

gantries

GS Series
Gantry Slide



NUMATICS

| | |
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Designed to handle heavier loads and travel greater distances.

The design centers around a moving carriage between two fixed tool bars. The carriage is supported and guided by four bearings and two hardened guide shafts.

A. Carriage:

Hardcoat Anodized Aluminum.....lightweight, high durability.
NuMate™ Direct Mounting Pattern Numate is a patented mounting system eliminating the need for adaptor/transition plates.
 Slide, gantries and grippers mount directly to the GS gantry.

B. Air Cylinder:

Standard Stainless Steel Body and Rodcorrosion resistant.
 Standard Magnetic Piston.....sensing options Reed, Hall, Prox sensors, able to be added in field.

C. Alignment Coupler:

360 Degrees of Float.....isolates cylinder, eliminates destructive side load, maximizes life.

D. Tool Bars:

Standard Dowel Locating Hole and Slot.....accurate mounting and positioning.

Standard Tapped Holes for Shock Absorbers accepts industry standard shocks.

E. Guide Shafts: (Two Choices)

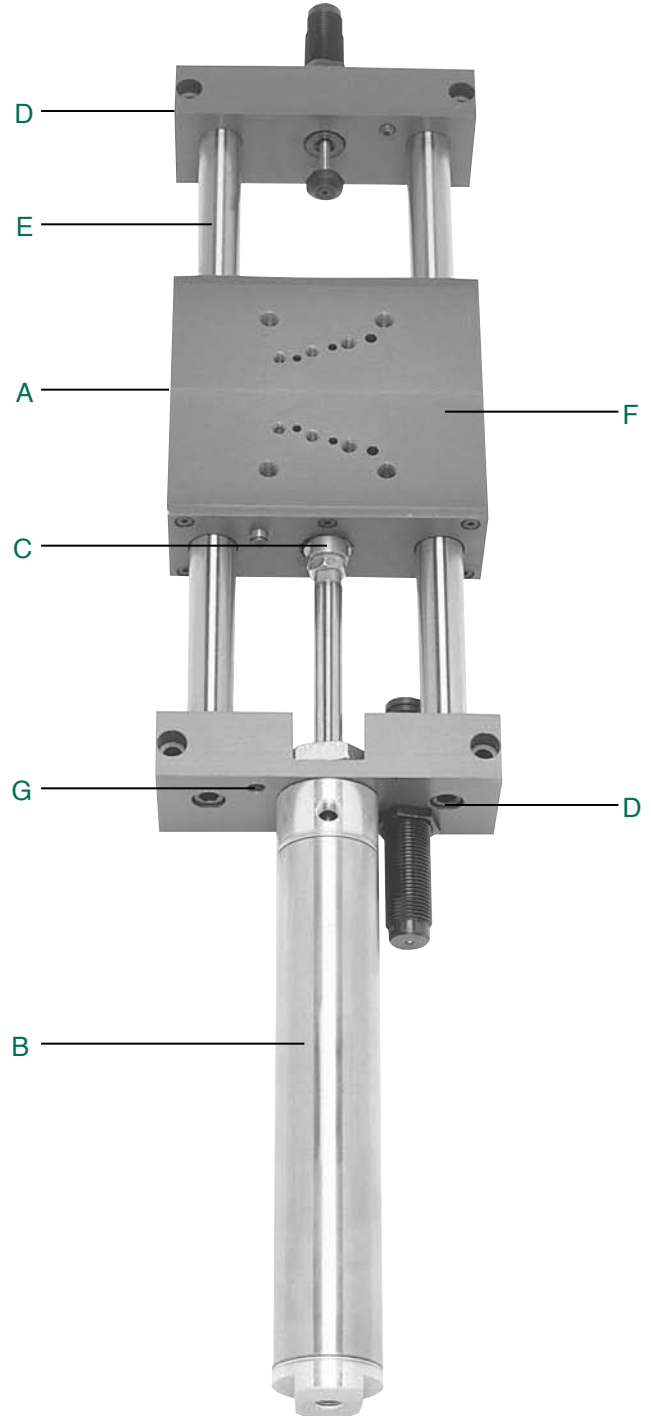
Hardened Steel.....hardness Rc 60-65, long life.
 Hardened Stainless Steel hardness Rc 50-55, corrosion resistant.
 Precision Ground and Polished 15u RMS.....smooth cycling, low breakaway.
 Large Diameter.....increased load capacity.
 Pilot Mounted to Tool Bar.....maximum rigidity, increased strength.

F. Bearings: (Two Choices)

Four Linear Ball Bearingsgreatest load capacity, self-lubricating, built-in seals and wipers, self-aligning.
 Four Frelon® Compounded Teflon®self-lubricating, self-aligning, long service life, ideal for cleanroom.

G. Stroke Adjustment Screws:

Standard Extend and Retract.....fine adjustment for carriage travel.





GS Series Gantry Slides

NUMATICS®

How to Order

GS 075 03 LB 1 H 3 C R 4

Bore Sizes

075 = 3/4 Inch
106 = 1-1/16 Inches
150 = 1-1/2 Inches
200 = 2 Inches

Standard Stroke

| | | |
|----------|----------|----------|
| 01 = 1" | 13 = 13" | 24 = 24" |
| 02 = 2" | 14 = 14" | 25 = 25" |
| 03 = 3" | 15 = 15" | 26 = 26" |
| 04 = 4" | 16 = 16" | 27 = 27" |
| 05 = 5" | 17 = 17" | 28 = 28" |
| 06 = 6" | 18 = 18" | 29 = 29" |
| 07 = 7" | 19 = 19" | 30 = 30" |
| 08 = 8" | 20 = 20" | 31 = 31" |
| 09 = 9" | 21 = 21" | 32 = 32" |
| 10 = 10" | 22 = 22" | 33 = 33" |
| 11 = 11" | 23 = 23" | 34 = 34" |
| 12 = 12" | | |

Bearing Option

LB = Linear Ball
TB = Teflon®

Cylinder Type

1 – Buna-N Seals
2 – Viton Seals (no magnet)
3 – Buna-N Seals w/Cushions
4 – Viton Seal with Magnet

Guide Shaft Material

H = Hardened Steel
S = Stainless Steel (includes all stainless hardware)

Shock Absorbers

1 = Extend
2 = Retract
3 = Extend and Retract
4 = No Shocks
Reference page 7.

Cylinder Orientation

R = Right
L = Left
Reference page 7.

Sensing Position

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

Sensing Type

Standard Cord Set
1 = Hall Effect - PNP (sourcing)
2 = Hall Effect - NPN (sinking)
3 = Reed Switch
4 = Prox Switch - PNP (sourcing)
5 = Prox Switch - NPN (sinking)
6 = No Sensing
7* = 8 mm Prox Ready
Quick Disconnect Cord Set
Z = Hall Effect - PNP (sourcing)
Y = Hall Effect - NPN (sinking)
X = Reed Switch
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.
See Sensor section.
*Does not include switch.

Example order:

Part Number: GS07503LB1H3CR4*

Part Description: 3/4 bore by 3 inch stroke with linear ball bearings, standard seals, hardened steel guide shafts, reed 2 position sensing, cylinder to right, no shocks.

