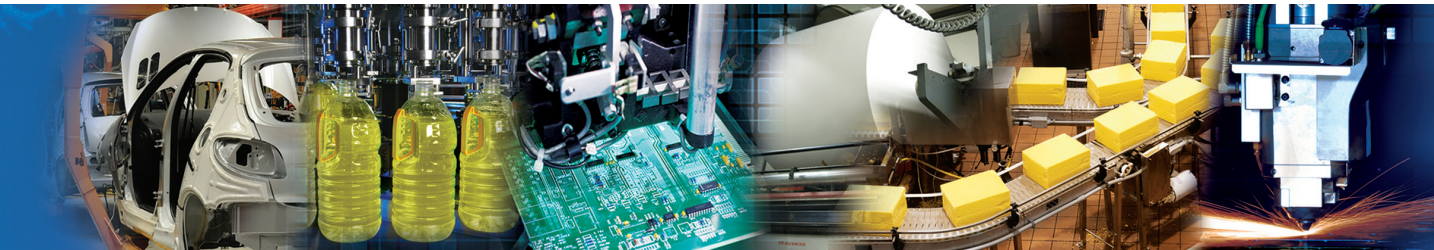
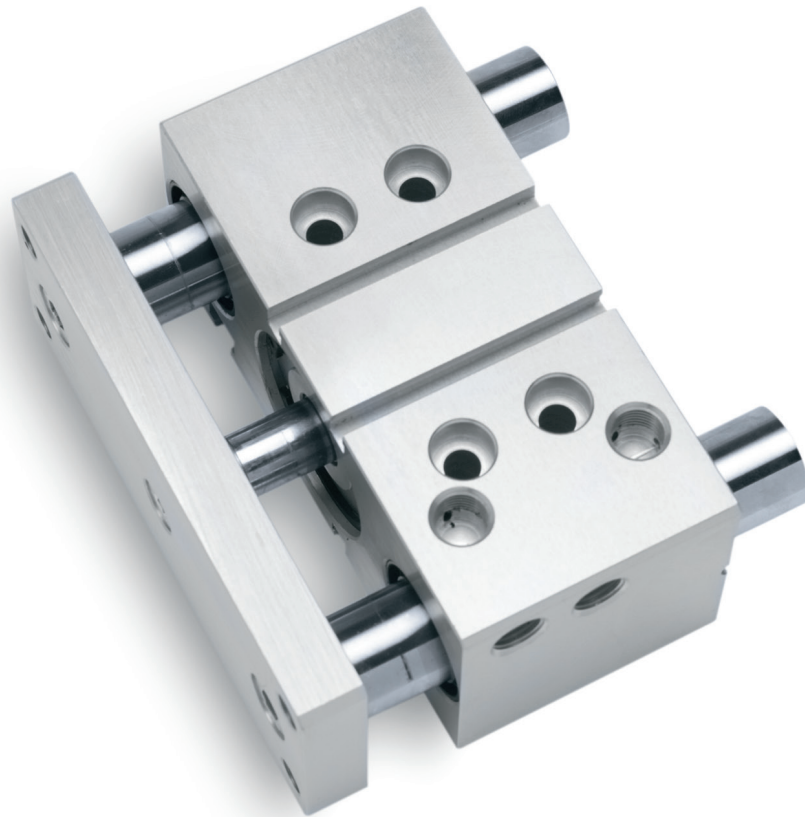


NUMATICS®

CGT Series

Compact Guide Slide



www.numatics.com

NUMATICS®

Numatics, Inc. is a leading manufacturer of pneumatic products and motion control products.

Our broad spectrum of standard, custom developed products and application components have made a significant impact on pneumatic innovation as well as pneumatic and motion control technology. Our company has an extensive history of generating innovative concepts and technological breakthroughs. Many of today's standard features in pneumatic technology were industry firsts from Numatics. We continue our innovative approach to product development by developing electric motion control solutions and enhancing our embedded Fieldbus and I/O products to continually meet and solve our customer's application requirements.



Today Numatics is proud to be a part of the Industrial Automation Division of Emerson Electric Co.

