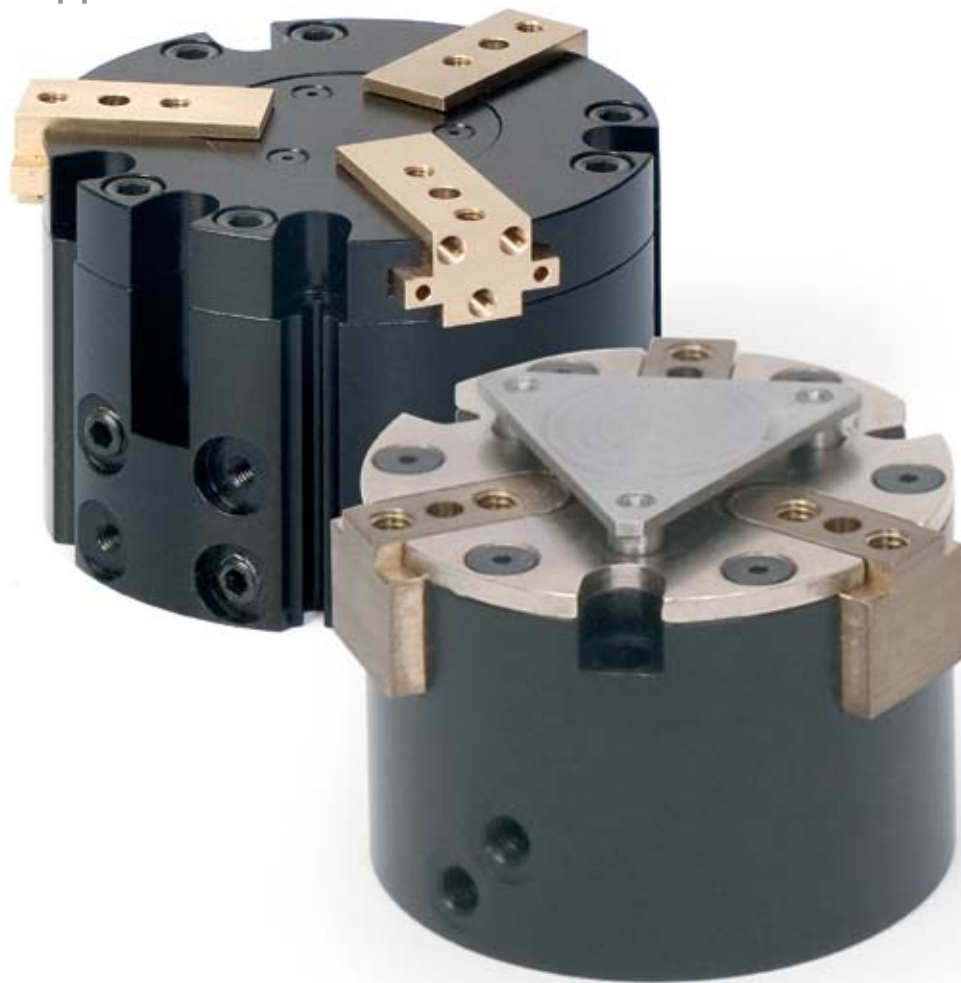


NUMATICS®

TJ Series

3 Jaw Gripper



www.numatics.com


EMERSON
Industrial Automation

BCAE
Automation Solutions

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TJ Series

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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 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