For Multi-Position Gantry ordering *see page 9.*

*When entering an order, DO NOT use spaces or dashes.

When Ordering Additional Sensors and Shocks

| SWITCH DESCRIPTION | STANDARD PART NO. | QUICK DISCONNECT PART NO. |
|------------------------------|-------------------|---------------------------|
| Hall Effect - PNP (Sourcing) | HPNPS31 | HPNPQ31 |
| Hall Effect - NPN (Sinking) | HNPNS32 | HNPNQ32 |
| Reed Switch | RSS02 | RSQ02 |
| Prox Switch - PNP (Sourcing) | SWPP - 0001 | SWPP - QS01 |
| Prox Switch - NPN (Sinking) | SWPN - 0001 | SWPN - QS01 |
| Prox Switch - PNP 90° | - | SWPP - QL01 |
| Prox Switch - NPN 90° | - | SWPN - QL01 |
| 90° 5 meter cable | - | PXC 90 |
| Straight 5 meter cable | - | PXC ST |

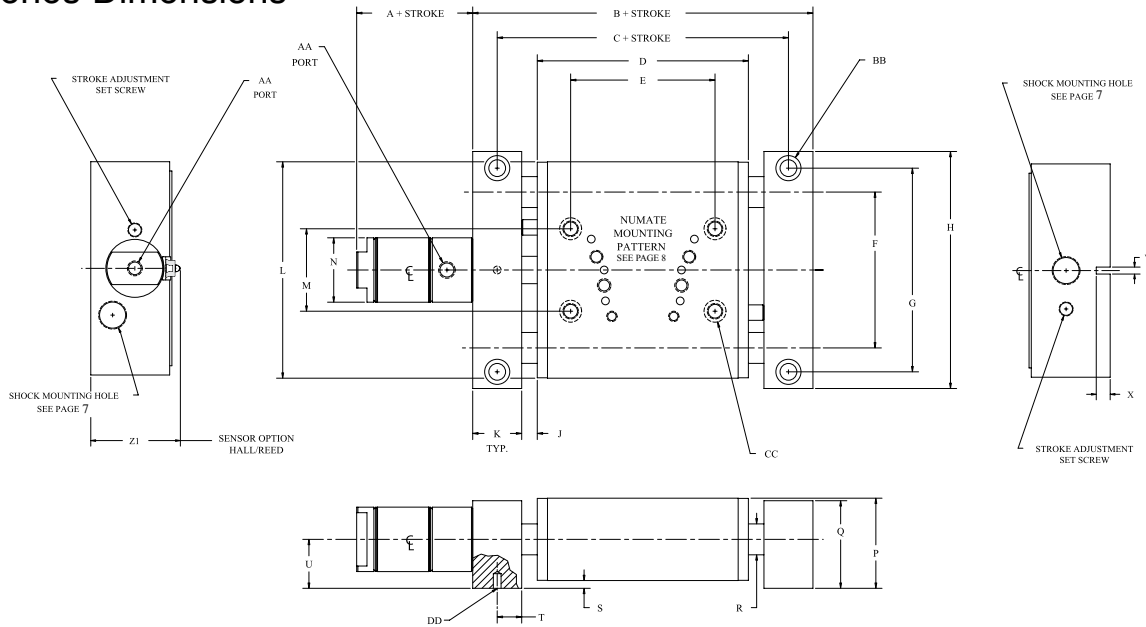
| SLIDE SERIES | SHOCK ABSORBER |
|--------------|----------------|
| GS075 | SK106 |
| GS106 | SK106 |
| GS150 | SK150 |
| GS200 | SK200 |

*Bands and tracks required for mounting.

Reference bracket in the Switch Application Chart in the Sensor section.



GS Series Dimensions



| | GS075 | | GS106 | | GS150 | | GS200 | |
|----|--|-------------|---|---------------|--|---------------|--|---------------|
| A | 2.47 | (62.7) | 2.62 | (66.5) | 2.81 | (71.4) | 3.50 | (88.9) |
| B | 5.78 | (146.8) | 6.90 | (175.3) | 8.25 | (209.6) | 9.91 | (251.7) |
| C | 5.15 | (130.8) | 5.90 | (149.9) | 7.06 | (179.3) | 8.41 | (213.6) |
| D | 4.28 | (108.7) | 4.40 | (111.8) | 5.12 | (130.0) | 6.40 | (162.6) |
| E | 3.00 | (76.2) | 3.25 | (82.6) | 3.50 | (88.9) | 4.00 | (101.6) |
| F | 2.75 | (69.8) | 3.25 | (82.6) | 3.78 | (96.0) | 4.81 | (122.2) |
| G | 3.70 | (94.0) | 4.31 | (109.5) | 4.94 | (125.5) | 6.28 | (159.5) |
| H | 4.25 | (108.0) | 4.95 | (125.7) | 5.75 | (146.1) | 7.00 | (177.8) |
| J | 0.13 | (3.3) | 0.25 | (6.4) | 0.38 | (9.7) | 0.25 | (6.4) |
| K | 0.63 | (16.0) | 1.00 | (25.4) | 1.19 | (30.2) | 1.50 | (38.1) |
| L | 4.00 | (101.6) | 4.63 | (117.6) | 5.25 | (133.4) | 6.80 | (172.7) |
| M | 1.40 | (35.6) | 1.50 | (38.1) | 2.00 | (50.8) | 2.50 | (63.5) |
| N | 0.88 | (22.4) | 1.13 | (28.7) | 1.56 | (39.6) | 2.07 | (52.6) |
| P | 1.62 | (41.1) | 2.12 | (53.8) | 2.19 | (55.6) | 2.75 | (69.8) |
| Q | 1.50 | (38.1) | 2.00 | (50.8) | 2.13 | (54.1) | 2.56 | (65.0) |
| R | 0.50 | (12.7) | 0.63 | (16.0) | 0.75 | (19.1) | 1.00 | (25.4) |
| S | 0.38 | (9.7) | 0.13 | (3.3) | 0.19 | (4.8) | 0.25 | (6.4) |
| T | 0.311/0.313 | (7.90/7.95) | 0.499/0.501 | (12.67/12.72) | 0.593/0.595 | (15.06/15.11) | 0.749/0.751 | (19.02/19.08) |
| U | 1.00 | (25.4) | 1.13 | (28.7) | 1.19 | (30.2) | 1.50 | (38.1) |
| W | 0.1870/0.1880 | (4.75/4.78) | 0.1870/0.1880 | (4.75/4.78) | 0.1870/0.1880 | (4.75/4.78) | 0.2500/0.2510 | (6.35/6.38) |
| X | 0.30 | (7.6) | 0.30 | (7.6) | 0.30 | (7.6) | 0.40 | (10.2) |
| AA | 1/8 NPTF | | 1/8 NPTF | | 1/8 NPTF | | 1/4 NPTF | |
| BB | C'bored for 1/4 SHCS, Tapped 5/16-24 x 0.62 DP From Opposite Side. | | C'bore for 5/16 SHCS Tapped 3/8-24 x 0.59 DP From Opposite Side. | | C;bore for 5/16 SHCS, Tapped 3/8-24 x 0.59 DP From Opposite Side. | | C'bore for 3/8 SHCS, Tapped 7/16-20 x 0.88 DP From Opposite Side. | |
| CC | Tapped 5/16-24 x .62 DP, C'bored for 1/4 SHCS, From Opposite Side. | | Tapped 3/8-24 x 0.59 DP, C'bore for 5/16 SHCS From Opposite Side. | | Tapped 3/8-24 x 0.59 DP, C;bore for 5/16 SHCS, From Opposite Side. | | Tapped 7/16-20 x 0.88 DP, C'bore for 3/8 SHCS, From Opposite Side. | |
| DD | 0.1870/0.1880 | (4.75/4.78) | 0.1870/0.1880 | (4.75/4.78) | 0.1870/0.1880 | (4.75/4.78) | 0.2500/0.2510 | (6.35/6.38) |
| Z1 | 1.91 | (49.0) | 2.16 | (55.0) | 2.44 | (62.0) | 3.01 | (76.0) |

