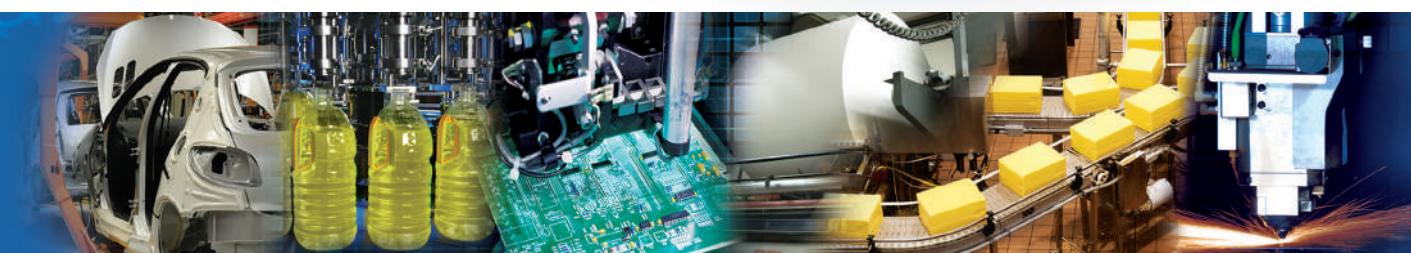
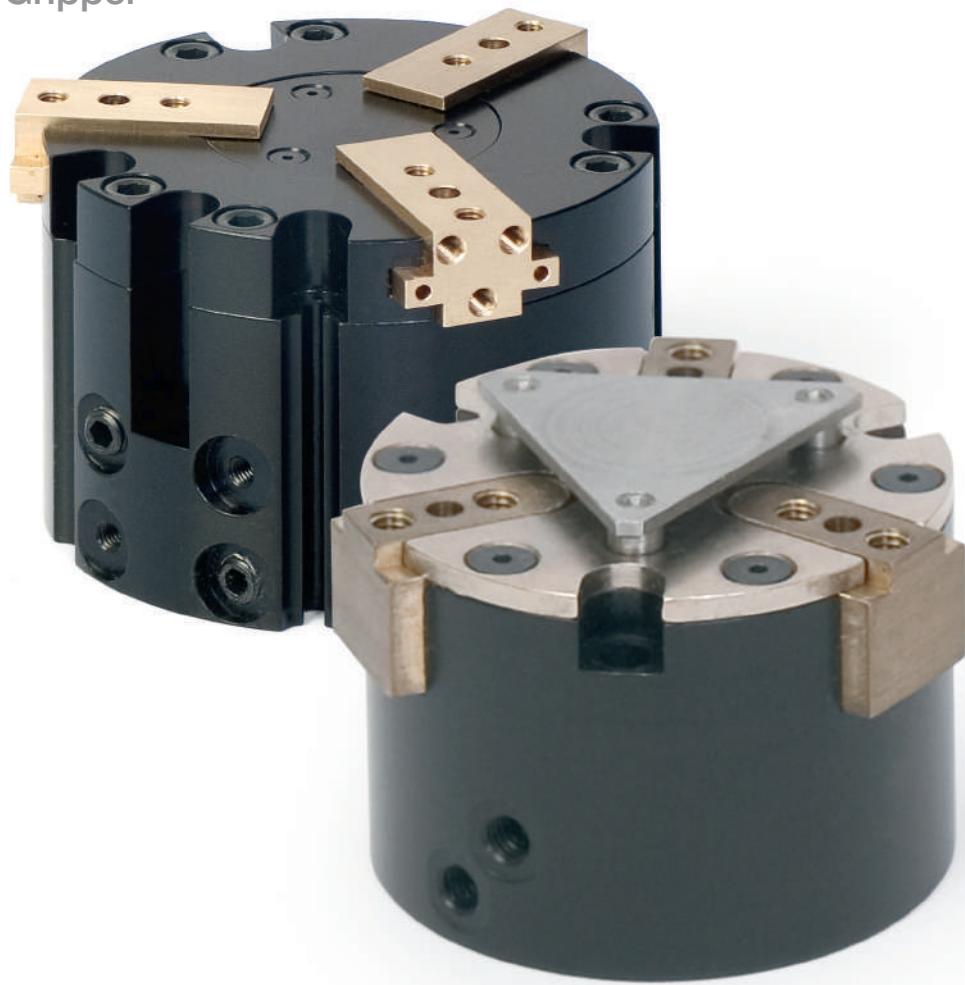


numatics®

TJ Series

3 Jaw Gripper



www.numatics.com



EMERSON
Industrial Automation

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TJ30 Series 3 Jaw Gripper

TJ30 3 jaw gripper provides high grip force in a compact design. Stripper plate option provides 9 lbs. of linear spring force to facilitate part insertion when gripper jaws release part.