Emerson (NYSE:EMR), based in St. Louis, Missouri (USA), is a global leader in bringing technology and engineering together to provide innovative solutions for customers in industrial, commercial, and consumer markets through its network power, process management, industrial automation, climate technologies, and appliance and tools businesses. For more information, visit www.Emerson.com.





Numatics Express Shipping Program guarantees† product shipment in two, three or five business days. Unlike most traditional quick ship programs, the Numatics Express Shipping Program includes the most comprehensive offering in the industry. This program encompasses the range and options that you require!

Numatics is committed to offering you the highest level of customer service, quality and performance.

2DAY

Numatics Express 2Day shipping program guarantees† product shipment in two business days. The program includes the most popular valve, air preparation and actuator products and includes applicable switches and mounting accessories.

Numatics guarantees† to ship any order received before 3 pm EST for up to 10 2Day products* in two business days.

3DAY

Numatics Express shipping program offers a 3Day shipping program that guarantees† product shipment of a fully assembled and tested valve manifold in 3 business days. The program includes the most popular manifold configurations of the 2000 and Mark series valves:

- Sub D, Terminal Strip and Fieldbus Electronic Options
- Can be configured for DIN Rail Mounting and Muffled Exhaust
- Shipped complete and 100% tested

The 3Day Express shipping program enables you to create a 2 to 8 station manifold assembly complete with any combination of valves, regulators, and blank stations that can be configured from the valve model charts in this catalog.

Numatics guarantees† to ship any order received before 3 pm EST for up to 5 manifold assemblies configured from this catalog in three business days or Numatics pays the shipping cost.

5DAY

We are pleased to expand Numatics Express to include a broad range of products in a 5Day shipping program. Numatics guarantees† to ship up to 10 of any 5Day product** for orders received before 3 pm EST in 5 business days or Numatics pays the shipping cost.

We are committed to providing you with an unmatched level of customer service, quality, and reliability. If you cannot locate the specific product for your application or need additional product specifications, visit www.numatics.com or call 888-686-2842. Numatics Express orders cannot be canceled or adjusted once entered. Saturdays, Sundays, and Holidays are excluded.

†As industry requirements change, Numatics reserves the right to modify the contents of this catalog and program without notification. Updates on this program can be obtained from the Numatics website www.numatics.com or by calling 888-686-2842, or by contacting your local Numatics representative or distributor and referencing the Numatics Express program.

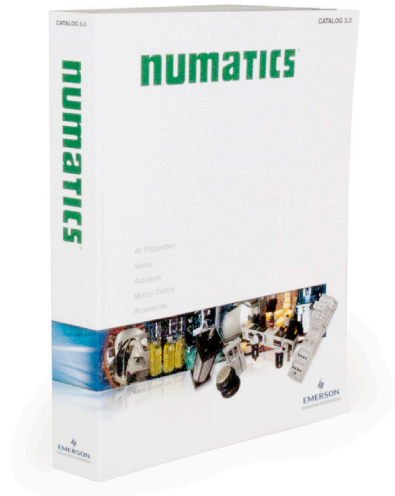
***Sentronic^D Proportional Valves, CGT Compact Slides, NR Series Rodless and Air Bellows are limited to orders up to 5.**

****A Series Large Bore NFPA, ASP Series Steel Body NFPA and G Series Guide Rail Rodless are limited to orders up to 5.**

Welcome to the World of Fluid Automation...

Since 1945, Numatics has emerged as the prominent specialist in developing and manufacturing pneumatic and fluid power components for a widely diverse field of automated industry. From idea to implementation, leading engineers choose Numatics as their single source for:

- Quality Fluid Power components
- Technologically advanced design resources
- Quick response time in delivery and service from around the world



Numasizing®

Developed by Numatics, Numasizing® offers a whole new level of fluid power system optimization. Compare large amounts of component and process data against user objectives and industry benchmarks for the best possible size, pneumatic pressure, actuator stroke velocities and other part and process variable determinations.