(mm)

Unit Weight Table

| | GS075 | GS106 | GS150 | GS200 |
|-----------------------------|-------|-------|-------|-------|
| Base Unit Weight (lbs.) | 3.81 | 6.46 | 9.18 | 16.75 |
| Adder/inch of stroke (lbs.) | 0.15 | 0.22 | 0.34 | 0.59 |

Add base weight to inch adder X stroke. Sample weight calculation: Model GS075 W/6" stroke, 3.81 + (0.15 x 6) = 4.71 lbs.

Unit Output Force Table

| | GS075 | GS106 | GS150 | GS200 |
|----------------------|-------|-------|-------|-------|
| Extend Force (lbs.) | 0.44 | 0.88 | 1.76 | 3.14 |
| Retract Force (lbs.) | 0.39 | 0.81 | 1.61 | 2.83 |

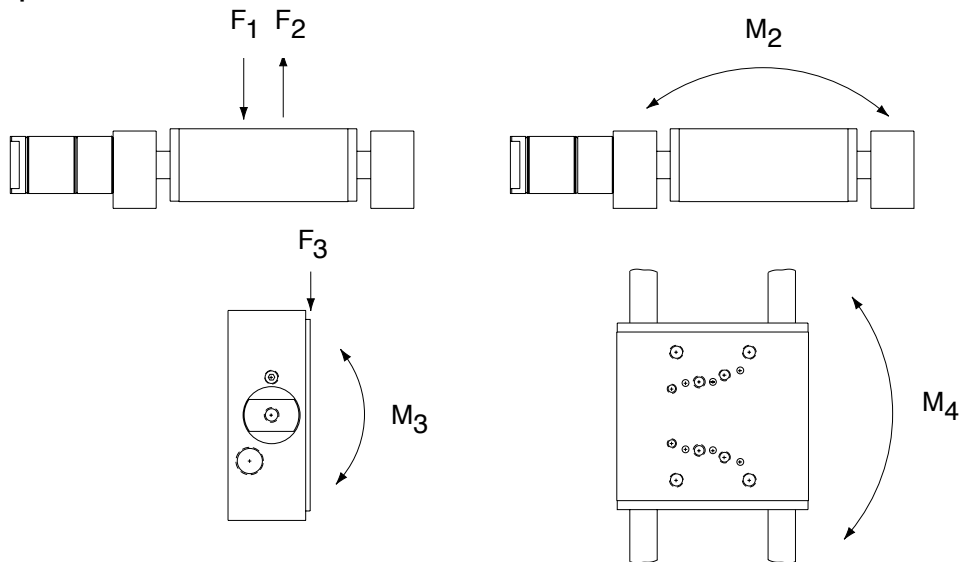
Multiply force factor X input pressure in PSI. Sample output force calculation: Model GS150 extend force@ 70PSI, 1.76 x 70 = 123.2 lbs.



GS Series Gantry Slides

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Technical Specifications

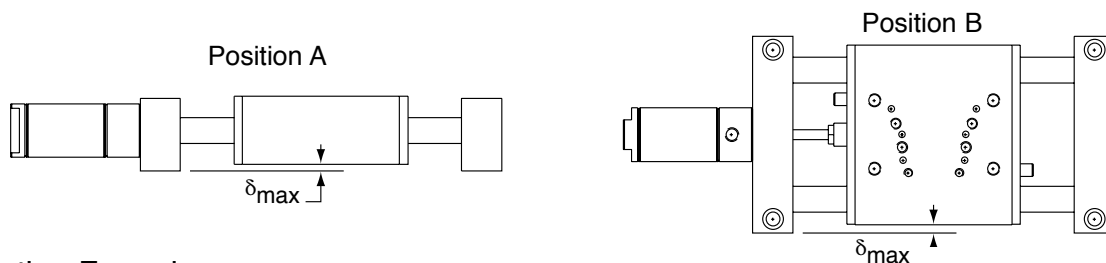


Linear Ball Bearing Dynamic Loads

| SLIDE SERIES | $F_1 / F_2 / F_3$ | | M2 | | M3 | | M4 | |
|--------------|-------------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|
| GS075 | 90 lb. | (40.8) kg. | 110 in. lb. | (12.4) N.m. | 222 in. lb. | (25.1) N.m. | 222 in. lb. | (25.1) N.m. |
| GS106 | 160 lb. | (72.6) kg. | 178 in. lb. | (20.1) N.m. | 455 in. lb. | (51.4) N.m. | 455 in. lb. | (51.4) N.m. |
| GS150 | 275 lb. | (124.7) kg. | 262 in. lb. | (29.6) N.m. | 790 in. lb. | (89.3) N.m. | 790 in. lb. | (89.3) N.m. |
| GS200 | 520 lb. | (235.9) kg. | 435 in. lb. | (49.1) N.m. | 1657 in. lb. | (187.2) N.m. | 1657 in. lb. | (187.2) N.m. |

Teflon Dynamic Loads

| SLIDE SERIES | $F_1 / F_2 / F_3$ | | M2 | | M3 | | M4 | |
|--------------|-------------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|
| GS075 | 63 lb. | (28.6) kg. | 77 in. lb. | (8.7) N.m. | 155 in. lb. | (17.5) N.m. | 155 in. lb. | (17.5) N.m. |
| GS106 | 112 lb. | (50.8) kg. | 124 in. lb. | (14.0) N.m. | 318 in. lb. | (35.9) N.m. | 318 in. lb. | (35.9) N.m. |
| GS150 | 193 lb. | (87.5) kg. | 183 in. lb. | (20.7) N.m. | 553 in. lb. | (62.5) N.m. | 553 in. lb. | (62.5) N.m. |
| GS200 | 364 lb. | (165.1) kg. | 304 in. lb. | (34.3) N.m. | 1159 in. lb. | (130.9) N.m. | 1159 in. lb. | (130.9) N.m. |