TJ 30 1 6 D SP X

Series
30

Seal Option
1 = Buna-N
2 = FKM

X = Standard

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

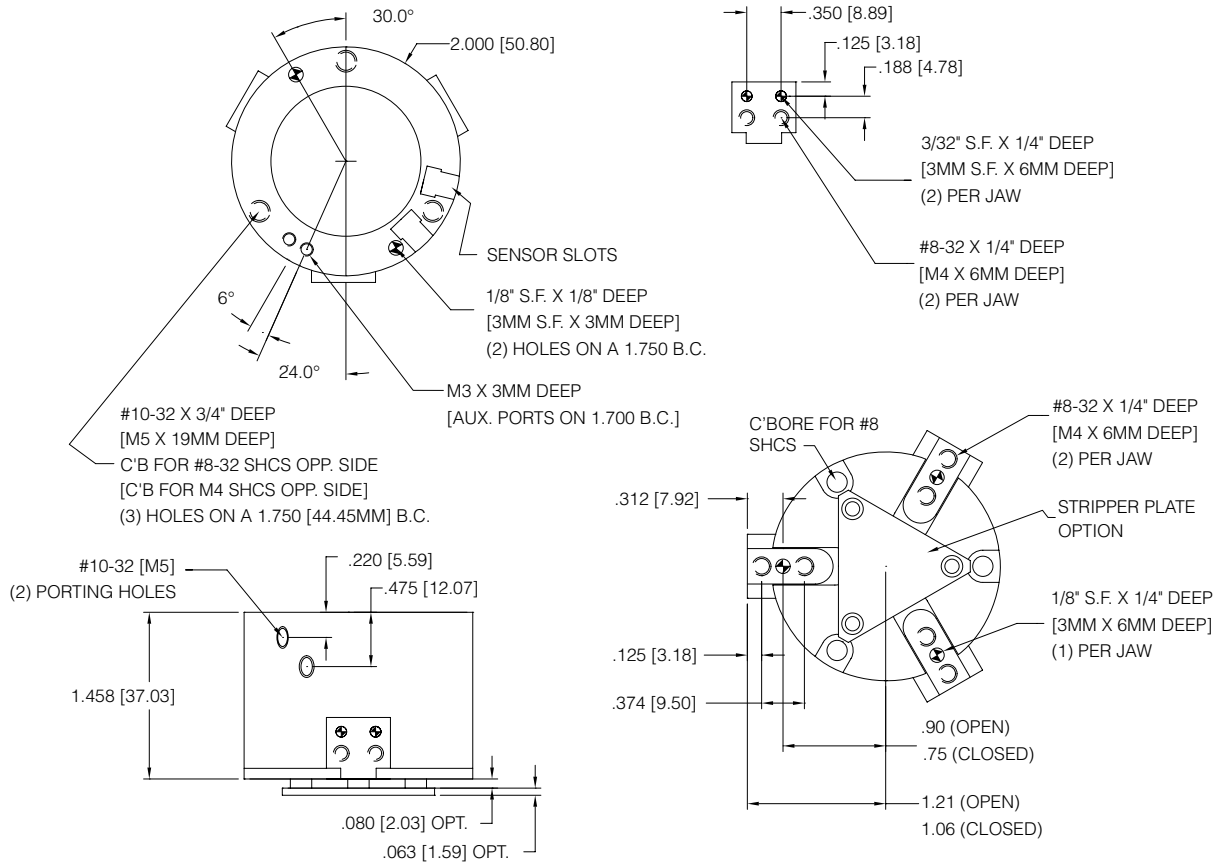
Sensing Position
A = Single Position Open
B = Single Position Closed
D = No Sensing

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)

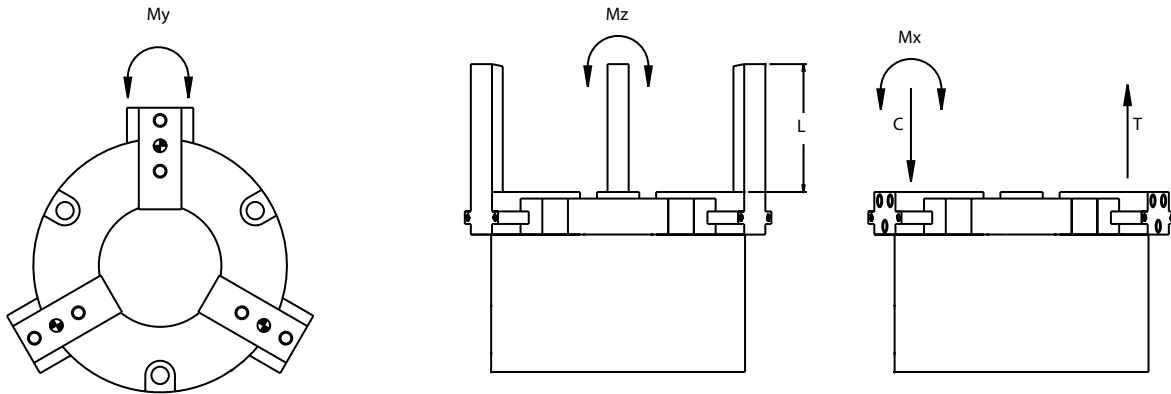
Sensing Kits

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

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 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