CAD Modeling

Save critical development time with the most innovative CAD configuration program in the pneumatic component industry. Numatics in 3D eliminates the time consuming process associated with designing components from scratch based on information found in conventional paper catalogs.

The models are available in 85 different native CAD formats in 2D drawings and 3D models, including all the popular formats including Catia, I-DEAS, Pro/Engineer, SolidWorks, Unigraphics and more.

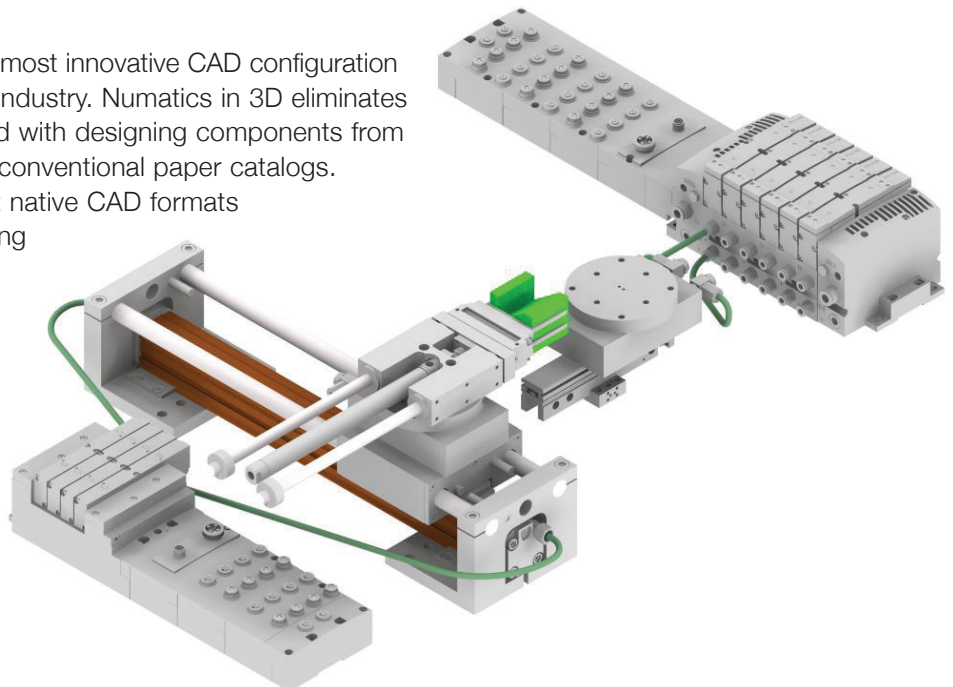


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CGT Series

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CGT Series Compact Guide Slide

A. Body

Anodized aluminum alloy, lightweight and durable. Multiple mounting options, counter bored holes, drilled and tapped holes and extruded "T" slots.

B. Tool Plate

Nickel-plated steel, easy access mounting holes for tooling attachment.

C. Bearings

Two choices, recirculating ball for heavy-duty applications and sintered bronze for medium to light duty applications.

D. Rod Wipers

Steel reinforced rod wiper assures wiping action on guide shafts to protect bearings from operating environment contamination.

E. Guide Shafts

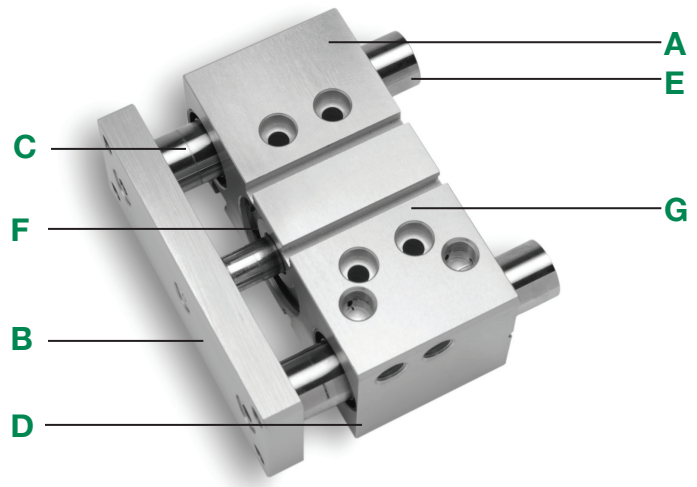
Hardened, ground and polished, Oversized diameter for additional load support and rigidity.