A. Jaws

Jaws are T-Slot bearing supported to prevent Jaw breakage and offer superior load bearing performance.

B. Flexible Mounting

Flexible mounting, thru hole for Socket Head Cap Screws (SHCS), tapped from opposite side.

C. Dowel Holes

Dowel holes for locating.

D. Body

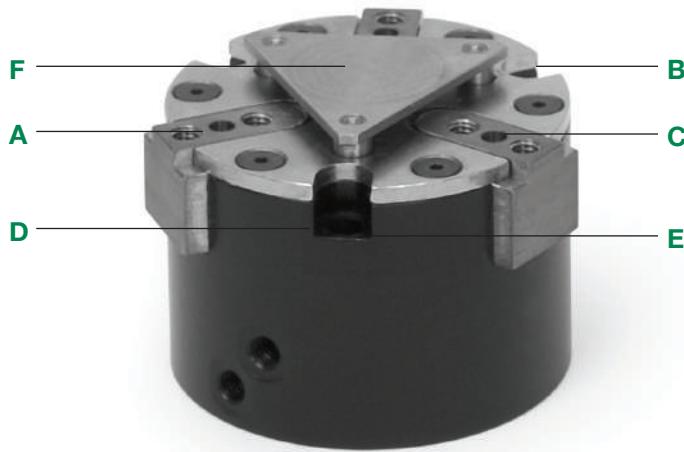
Hardcoated aluminum body.

E. Sensing Tracks

Sensing tracks for Hall effect switches sensing.

F. Stripper Plate

Optional Stripper Plate.

**Specifications**

Series	Grip Force Close 100 PSI	Stroke	Weight	Displacement	Maximum Operating Pressure
TJ30	36 lbs.	0.300	9 oz	0.35 cu. in.	120 PSI