Deflection Formulas

| | POSITION A | POSITION B |
|-------|---|---|
| GS075 | $\delta_{max} = (\text{LOAD}) \left(\left(\frac{\text{STROKE}}{2} - 1.325 \right)^3 \left(2 + \frac{15.9}{\text{STR}_{\text{OKE}-2.65}} \right) \right) 1.1331 \times 10^{-7}$ | $\delta_{max} = (\text{LOAD}) \left(\left(\frac{\text{STROKE}}{2} - 1.325 \right)^3 \left(2 + \frac{15.9}{\text{STR}_{\text{OKE}-2.65}} \right) \right) 7.9317 \times 10^{-8}$ |
| GS106 | $\delta_{max} = (\text{LOAD}) \left(\left(\frac{\text{STROKE}}{2} - 1.200 \right)^3 \left(2 + \frac{19.5}{\text{STR}_{\text{OKE}-2.40}} \right) \right) 4.6491 \times 10^{-8}$ | $\delta_{max} = (\text{LOAD}) \left(\left(\frac{\text{STROKE}}{2} - 1.200 \right)^3 \left(2 + \frac{19.5}{\text{STR}_{\text{OKE}-2.40}} \right) \right) 3.2544 \times 10^{-8}$ |
| GS150 | $\delta_{max} = (\text{LOAD}) \left(\left(\frac{\text{STROKE}}{2} - 1.500 \right)^3 \left(2 + \frac{18.0}{\text{STR}_{\text{OKE}-3.00}} \right) \right) 2.2515 \times 10^{-8}$ | $\delta_{max} = (\text{LOAD}) \left(\left(\frac{\text{STROKE}}{2} - 1.500 \right)^3 \left(2 + \frac{18.0}{\text{STR}_{\text{OKE}-3.00}} \right) \right) 1.5761 \times 10^{-8}$ |
| GS200 | $\delta_{max} = (\text{LOAD}) \left(\left(\frac{\text{STROKE}}{2} - 1.828 \right)^3 \left(2 + \frac{21.9}{\text{STR}_{\text{OKE}-3.66}} \right) \right) 7.1055 \times 10^{-9}$ | $\delta_{max} = (\text{LOAD}) \left(\left(\frac{\text{STROKE}}{2} - 1.828 \right)^3 \left(2 + \frac{21.9}{\text{STR}_{\text{OKE}-3.66}} \right) \right) 4.9739 \times 10^{-9}$ |

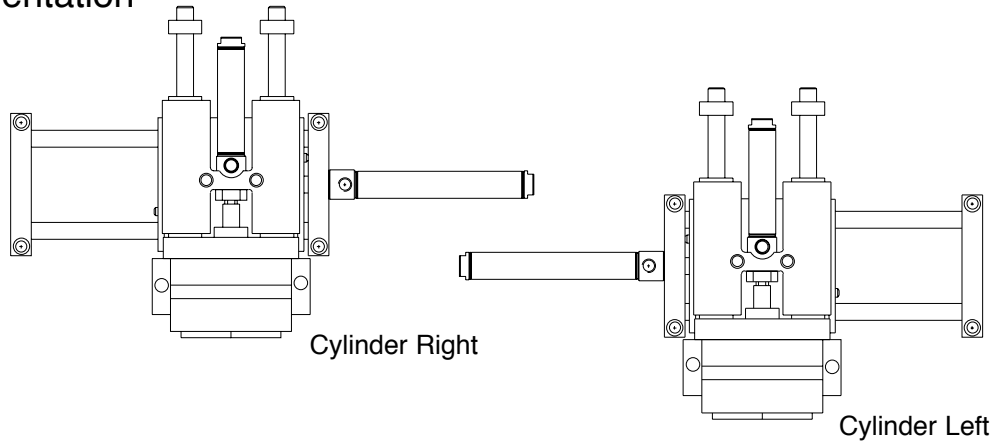
LOAD and STROKE values input by customer.

Sample Deflection Calculation: GS10605 with 110# load in Position A

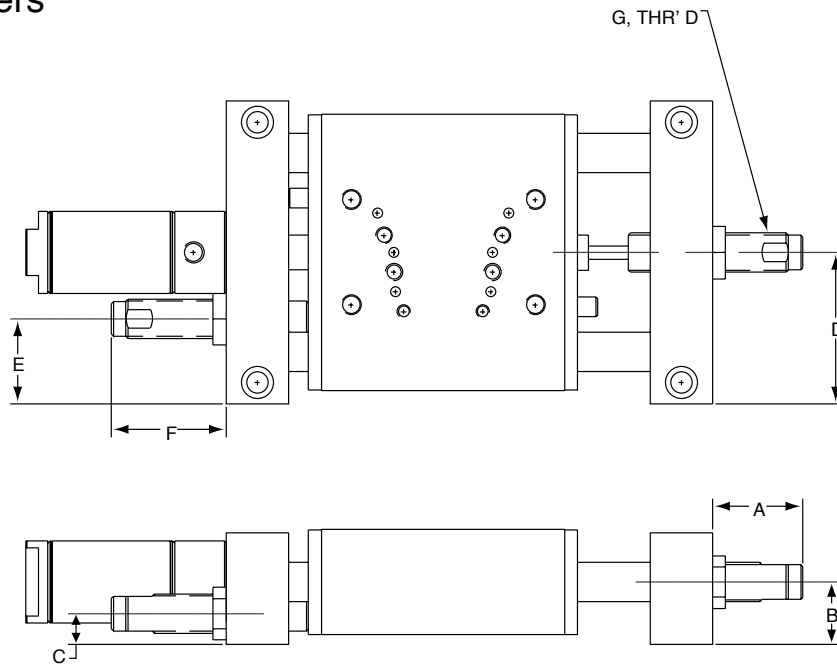
$$\delta_{max} = (110) \left(\left(\frac{5}{2} - 1.200 \right)^3 \left(2 + \frac{19.5}{5-2.40} \right) \right) 4.6491 \times 10^{-8} : \delta_{max} = (110)(1.300)^3(2+7.5)4.6491 \times 10^{-8} = 0.00011 \text{ inch at mid travel}$$



Cylinder Orientation



Shock Absorbers



Dimensions

| | GS075 | | GS106 | | GS150 | | GS200 | |
|------|-----------|--------|-----------|--------|----------|--------|--------|--------|
| A | 2.78 | (70.6) | 2.21 | (56.1) | 1.72 | (43.7) | 2.34 | (59.4) |
| B | 1.00 | (25.4) | 1.13 | (28.7) | 1.19 | (30.2) | 1.50 | (38.1) |
| C | 0.61 | (15.5) | 0.63 | (16.0) | 0.59 | (15.0) | 0.74 | (18.8) |
| D | 2.13 | (54.1) | 2.48 | (63.0) | 2.88 | (73.2) | 3.50 | (88.9) |
| E | 1.20 | (30.5) | 1.48 | (37.6) | 1.62 | (41.1) | 1.85 | (47.0) |
| F | 3.12 | (79.2) | 2.62 | (66.5) | 2.19 | (55.6) | 2.87 | (72.9) |
| G | 9/16 - 18 | | 9/16 - 18 | | 3/4 - 16 | | 1 - 12 | |
| (mm) | | | | | | | | |