F. Piston

Internal to body. Magnetic band for position sensing standard on all sizes and strokes.

G. Sensor Mounting Track

Extruded directly in body, no external brackets, easy access for Hall effect and Reed switches.



How to Order

CGT 032 050 B 1 6 D X

Bore Diameter

- 016 = 16 mm
- 020 = 20 mm
- 025 = 25 mm
- 032 = 32 mm
- 040 = 40 mm
- 050 = 50 mm

Stroke

- 010 = 10 mm
- 020 = 20 mm
- 025 = 25 mm
- 030 = 30 mm
- 040 = 40 mm
- 050 = 50 mm
- 075 = 75 mm
- 100 = 100 mm

Reference Standard Stroke table for available bore and stroke.

Bearing Option

- B = Bronze Bushing
- L = Linear Ball Bearing

Seal Option

- 1 = Polyurethane

Options

- X = No Options

Sensing Position

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

Sensing Type

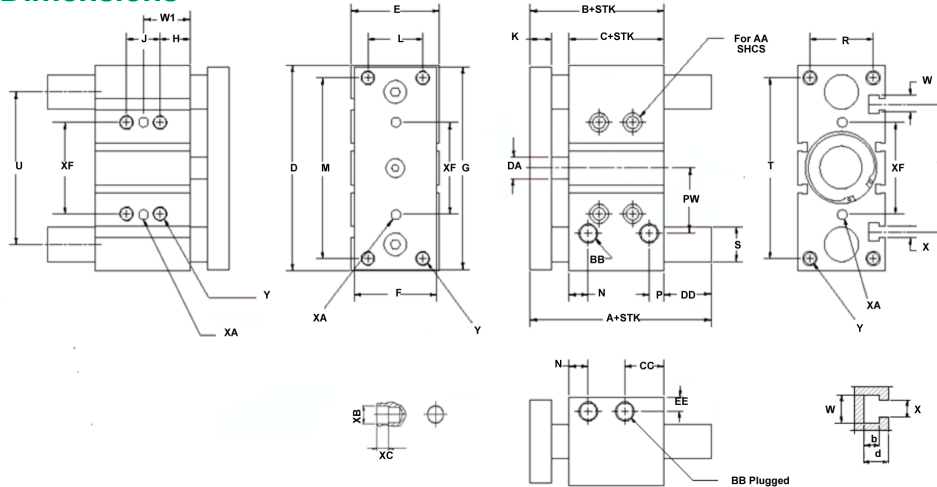
- Standard Cord Set
- 1 = Hall Effect - PNP (sourcing)
- 2 = Hall Effect - NPN (sinking)
- 3 = Reed Switch
- 6 = No Sensing
- Quick Connect Cord Set
- Z = Hall Effect - PNP (sourcing)
- Y = Hall Effect - NPN (sinking)
- X = Reed Switch

When Ordering Additional Sensors

Switch Description	Standard Part No.
Hall Effect - PNP (Sourcing)	PNP-FL2-00-U
Hall Effect - NPN (Sinking)	NPN-FL2-00-U
Reed Switch	REED-FL2-00S

Dimensions: mm

CGT Series Dimensions



Bore	B	C	D	E	F	G	H	K	L	M	N	P	R	T	U	V
16	46.0	33.0	64.0	30.0	25.0	62.0	5.0	8.0	16.0	54.0	11.0	8.0	22.0	56.0	46.0	38.0
20	53.0	37.0	83.0	36.0	30.0	81.0	17.0	10.0	18.0	70.0	10.5	8.5	24.0	72.0	54.0	44.0
25	53.5	37.5	93.0	42.0	38.0	91.0	17.0	10.0	26.0	78.0	11.5	9.0	30.0	82.0	64.0	49.7
32	59.5	37.5	112.0	48.0	44.0	110.0	21.0	12.0	30.0	96.0	12.5	9.0	34.0	98.0	78.0	63.0
40	66.0	44.0	120.0	54.0	44.0	118.0	22.0	12.0	30.0	104.0	14.0	10.0	40.0	106.0	86.0	72.0
50	72.0	44.0	148.0	64.0	60.0	146.0	24.0	16.0	40.0	130.0	14.0	11.0	46.0	130.0	110.0	91.5
63	77.0	49.0	162.0	78.0	70.0	158.0	24.0	16.0	50.0	130.0	16.5	13.5	58.0	142.0	124.0	110.0