How To Order

Series
30

Seal Option
1 = Buna-N

TJ **30** **1** **6** **D** **SP** **X**

X = Standard

Stripper Plate
SP = With Stripper Plate
NP = No Stripper Plate

Sensing Position

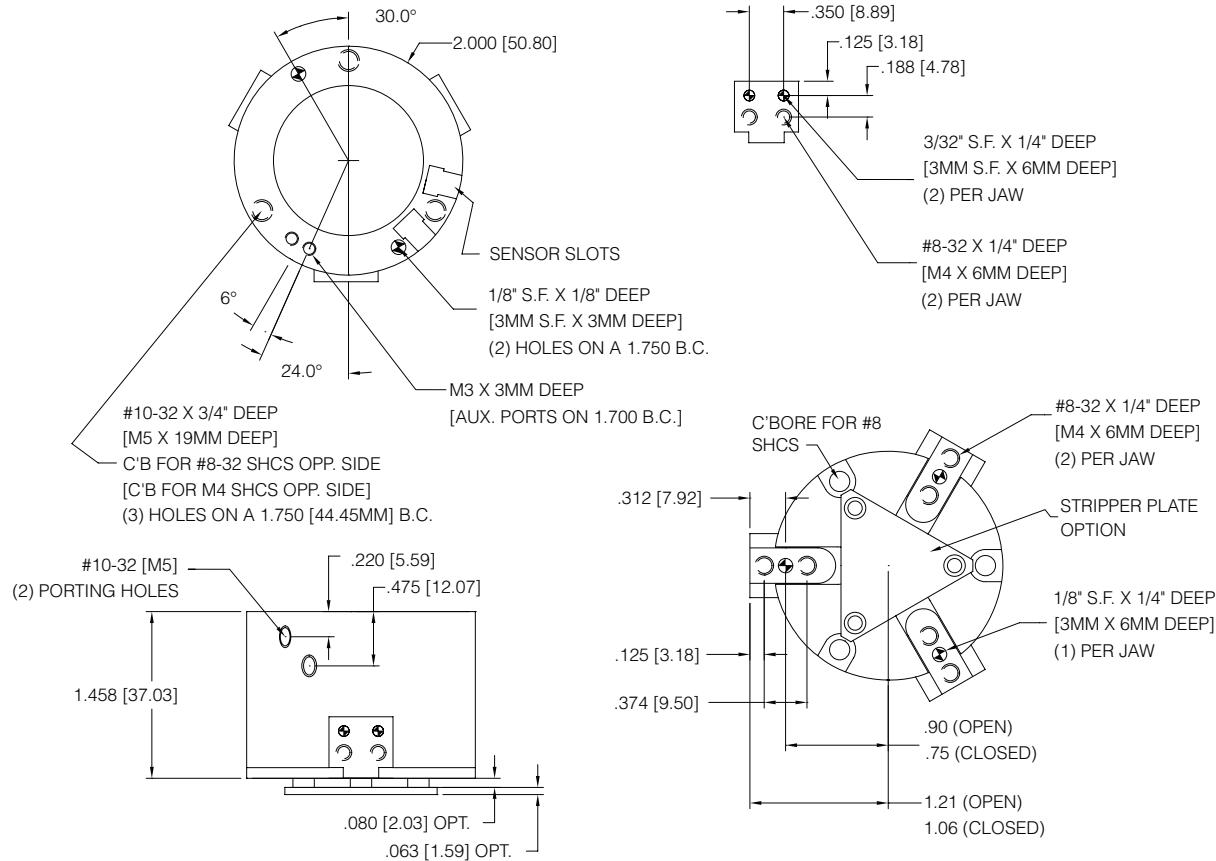
A = Single Position Open
B = Single Position Closed
C = Open and Close Position Sensing
D = No Sensing

Sensing Type

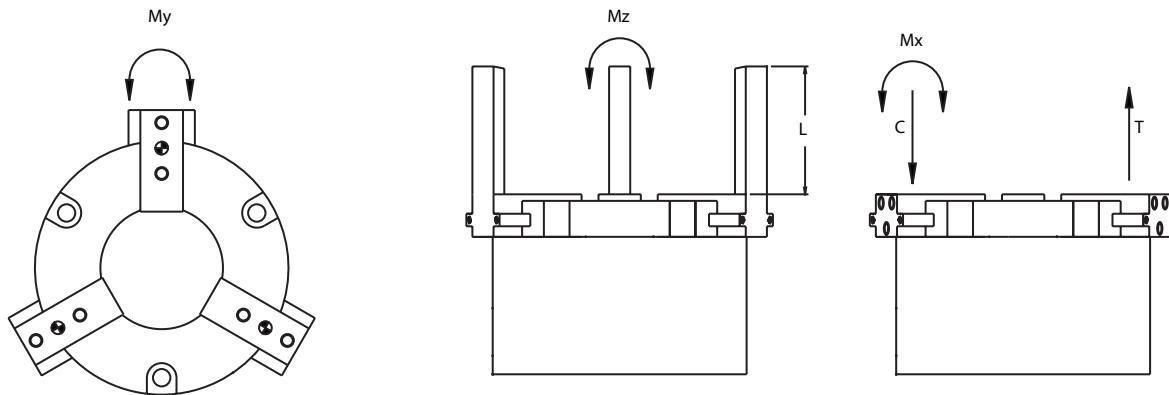
1 = Hall Switch – PNP (Sourcing)
2 = Hall Switch – NPN (Sinking)
6 = No Sensing
Quick Disconnect Cord Set
Z = Hall Switch – PNP (Sourcing)
Y = Hall Switch – NPN (Sinking)

Switch Description	Standard Cord Set Part No.	Quick Disconnect Part No.
Hall PNP	P494A0022300A00	P494A0022600A00
Hall NPN	P494A0022400A00	P494A0022700A00
90° 5 Meter Cable	N/A	PXC90
Straight 5 Meter Cable	N/A	PXCST

Dimensions: Inches (mm)