TJ 200 1 6 D X

Series
200

Seal Option
1 = Buna-N
2 = FKM

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

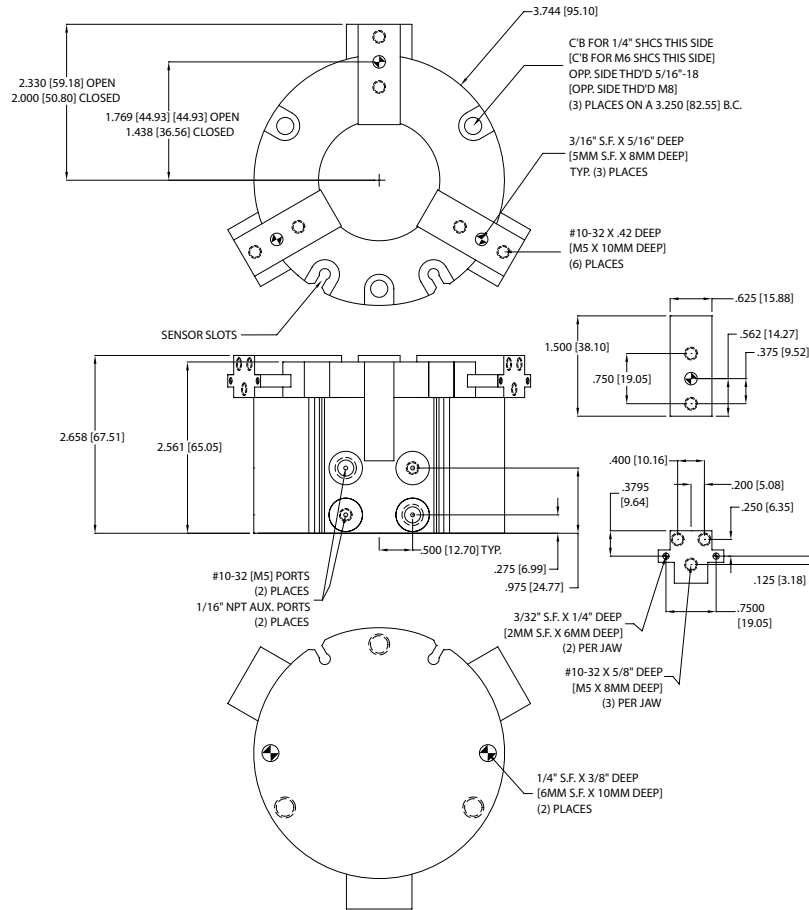
Sensing Type
CS Series Switch
1 = Hall Switch – PNP (Sourcing)
2 = Hall Switch – NPN (Sinking)
6 = No Sensing
Quick Disconnect Cord Set
Z = Hall Switch – PNP (Sourcing)
Y = Hall Switch – NPN (Sinking)