Shock Absorbers

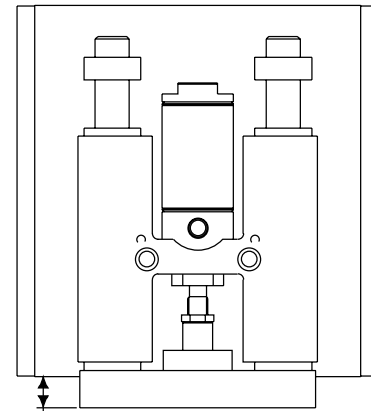
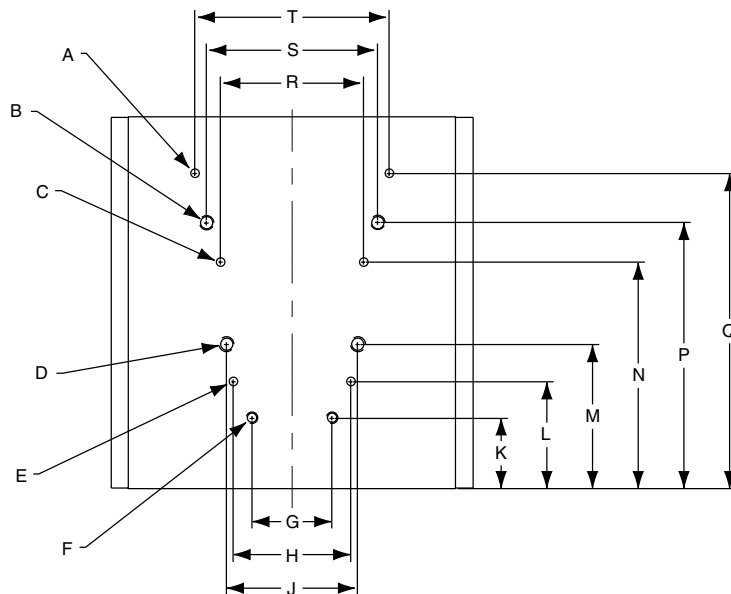
| | GS075 | GS106 | GS150 | GS200 |
|----------|-------|-------|-------|-------|
| PART NO. | SK106 | SK106 | SK150 | SK200 |



GS Series Gantry Slides

NUMATICS®

NuMate Mounting System



Refer To Numate Capatability Table

NuMate™ Pattern Dimensional Data

| | GS075 | GS106 | GS150 | GS200 |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| A | 0.187/0.188 x 0.37 DP | 0.187/0.188 x 0.37 DP | 0.187/0.188 x 0.37 DP | 0.250/0.251 x 0.50 DP |
| B | 1/4-20 x 0.37 DP | 5/16-18 x 0.50 DP | 5/16-18 x 0.50 DP | 3/8-16 x 0.60 DP |
| C | 0.125/0.126 x 0.25 DP | 0.187/0.188 x 0.37 DP | 0.187/0.188 x 0.37 DP | 0.187/0.188 x 0.37 DP |
| D | #10-32 x 0.33 DP | 1/4-20 x 0.37 DP | 5/16-18 x 0.50 DP | 5/16-18 x 0.50 DP |
| E | .0937/.0947 x 0.18 DP | 0.125/0.126 x 0.25 DP | 0.187/0.188 x 0.37 DP | 0.187/0.188 x 0.37 DP |
| F | #6-32 x 0.22 DP | #10-32 x 0.33 DP | 1/4-20 x 0.37 DP | 5/16-18 x 0.50 DP |
| G | 1.00 (25.4) | 1.25 (31.8) | 1.50 (38.1) | 1.87 (47.5) |
| H | 1.00 (25.4) | 1.38 (35.1) | 1.81 (46.0) | 1.87 (47.5) |
| J | 1.25 (31.8) | 1.50 (38.1) | 1.87 (47.5) | 2.25 (57.2) |
| K | 1.12 (28.4) | 1.38 (35.1) | 1.50 (38.1) | 2.38 (60.5) |
| L | 1.33 (33.8) | 1.69 (42.9) | 1.87 (47.5) | 2.76 (70.1) |
| M | 1.52 (38.6) | 1.94 (49.3) | 2.25 (57.2) | 3.08 (78.2) |
| N | 1.83 (46.5) | 2.31 (58.7) | 2.63 (66.8) | 3.52 (89.4) |
| P | 2.13 (54.1) | 2.69 (68.3) | 2.95 (74.9) | 3.87 (98.3) |
| Q | 2.50 (63.5) | 3.06 (77.7) | 3.38 (85.9) | 4.37 (111.0) |
| R | 1.38 (35.1) | 1.81 (46.0) | 1.87 (47.5) | 2.50 (63.5) |
| S | 1.50 (38.1) | 1.87 (47.5) | 2.25 (57.2) | 2.75 (69.8) |
| T | 1.81 (46.0) | 1.87 (47.5) | 2.50 (63.5) | 3.00 (76.2) |

(mm)

NuMate™ Compatibility Table & Edge Reference

| | GS075 | GS106 | GS150 | GS200 |
|-------|---------------|---------------|---------------|---------------|
| SH031 | 0.15 (3.8) | | | |
| SH056 | 0.36 (9.1) | 0.50 (12.7) | | |
| SH075 | 0.21 (5.3) | 0.40 (10.2) | 0.84 (21.3) | |
| SH106 | | 0.22 (5.6) | 0.65 (16.5) | 0.52 (13.2) |
| SH150 | | | 0.30 (7.6) | 0.16 (4.1) |
| SH200 | | | | 0.13 (3.3) |
| LC056 | -0.28 (-7.1) | -0.14 (-3.6) | | |
| LC075 | -0.54 (-13.7) | -0.35 (-8.9) | 0.09 (2.3) | |
| LC106 | | -0.85 (-21.6) | -0.41 (-10.4) | -0.54 (-13.7) |
| LC150 | | | -0.89 (-22.6) | -1.02 (-25.9) |
| B04 | 0.09 (2.3) | 0.24 (6.1) | | |
| B06 | 0.26 (6.6) | 0.40 (10.2) | | |
| B08 | 0.84 (21.3) | 0.99 (25.2) | | |

(mm)

8

Information subject to change without notice. For ordering information or regarding your local sales office visit www.numatics.com.



How to Order

3 Position Gantry Slide

GM C 02 01 A 1 1 6 D R 4

Bore Sizes

- C = 3/4 Inch
- F = 1-1/16 Inches
- K = 1-1/2 Inches
- L = 2 Inches

Front Cylinder (Total Stroke)

01 - 18 Inches

Fractional Stroke for Front Cylinder

- * = 0 Inch
- C = 1/4 Inch
- E = 1/2 Inch
- G = 3/4 Inch
- *Leave blank if fractional stroke = 0.