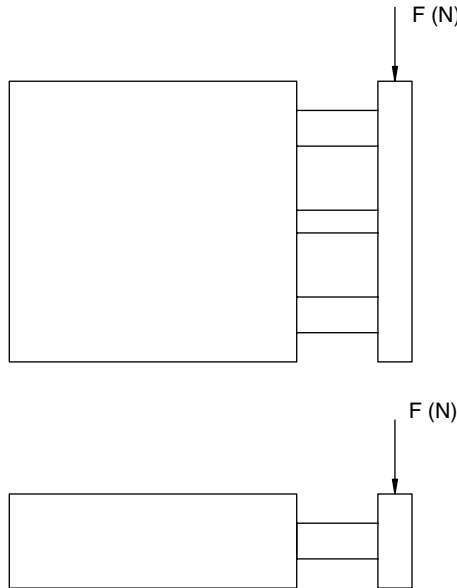
Bore	W	X	Y	AA	BB	CC	EE	DA	PW	b	d	XA	XB	XC	XF
16	7.4	4.4	M5	4 mm	M5	18.0	5.0	8.0	19.0	3.7	6.2	3mm	3.5	3.0	24.0
20	8.4	5.5	M6	5 mm	G 1/8	24.5	6.5	10.0	25.0	4.5	7.3	3mm	3.5	3.0	28.0
25	8.4	5.5	M6	5 mm	G 1/8	25.0	7.5	10.0	28.5	4.5	7.5	4mm	4.5	3.0	34.0
32	10.5	6.5	M8	6 mm	G 1/8	30.5	9.0	12.0	34.0	5.5	9.0	4mm	4.5	3.0	42.0
40	10.5	6.5	M8	6 mm	G 1/8	31.0	9.0	12.0	38.0	5.5	9.0	4mm	4.5	3.0	50.0
50	13.5	8.5	M10	8 mm	G 1/4	35.0	9.5	16.0	47.0	7.5	12.0	5mm	6.0	4.0	66.0
63	17.8	11.0	M10	8 mm	G 1/4	35.0	11.0	16.0	55.0	10.0	16.5	5mm	6.0	4.0	80.0

Bore	Stroke with Slide Bearings						Stroke with Ball Bushings						W and W1 Dimensions											
	A	A	A	DD	DD	DD	S	A	A	A	DD	DD	DD	S	J	J	J	J	J	W1	W1	W1	W1	W1
	10-50	75-100	125-250	10-50	75-100	125-250		10-30	40-100	125-250	10-30	40-100	125-250		10-30	40-100	125-200	250-300		10-30	40-100	125-200	250-300	
16	46	64.5	95	0	18.5	49	10	46	66	95	0	20	49	8	24	44	110	200		17	27	60	105	

Bore	Stroke with Slide Bearings						Stroke with Ball Bushings						W and W1 Dimensions											
	A	A	A	DD	DD	DD	S	A	A	A	DD	DD	DD	S	J	J	J	J	J	W1	W1	W1	W1	W1
	20-50	75-200	250-400	20-50	75-200	250-400		20-30	40-200	250-400	20-30	40-200	250-400		10-30	40-100	125-200	250-300		10-30	40-100	125-200	250-300	
20	53.0	84.5	122	0	31.5	69	12	53	85.5	122	0	32.5	69	12	24	44	120	200	300	29	39	77	117	167
25	53.5	85	122	0	31.5	68.5	16	53.5	86	122	0	32.5	68.5	12	24	44	120	200	300	29	39	77	117	167