Performance Data



Grip Force VS. Finger Length

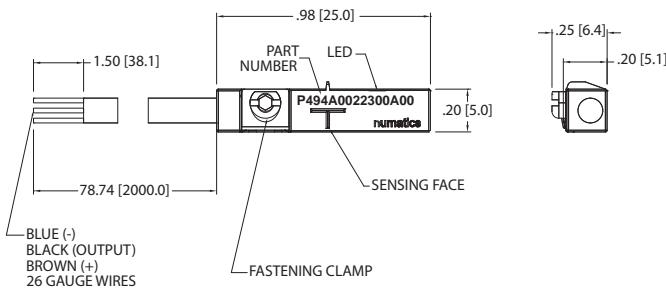
L (Finger Length)	Close Force @ 80 PSI	
1 inch	24 lbs	10.8 Kgf
2 inches	21 lbs	9.5 Kgf

Maximum Load Ratings

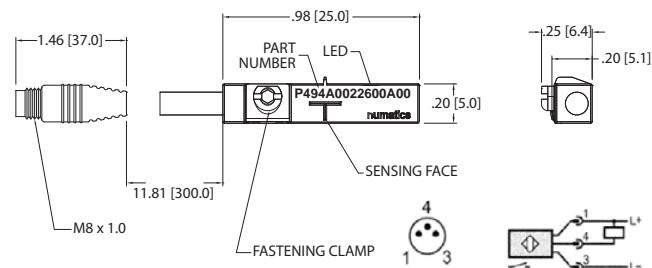
TJ30	Static	Dynamic
C- Compression	300 lbs. (1332N)	100 lbs (444N)
T - Tension	300 lbs. (1332N)	100 lbs (444N)
Mx	250 in/lbs. (2.8 Nm)	75 in/lbs (8.5 Nm)
My	150 in/lbs. (17 Nm)	75 in/lbs (8.5 Nm)
Mz	250 in/lbs. (2.8 Nm)	75 in/lbs (8.5 Nm)

Sensing Part Numbers

P494A0022300A00



P494A0022600A00



ELECTRICAL DESIGN	DC PNP	ELECTRICAL DESIGN	DC PNP
OUTPUT	Normally Open	OUTPUT	Normally Open
OPERATING VOLTAGE	10-30 VDC	OPERATING VOLTAGE	10-30 VDC
CURRENT RATING	100 mA	CURRENT RATING	100 mA
SHORT-CIRCUIT PROTECTION	Yes	SHORT-CIRCUIT PROTECTION	Yes
OVERLOAD PROTECTION	Yes	OVERLOAD PROTECTION	Yes
REVERSE POLARITY PROTECTION	Yes	REVERSE POLARITY PROTECTION	Yes
VOLTAGE DROP	< 2.5 V	VOLTAGE DROP	< 2.5 V
CURRENT CONSUMPTION	< 12 mA	CURRENT CONSUMPTION	< 12 mA
REPEATABILITY	< .2mm	REPEATABILITY	< .2mm
POWER-ON DELAY TIME	< 30 ms	POWER-ON DELAY TIME	< 30 ms
SWITCH FREQUENCY	> 3000 Hz	SWITCH FREQUENCY	> 3000 Hz
AMBIENT TEMPERATURE	-25°C to 85°C	AMBIENT TEMPERATURE	-25°C to 85°C
PROTECTION	IP 67, III	PROTECTION	IP 67, III
HYSTERESIS	1.0mm	HYSTERESIS	1.0mm
MAGNETIC SENSITIVITY	2.0 mT	MAGNETIC SENSITIVITY	2.0 mT
TRAVEL SPEED	> 10 m/s	TRAVEL SPEED	> 10 m/s
HOUSING MATERIAL	PA (Polyamide) Black; Fastening Clamp: Stainless Steel	HOUSING MATERIAL	PA (Polyamide) Black; Fastening Clamp: Stainless Steel
FUNCTION DISPLAY SWITCHING STATUS	Yellow LED	FUNCTION DISPLAY SWITCHING STATUS	Yellow LED
CONNECTION	Flying Leads, Pur Cable (2m Long, 3 x26 Gauge Wire)	CONNECTION	M8 Connector, Pur Cable (.3 m)
REMARKS	Clamping Screw with Combined Slot/Hexagon Socket Head AF 1.5 cULus - Class 2 Source Required	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	ACCESSORIES	Rubber Placeholder, Cable Clip, and Cut Sheet To Be Provided with Every Switch