Back Cylinder (First Stroke)

01 - 18 Inches

Fractional Stroke for Back Cylinder

- A = 0 Inch
- C = 1/4 Inch
- E = 1/2 Inch
- G = 3/4 Inch

Bearing and Guide Shaft Type

- 1 = Linear Ball Hardened Steel Shafts
- 2 = Linear Ball Stainless Steel Shafts
- 3 = Teflon® Hardened Steel Shafts
- 4 = Teflon® Stainless Steel Shafts

Cylinder Type

- 1 = Buna-N Seals
- 2 = Viton Seals (no magnet)
- 3 = Buna-N Seals w/Cushions Full Ext. and Ret. only

Shock Absorbers

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

Cylinder Orientation

- R = Right
- L = Left

Sensing Position

- A = Single Position Extend
- B = Single Position Retract
- C = Two Position Sensing
- D = No Sensing
- E = 3 Position (Extend, Retract & Mid Stroke)
- F = 4 Position
- G = 5 Position

Sensing Type

- Standard Cord Set
- 1 = Hall Effect - PNP (sourcing)
- 2 = Hall Effect - NPN (sinking)
- 3 = Reed Switch
- 4 = Prox Switch on Cylinder - PNP (sourcing)
- 5 = Prox Switch on Cylinder - NPN (sinking)
- 6 = No Sensing
- Quick Disconnect Cord Set
- Z = Hall Effect - PNP (sourcing)
- Y = Hall Effect - NPN (sinking)
- X = Reed Switch
- W = Prox Switch on Cylinder - PNP (sourcing) Straight
- V = Prox Switch on Cylinder - NPN (sinking) Straight
- U = Prox Switch on Cylinder - PNP (sourcing) 90 Deg.
- T = Prox Switch on Cylinder - NPN (sinking) 90 Deg.

See Sensor section.

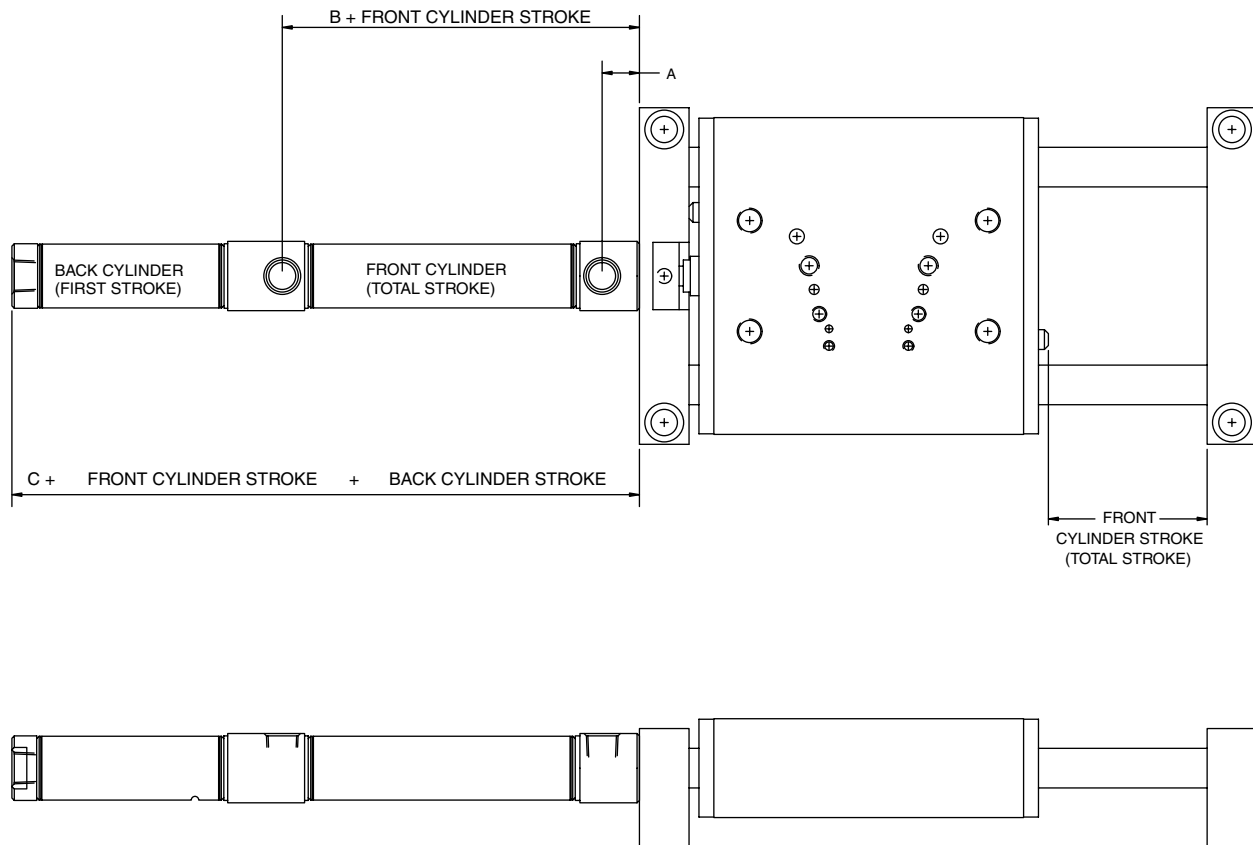
*Does not include switch.



GS Series Gantry Slides

NUMATICS®

3 Position Gantry Slide



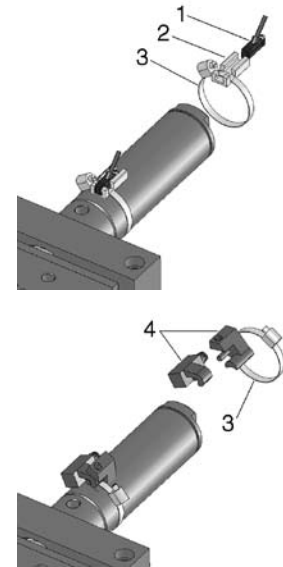
Dimensions - Inches

| GS SERIES | A | B | C |
|-----------|------|------|------|
| GS075 | 0.47 | 2.50 | 4.91 |
| GS106 | 0.56 | 2.59 | 5.16 |
| GS150 | 0.63 | 2.75 | 5.56 |
| GS200 | 0.74 | 3.45 | 6.93 |



GS Series Switch Information

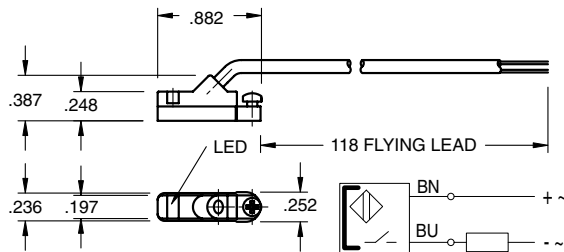
| | SWITCH OR BRACKET DESCRIPTION | STANDARD PART NO. | QUICK DISCONNECT PART NO. |
|---|-------------------------------|-------------------|---------------------------|
| 1 | Hall Effect - PNP (Sourcing) | HPNPS31 | HPNPQ31 |
| 1 | Hall Effect -NPN (Sinking) | HNPNS32 | HNPNQ32 |
| 1 | Reed Switch | RSS02 | RSQ02 |
| 2 | Short Switch Bracket | SBS-1 | SBS-1 |
| 2 | Long Switch Bracket** | SBL-2 | SBL-2 |
| 3 | Switch Band Clamp | SBC###* | SBC###* |
| 4 | Prox Switch - PNP (Sourcing) | SWPP-0001 | SWPP-QS01 |
| 4 | Prox Switch - NPN (Sinking) | SWPN-0001 | SWPN-QS01 |



*Use the 3 digit bore size with "SBC" number to complete part number
Example: GS15003LB1H3CR4 = Switch Band clamp p/n: SBC150