Bore	Stroke with Slide Bearings						Stroke with Ball Bushings						W and W1 Dimensions													
	A	A	A	DD	DD	DD	S	A	A	A	DD	DD	DD	S	J	J	J	J	J	W1	W1	W1	W1	W1		
	20-50	75-200	250-400	25-50	75-200	250-400		25-50	75-200	250-400	25-50	75-200	250-400		10-30	40-100	125-200	250-300		10-30	40-100	125-200	250-300			
32	97	107	140	37.5	47.5	85.5	20	97	97	107	140	37.5	37.5	47.5	85.5	20	24	48	124	200	300	33	45	83	121	171
40	97	107	140	31	41	79	20	97	97	107	140	31	31	41	79	20	24	48	124	200	300	34	46	84	122	172
50	106.5	118	161	34.5	46	89	25	106.5	114	118	161	34.5	42	46	89	25	24	48	124	200	300	36	48	86	124	174
63	106.5	118	161	29.5	41	84	25	106.5	114	118	161	29.5	37	41	84	25	28	52	128	200	300	38	50	88	124	174

CGT Series



Load vs Stroke

Load Values = N (newtons)

Bore	Bearing Type	Stroke							
		10	20	25	30	40	50	75	100
16	Bronze	28.0	28.0	–	25.0	22.0	19.0	–	–
	Linear Ball	35.0	30.0	–	26.0	37.0	33.0	–	–
20	Bronze	–	51.0	–	44.0	38.0	34.0	53.0	44.0
	Linear Ball	–	55.0	–	47.0	78.0	69.0	57.0	49.0
25	Bronze	–	70.0	–	60.0	53.0	47.0	59.0	51.0
	Linear Ball	–	71.0	–	61.0	77.0	72.0	77.0	65.0
32	Bronze	–	–	88.0	–	–	59.0	137.0	108.0
	Linear Ball	–	–	196.0	–	–	167.0	275.0	216.0
40	Bronze	–	–	88.0	–	–	59.0	137.0	108.0
	Linear Ball	–	–	196.0	–	–	167.0	275.0	216.0
50	Bronze	–	–	137.0	–	–	88.0	215.0	176.0
	Linear Ball	–	–	294.0	–	–	255.0	392.0	313.0

To Convert Newtons to Pounds: newtons x 0.2248 = pounds force

Twisting Moment vs Stroke

Moment Values = N-m (newton-meters)

Bore mm	Bearing Type	Stroke							
		10	20	25	30	40	50	75	100
16	Bronze	0.51	0.43	–	0.35	0.31	0.27	–	–
	Linear Ball	0.75	0.58	–	0.48	0.71	0.64	–	–
20	Bronze	–	0.91	–	0.78	0.71	0.63	1.04	0.88
	Linear Ball	–	1.26	–	1.06	1.77	1.58	1.22	1.01
25	Bronze	–	1.53	–	1.31	1.16	1.03	1.65	1.41
	Linear Ball	–	1.96	–	1.69	2.16	2.00	1.68	1.42
32	Bronze	–	–	1.96	–	–	2.94	2.45	1.96
	Linear Ball	–	–	3.92	–	–	0.98	2.94	2.45
40	Bronze	–	–	2.45	–	–	1.45	2.94	2.45
	Linear Ball	–	–	4.41	–	–	3.43	6.37	5.39
50	Bronze	–	–	3.43	–	–	2.45	4.90	4.41
	Linear Ball	–	–	7.35	–	–	5.88	10.78	8.33

To Convert Newtons-Meters to Inch-Pounds: newton-meters x 8.850 = inch-pounds

Output Force vs Pressure

	16	20	25	32	40	50
Extend Force (N) @ 6 bar	120 (N)	187 (N)	293 (N)	472 (N)	747 (N)	1161 (N)
Retract Force (N) @ 6 bar	91 (N)	141 (N)	247 (N)	406 (N)	624 (N)	974 (N)

Max Operating Pressure: 10 bar (145 psi)
 Operating Temperature: -20°C (-4°F) to 80°C (176°F)