X = Standard

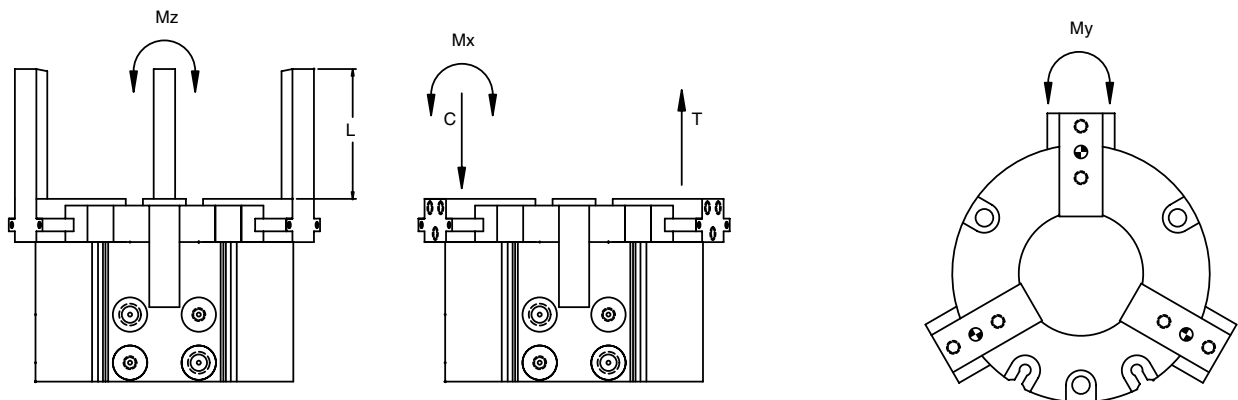
When ordering additional switches:

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

Dimensions: Inches (mm)



Performance Data



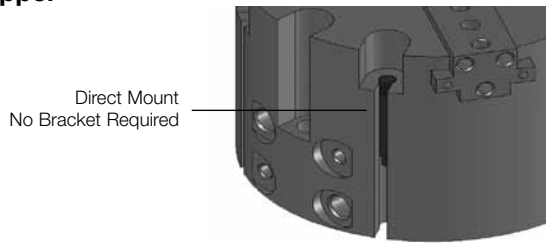
Grip Force VS. Finger Length

| 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) |
| Mx | 1000 in./lbs. (113 Nm) | 400 in./lbs. (113 Nm) |
| My | 900 in./lbs. (113 Nm) | 300 in./lbs. (101 Nm) |
| Mz | 1000 in./lbs. (113 Nm) | 400 in./lbs. (113 Nm) |

TJ200 Series Gripper

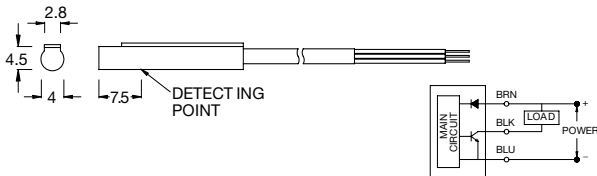


| Sensor Description | Standard Cord Set | Quick Disconnect |
|--------------------|-------------------|------------------|
| Hall PNP | CS-20TP | CS-20TP-QD |
| Hall NPN | CS-20TN | CS-20TN-QD |

See page 17 for sensor specifications

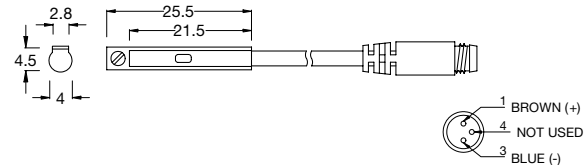
Switch Information

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) |

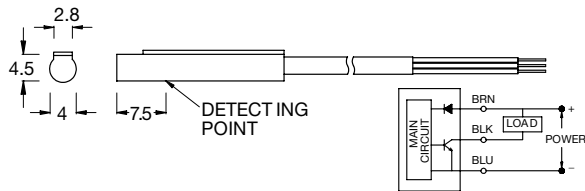
Electro Switch (NPN NO) 8 mm Connector - CS-20TN-QD



| | |
|--------------------------|-------------------------------------|
| 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) |

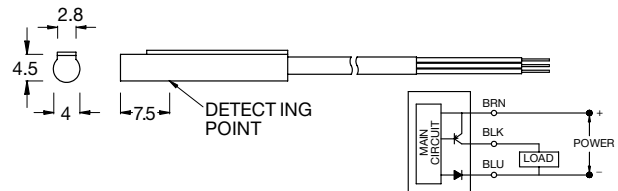
Switch Information

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 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.

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