** Long bracket used on strokes of 1" or less with two position sensing.

RSS02 – Reed Switch (AC/DC NO), flying lead



Sensing Data

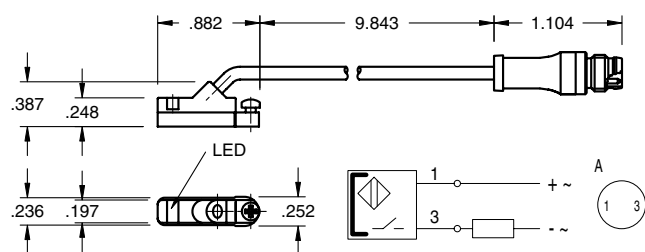
| | | |
|--|---------|-----------------------|
| Ambient temperature range T_a | (°F/°C) | -4 to 176 (-20 to 80) |
| Frequency of operating cycles f at U_e | (kHz) | 0.5 |
| Turn on time t | (ms) | ≤ 0.25 |
| turn off time t | (ms) | 0.03 |
| LED function indication | | yes |

Electrical Data

| | | |
|---|------|----------------------|
| Rated operational voltage U_e | (V) | 3...130 AC/DC |
| Supply voltage U_B | (V) | 3...130 AC/DC |
| Voltage drop U_d at I_e Stat./dyn. | (V) | 3.5 |
| Rated insulation volatage U_i | (V) | 2750 DC (EN 60335-1) |
| Rated supply frequency | (Hz) | AC/DC |
| Rated operational current I_e | (mA) | 50 (10W max.) |
| No-load supply current I_o at U_e d./und. | (mA) | 0 |

Observe polarity for correct LED function

RSQ02 – 8mm connector



Mechanical Data

| | |
|--|-----------|
| Housing material | Polyamide |
| Material of sensing face | Polyamide |
| Connection | PVC cable |
| Degree of Protection | IP 67 |
| Rated shock: half-sinus, 50g, 11 ms | |
| Rated vibration environment: 10g, 10...2000 Hz. 90 min | |



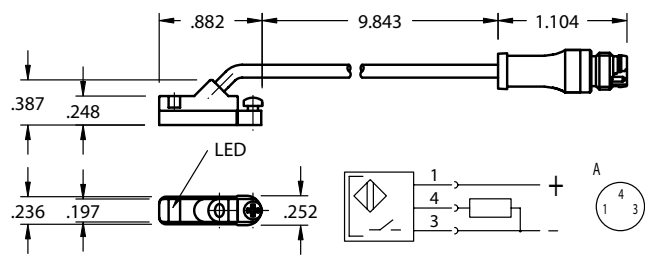
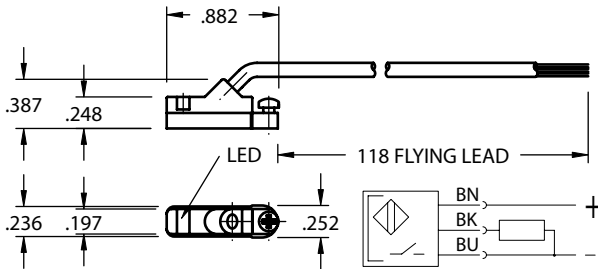


GS Series Gantry Slides

NUMATICS®

HPNPS31 – Electronic Switch (PNP NO), flying lead

HPNPQ31 – 8mm connector



Sensing Data

| | | |
|--|---------|-------------------------------|
| Ambient temperature range t_d | (°F/°C) | -13 to +158 (-25 to +70) |
| Temperature drift | (% of) | $\leq 0.3\%/^{\circ}\text{C}$ |
| Frequency of operating cycles f at U_e | (kHz) | 10 |
| Turn on time t | (ms) | .05 |
| Turn off time t | (ms) | .05 |
| Utilization categories | | DC13 |
| Function—supply voltage indication | | YES |

Electrical Data

| | | |
|---|---------------|------------|
| Rated operational voltage U_e | (V) | 24 DC |
| Supply voltage U_B | (V) | 10...30 DC |
| incl. ripple | (% of U_e) | 15 |
| Voltage drop U_d at I_e Stat./dyn. | (V) | 1/- |
| Rated insulation voltage U_i | (V) | 75 AC |
| Rated supply frequency | (Hz) | DC |
| Rated operational current I_e | (mA) | 200 |
| No-load supply current I_o at U_e d./und. | (mA) | 25/13 |
| Protected against polarity reversal | | YES |

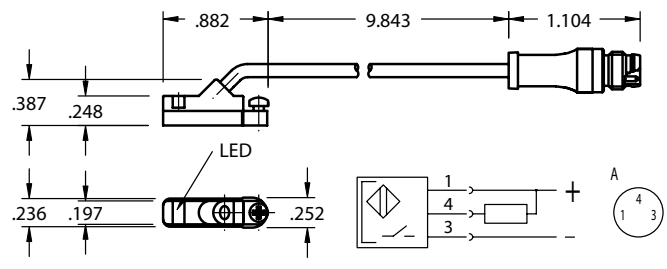
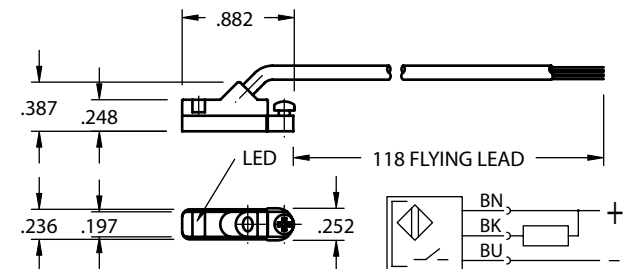
Mechanical Data

| | |
|---|-----------|
| Housing material | Polyamide |
| Material of sensing face | Polyamide |
| Connection | PVC cable |
| Degree of Protection | IP 67 |
| Rated shock: half-sinus, 30 g, 11 ms | |
| Rated vibration environment: 55 Hz, 1mm amplitude, 3 x 30 | |



HNPNS32 – Electronic Switch (NPN NO), flying lead

HNPNQ32 – 8mm connector



Sensing Data

| | | |
|--|---------------|-------------------------------|
| Ambient temperature range t_d | (°F/°C) | -13 to +158 (-25 to +70) |
| Temperature drift | (% of S_r) | $\leq 0.3\%/^{\circ}\text{C}$ |
| Frequency of operating cycles f at U_e | (kHz) | 10 |
| Turn on time t | (ms) | .05 |
| Turn off time t | (ms) | .05 |
| Utilization categories | | DC13 |
| Function—supply voltage indication | | YES |

Electrical Data

| | | |
|---|---------------|------------|
| Rated operational voltage U_e | (V) | 24 DC |
| Supply voltage U_B | (V) | 10...30 DC |
| incl. ripple | (% of U_e) | 15 |
| Voltage drop U_d at I_e Stat./dyn. | (V) | 1/- |
| Rated insulation voltage U_i | (V) | 75 AC |
| Rated supply frequency | (Hz) | DC |
| Rated operational current I_e | (mA) | 200 |
| No-load supply current I_o at U_e d./und. | (mA) | 25/13 |
| Protected against polarity reversal | | YES |