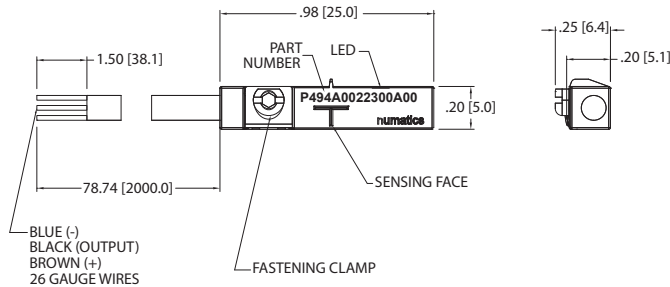
To Convert Newtons to Pounds: newtons x 0.2248 = pounds

Reference the comprehensive CGT Series catalog PDF at www.numatics.com for the following additional CGT Series information.

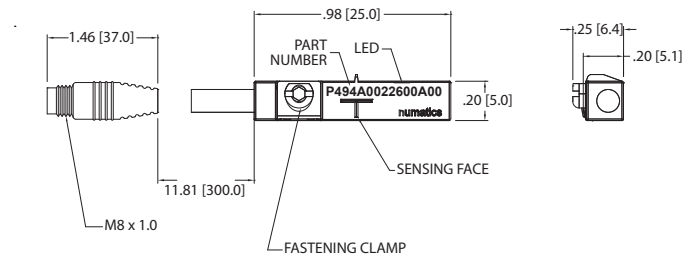
- Technical Switch Data
- Switch Mounting Instructions

Sensing Part Numbers

PNP-FL2-00-U



PNP-QDS-M8-U

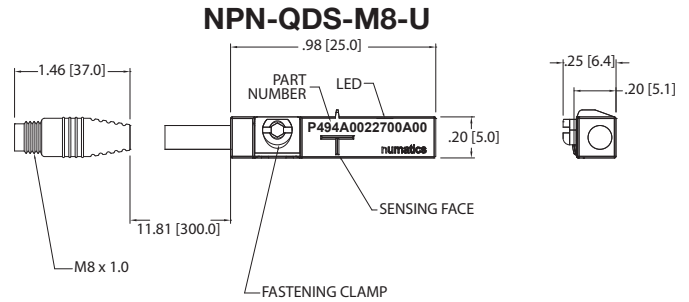
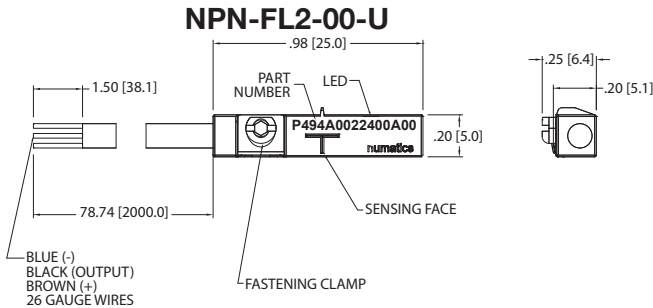


ELECTRICAL DESIGN	DC PNP
OUTPUT	Normally Open
OPERATING VOLTAGE	10-30 VDC
CURRENT RATING	100 mA
SHORT-CIRCUIT PROTECTION	Yes
OVERLOAD PROTECTION	Yes
REVERSE POLARITY PROTECTION	Yes
VOLTAGE DROP	< 2.5 V
CURRENT CONSUMPTION	< 12 mA
REPEATABILITY	< .2mm
POWER-ON DELAY TIME	< 30 ms
SWITCH FREQUENCY	> 3000 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
AGENCY APPROVALS	

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 (Snap Fit) , 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	