AGENCY APPROVALS

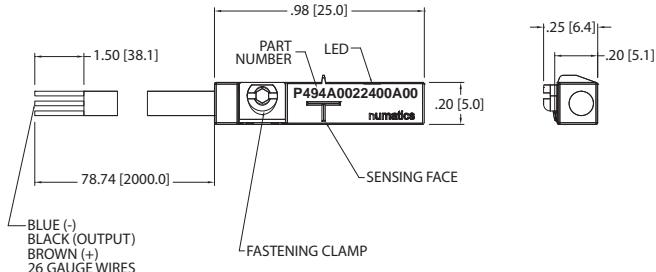


AGENCY APPROVALS

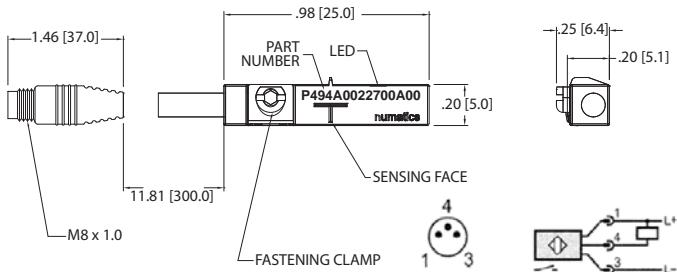


Sensing Part Numbers

P494A0022400A00



P494A0022700A00



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 x 26 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	
AGENCY APPROVALS	

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, 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	
AGENCY APPROVALS	

TJ200 Series 3 Jaw Gripper

Provides high grip force in a compact design. Shielded design makes the TJ ideal for machine loading and unloading. Compact design to grip force ratio are ideal for confined work areas.

A. Jaws

Jaws are T-Slot bearing supported to prevent Jaw breakage and offer superior load bearing performance.

B. Flexible Mounting

Flexible mounting, thru hole for Socket Head Cap Screws (SHCS), tapped from opposite side.

C. Dowel Holes

Dowel holes for locating.

D. Body

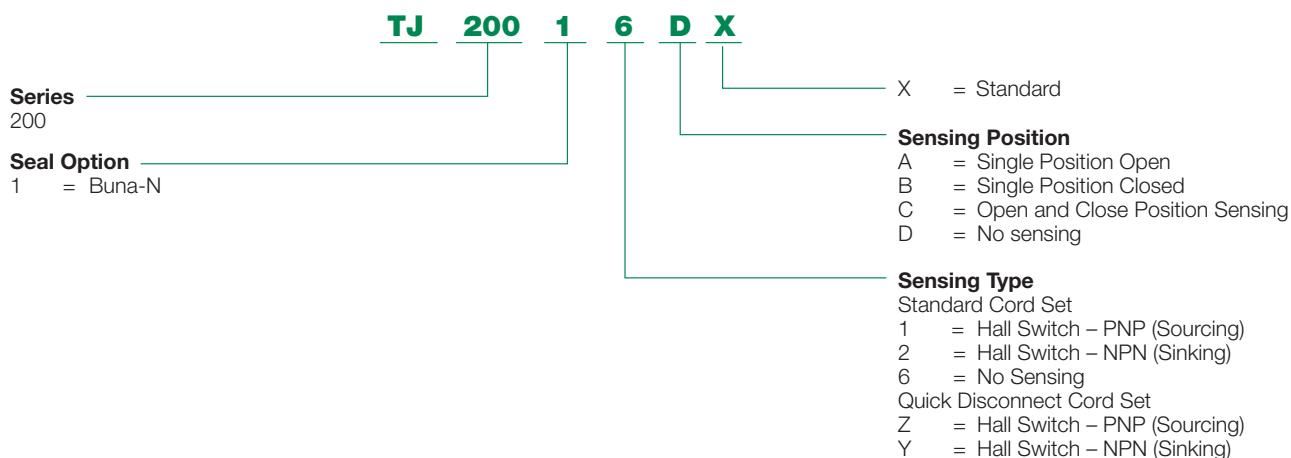
Hardcoated aluminum body.