Mechanical Data

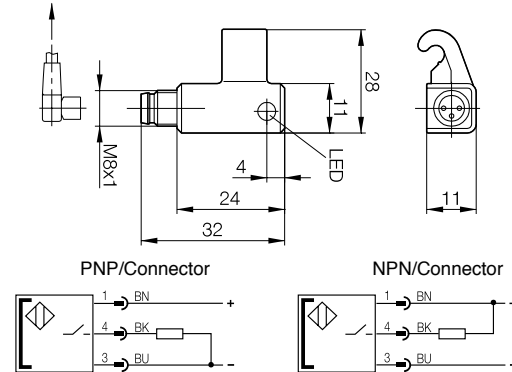
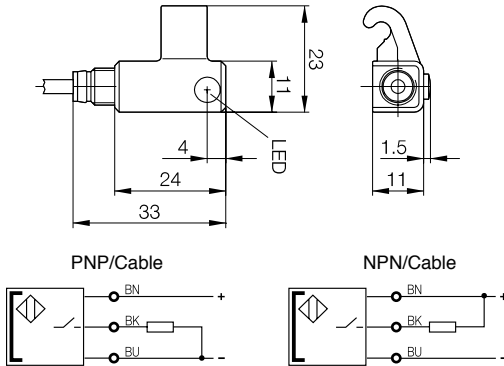
| | |
|---|-----------|
| Housing material | Polyamide |
| Material of sensing face | Polyamide |
| Connection | PVC cable |
| Degree of Protection | IP 67 |
| Rated shock: half-sinus, 30 g, 11 ms | |
| Rated vibration environment: 55 Hz, 1mm amplitude, 3 x 30 | |





SWPP-0001 (PNP NO), flying lead
SWPN-0001 (NPN NO), flying lead

SWPP-QS01 – 8 mm connector
SWPN-QS01 – 8 mm connector



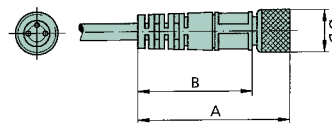
| | |
|--|---|
| Hysteresis of I_{Hn} | $\leq 45\%$ |
| Temperature drift of turn-on point of I_{Hn} | $\leq 0.3\%/^{\circ}\text{C}$ |
| Turn-on delay | ≤ 0.5 ms |
| Turn-off delay | ≤ 0.5 ms |
| Supply voltage U_B | 10...30 Vdc |
| Voltage drop U_d | ≤ 3.1 V |
| Rated insulation voltage U_i | 75 Vdc |
| Rated operating current I_e | 200 mA ¹ |
| No-load supply current I_0 max. | ≤ 30 mA |
| Off-state current I_r | ≤ 80 μA |
| Protected against polarity reversal | yes |
| Short circuit protected | yes |
| Load capacitance | ≤ 1 μF |
| Ambient temperature range T_a | $-25^{\circ}\text{C} \dots +70^{\circ}\text{C}$ |
| Utilization category | DC 13 |
| Degree of protection per IEC 60529 | IP 67 |
| Housing material | PBT Hardened |

Female Connectors for Reed Switches and Hall Effect Sensors

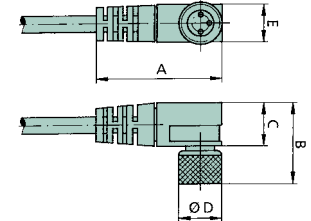
Dimensions (mm)

| TYPE | ORDER CODE |
|---------------------|------------|
| Straight, 5 m Cable | PXCST |
| Elbow, 5 m Calbe | PXC90 |

Straight Type

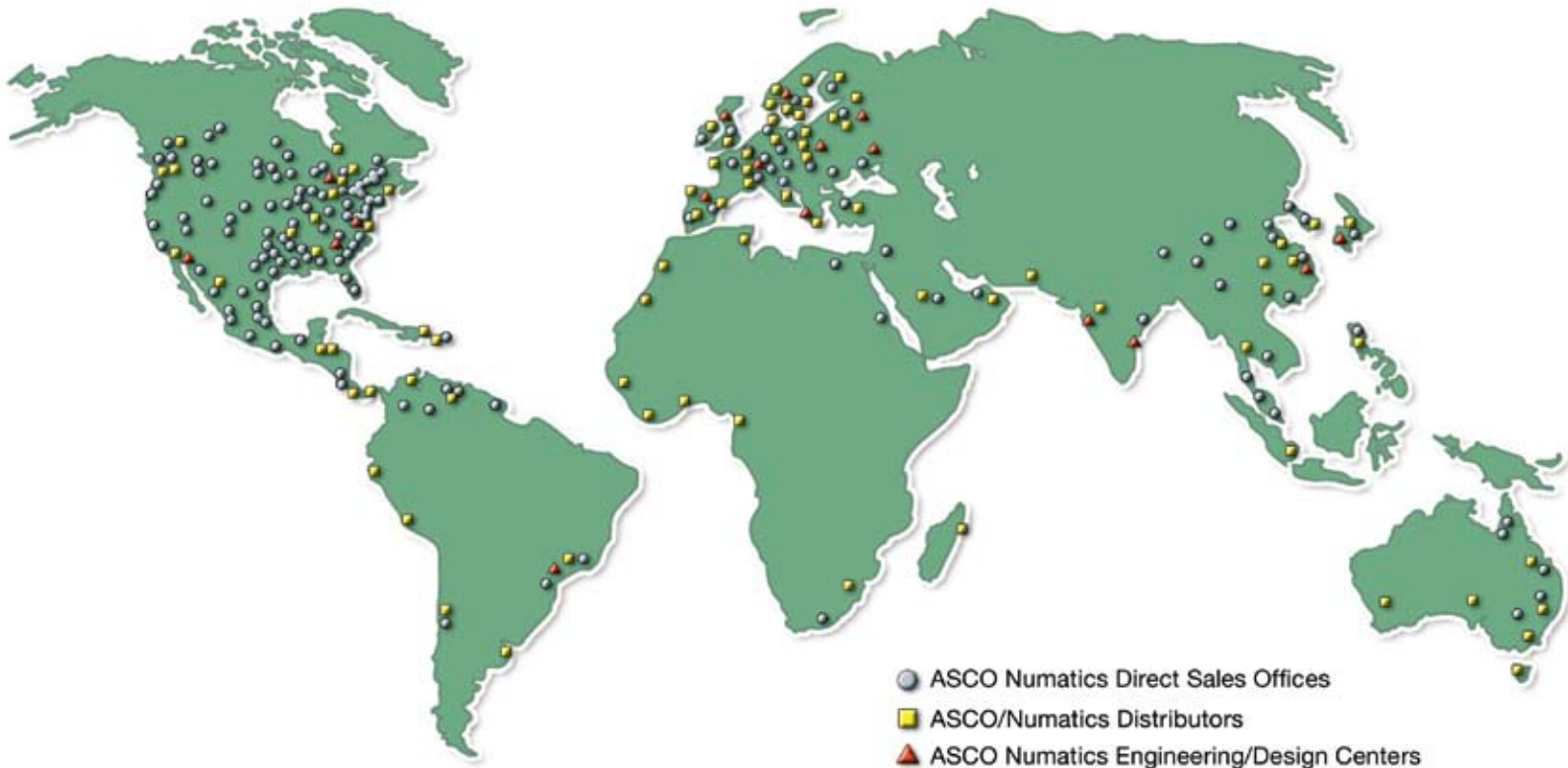


Elbow Type



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