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

Sensing Part Numbers



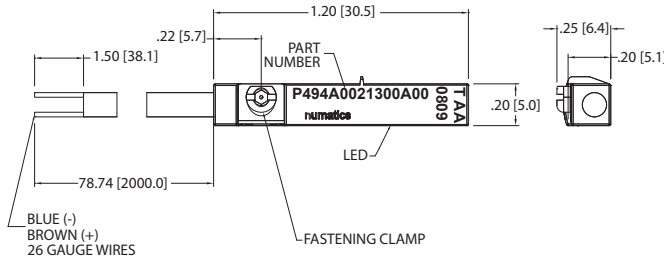
ELECTRICAL DESIGN	DC NPN
OUTPUT	Normally Open
OPERATING VOLTAGE	10-30 VDC
CURRENT RATING	100 mA
SHORT-CIRCUIT PROTECTION	Yes
OVERLOAD PROTECTION	Yes
REVERSE POLARITY PROTECTION	Yes
VOLTAGE DROP	< 2.5 V
CURRENT CONSUMPTION	< 12 mA
REPEATABILITY	< .2mm
POWER-ON DELAY TIME	< 30 ms
SWITCH FREQUENCY	> 3000 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 Placeholder, Cable Clip, and Cut Sheet To Be Provided with Every Switch
AGENCY APPROVALS	CE cUL us RoHS

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 (Snap Fit) , 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	CE cUL us RoHS

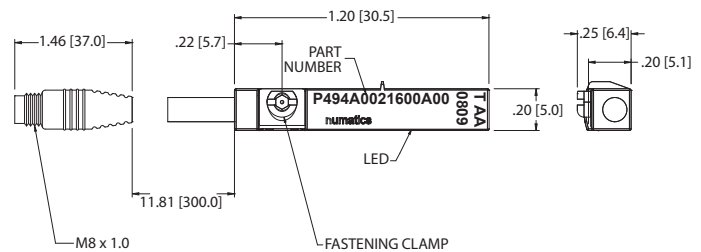
6 *Switches are not designed for wet environments. Please see your distributor for additional information.


Sensing Part Numbers


REED-FL2-00S



REED-QDS-M8S

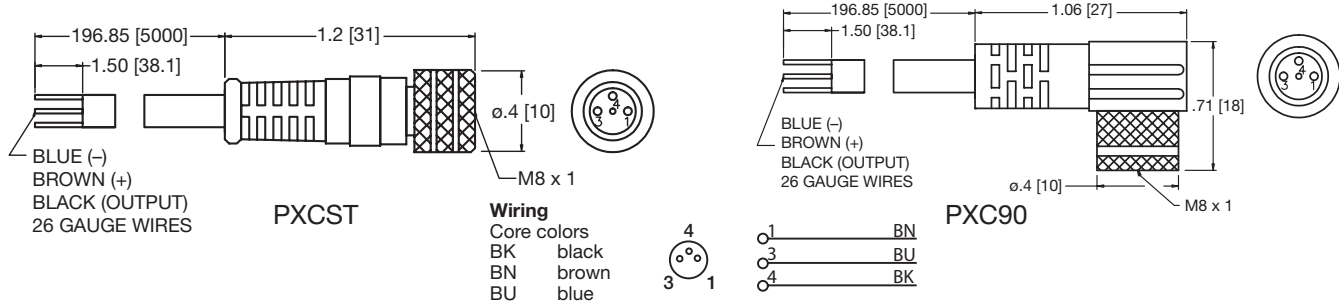


ELECTRICAL DESIGN	AC/DC REED
OUTPUT	Normally Open
OPERATING VOLTAGE	5-120 VAC/DC
CURRENT RATING	100 mA*
SHORT-CIRCUIT PROTECTION	No
OVERLOAD PROTECTION	No
REVERSE POLARITY PROTECTION	Yes
VOLTAGE DROP	< 5 V
REPEATABILITY	± .2mm
MAKETIME INCLUDING BOUNCE	< .6 ms
BREAKTIME	< .1 ms
SWITCHING POWER (MAX)	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 Placeholder, Cable Clip, and Cut Sheet To Be Provided with Every Switch
AGENCY APPROVALS	 RoHS

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 (Snap Fit), 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 Placeholder, Cable Clip, and Cut Sheet To Be Provided with Every Switch
AGENCY APPROVALS	 RoHS

*Switches are not designed for wet environments. Please see your distributor for additional information.
Information subject to change without notice. For ordering information or regarding your local sales office visit www.numatics.com.

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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