E. Sensing

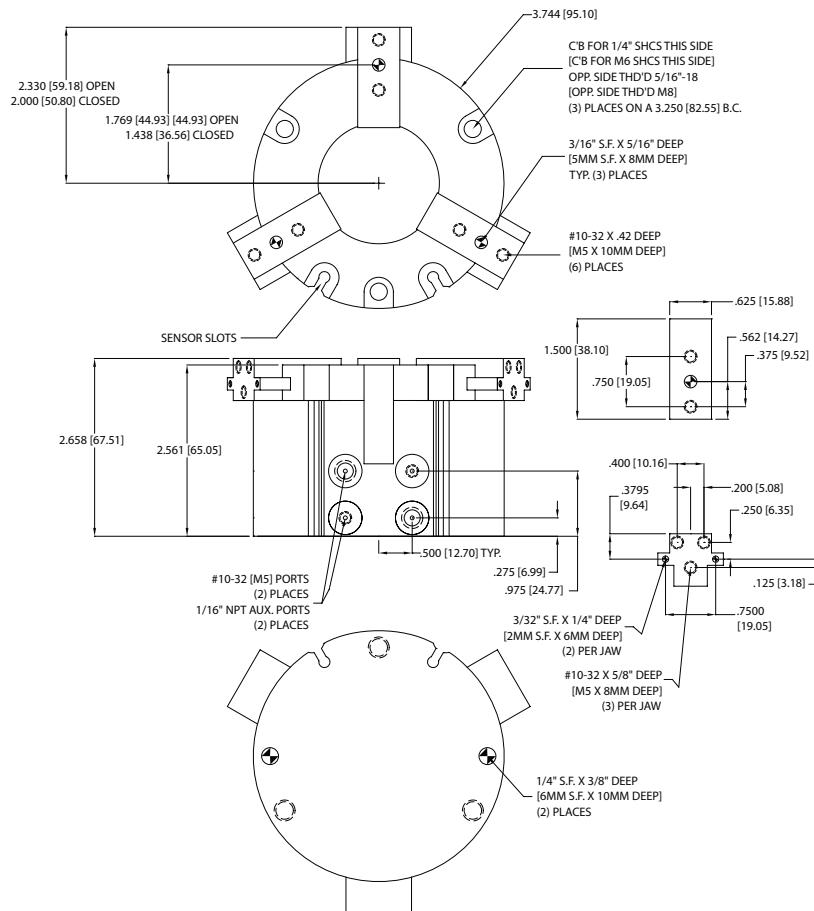
Sensing tracks for Hall effect switches sensing.

**Specifications**

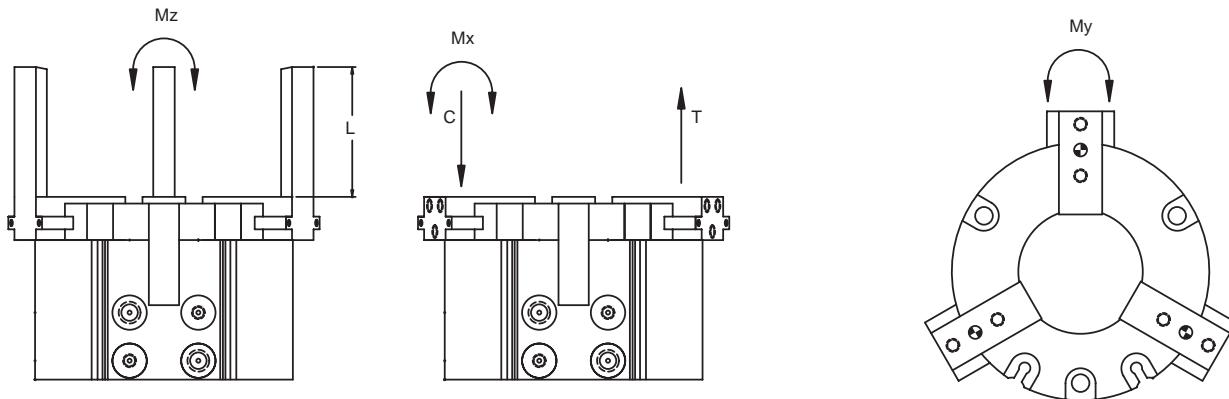
Series	Grip Force Close 100 PSI	Stroke	Weight	Maximum Operating Pressure
TJ200	250 lbs	0.330	2.3 oz	120 psi

