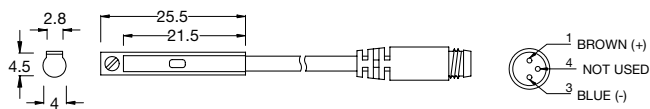


Electro Switch (PNP NO) 8 mm Connector - CS-20TP-QD



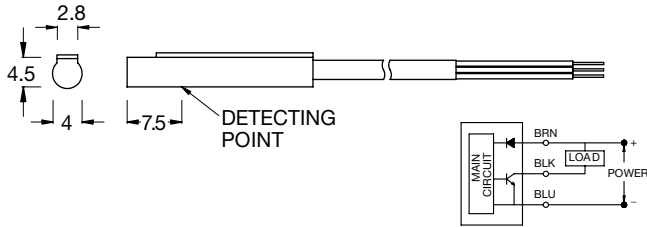
| | |
|--------------------------|-------------------------------------|
| Sensor Type | Solid State Output |
| Switching Logic | Normally Open |
| Output | PNP Current Sourcing |
| Operating Voltage | 5-30 VDC |
| Switching Current | 50mA max. |
| Power Rating* | 1.5 Watts |
| Voltage Drop | 1.5 V @ 25 mA max. |
| Current Consumption | 15 mA @ 24 VDC max. |
| Leakage Current | 0.01 mA max. |
| LED Indicator | Green |
| 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) 8 mm Connector - CS-20TN-QD



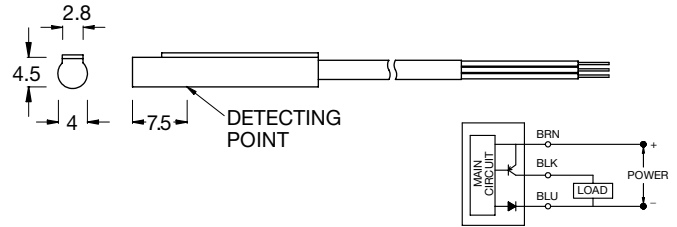
| | |
|--------------------------|-------------------------------------|
| Sensor Type | Solid State Output |
| Switching Logic | Normally Open |
| Output | NPN Current Sinking |
| Operating Voltage | 5-30 VDC |
| Switching Current | 50mA max. |
| Power Rating* | 1.5 Watts |
| Voltage Drop | 0.5 V @ 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) |

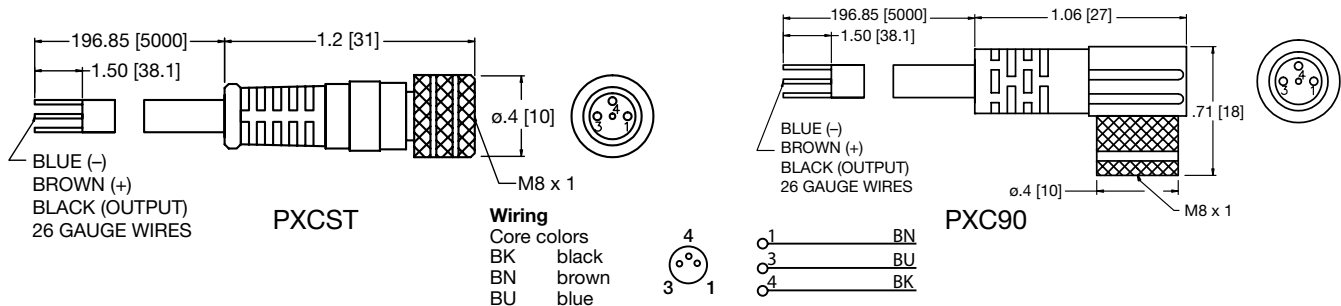
Electro Switch (PNP NO) Flying Lead - CS-20TP



| | |
|--------------------------|-------------------------------------|
| Sensor Type | Solid State Output |
| Switching Logic | Normally Open |
| Output | PNP Current Sinking |
| Operating Voltage | 5-30 VDC |
| Switching Current | 50mA max. |
| Power Rating* | 1.5 Watts |
| Voltage Drop | 1.5 V @ 25 mA max. |
| Current Consumption | 12 mA @ 24 VDC max. |
| Leakage Current | 0.01 mA max. |
| LED Indicator | Green |
| Cable | Abrasion resistant polyurethane |
| 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) |

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

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 |

NUMATICS®

World Class Supplier of Pneumatic Components



World Headquarters

USA Numatics, Incorporated

46280 Dylan Drive
Novi, Michigan 48377

P: 248-596-3200
F: 248-596-3201

Canada Numatics, Ltd

P: 519-758-2700
F: 519-758-5540

México - Ascomatica SA de CV

P: 52 55 58 09 56 40 (DF y Area metropolitana)
P: 01 800 000 ASCO (2726) (Interior de la República)
F: 52 55 58 09 56 60

Brazil Ascoval Ind.e Comercio Ltda

P: (55) 11-4208-1700
F: (55) 11-4195-3970