How To Order

Dimensions: Inches (mm)



Performance Data



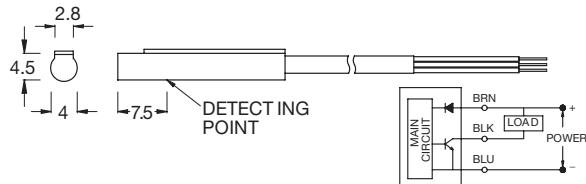
Grip Force VS. Finger Length

L (Finger Length)	Close Force @ 80 PSI	
1 inch	175 lbs.	79 Kgf.
2 inches	160 lbs.	72 Kgf.
3 inches	140 lbs.	63 Kgf.

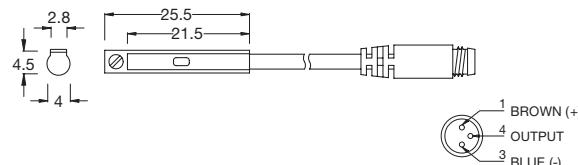
Maximum Load Ratings

TJ200	Static	Dynamic
C- Compression	1250 lbs. (5560N)	400 lbs. (1780N)
T - Tension	1250 lbs. (5560N)	400 lbs. (1780N)
M_x	1000 in/lbs. (113 Nm)	400 in/lbs. (113 Nm)
M_y	900 in/lbs. (113 Nm)	300 in/lbs. (101 Nm)
M_z	1000 in/lbs. (113 Nm)	400 in/lbs. (113 Nm)

Switch Information

Electro Switch (PNP NO)
Flying Lead - CS-18-TP

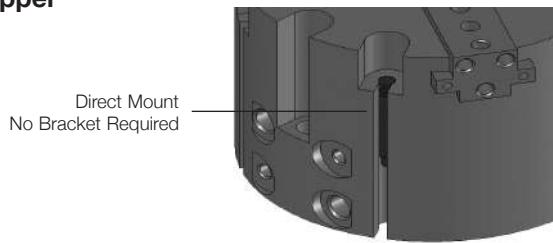
Sensor Type	Solid State Output
Switching Logic	Normally Open
Output	PNP Current Sourcing
Operating Voltage	5-30 VDC
Switching Current	50mA max.
Power Rating*	1.5 Watts
Voltage Drop	0.5 V @ 25 mA max.
Current Consumption	12 mA @ 24 VDC max.
Leakage Current	0.01 mA max.
LED Indicator	Red
Cable	-
Operating 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-18T-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	12 mA @ 24 VDC max.
Leakage Current	0.01 mA max.
LED Indicator	Green
Cable	Abrasion resistant polyurethane (PUR) jacket, PVC insulation
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.

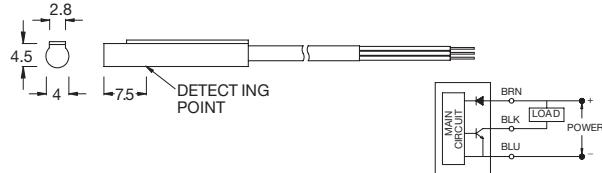
TJ200 Series Gripper



Sensor Description	Standard Cord Set	Quick Disconnect
Hall PNP	CS-18-TP	CS-18T-QD
Hall NPN	CS-20TN	CS-18N-QD

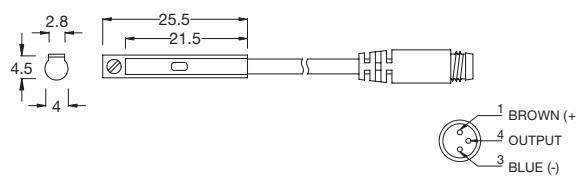
Switch Information

**Electro Switch (NPN NO)
Flying Lead - CS-20TN**



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)
8 mm Connector - CS-18N-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)



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)
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F: 52 55 58 09 56 60

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