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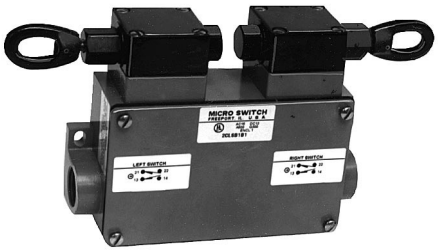
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Momentary Cable Pull Limit Switches: For Signaling Applications





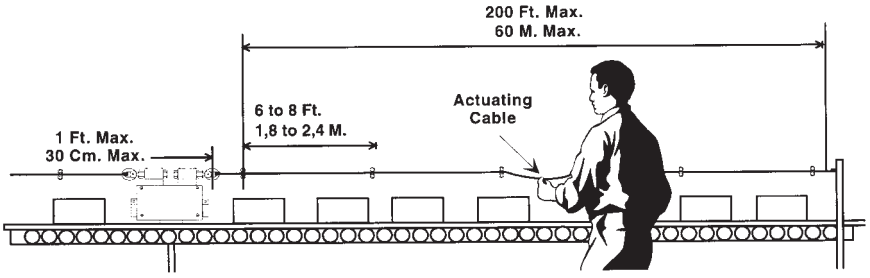
MOMENTARY (CONTACT SWITCH) OPERATING HEAD

Momentary CLS Series Cable Pull Limit Switches are designed for signaling applications; they are not to be used as emergency stop devices. (For emergency stop applications, see the Maintained Cable Pull Limit Switches in the Safety Products catalog.)

When using direct acting contacts, Momentary Cable Pull Limit Switches provide a means to manually force disconnection of a normally closed control circuit by pulling on an attached cable. Momentary switches cause contact transfer if the cable is manually pulled and held. When the cable is released, switch contacts return to their original state. Momentary switches have either direct-acting contacts or snap-action contacts.

Cable length may be up to 200 ft. in a straight line for Single Head switches, and up to 400 ft. (200 ft. in each direction) for Duplex Head switches.

TYPICAL DUPLEX HEAD SWITCH INSTALLATION



FEATURES

- Offered in Single Head and Duplex Head versions
- Optional direct acting contacts enhance reliability
- Duplex Head switches cover up to 400 ft. cable spans (200 ft. in each direction)
- Single Head switches have one normally open auxiliary contact, while Duplex Head switches have up to three normally open and two normally closed auxiliary contacts
- Four conduit opening thread size options: 1/2-14 NPT, 20mm, PF1/2 and PG13.5
- Compact size of Single Head switches fits into tight spaces
- Sealed to NEMA 1, 3, 4 and 13
- Smart Distributed System output available on Duplex version for monitoring only
- UL listed
- CSA certified
- CE certified
- Temperature range: –1° to 70°C (30° to 158°F)
- Available with indicators
- Duplex versions available with high visibility pilot light

TYPICAL APPLICATIONS

- Conveyors
- Packaging machinery
- Assembly lines
- Process equipment
- Transfer lines

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TECHNICAL DATA CLS SERIES SPECIFICATIONS

Electrical		
Rate thermal current	I_{th} = 10 A	
Rate insulation voltage	U_i = 660 VAC/660 VDC	
Impulse voltage	U_{imp} = 2.5 kV	
Contact resistance	< 25 milliohms	
Operating rating	AC15	U = 600 V: I = 1.2 A U = 240 V: I = 3 A U = 120 V: I = 6 A
	DC13	U = 250 V: I = 0.27 A U = 24 V: I = 2.8 A
UL/CSA	A600/Q300	
Mechanical		
Protection class	NEMA 1, 3, 4 and 13	
Mechanical life	10^5 operations maximum	
Temperature Range	–1° to 70°C (30° to 158°F)	
Terminal identification	Numbering to EN50013	
Head/housing material	Zinc die cast	

CABLE PULL SWITCH CHARACTERISTICS

Momentary Cable Pull Limit Switches are offered with a black operating head and a blue body. There is a choice of four different conduit openings: 1/2-14 NPT, 20mm, PF 1/2, and PG13.5. Duplex switches have 3 standard conduit openings with two conduit plugs provided.

All switches come with a 1NO auxiliary contact as standard.

An additional auxiliary switch is also available in the Duplex. This auxiliary switch may be configured as 1NO - 1NC direct acting, 2NO - 2NC snap action (monitoring only) or 1NO - 1NC with Smart Distributed System output (monitoring only).

Neon and LED indicators are available. A 6 watt incandescent pilot light is available on the Duplex for high visibility at long distances.

SMART DISTRIBUTED SYSTEM OUTPUT VERSION

The Smart Distributed System Output Version provides Smart Distributed System compatible switch status messaging. The primary contact block (NC) must be wired to the control current. The auxiliary contact block has been replaced with the Smart Distributed System circuitry.

NOTICE

Snap action contact blocks and the Smart Distributed Output Version should be used for monitoring only. These types of switches should not be used in control circuits.

Momentary Cable Pull Limit Switches: For Signaling Applications

SINGLE HEAD CLS ORDER GUIDE

CLS ____ ____ ____ – ____

BODY CODE
A BLUE BODY – PG13.5
B BLUE BODY – 1/2 NPT
C BLUE BODY – 20MM
D BLUE BODY – PF1/2

BASIC SWITCH CODE
3 1NO-1NC SNAP ACTION (Monitoring Only)
4 1NO-1NC DIRECT ACTING
5 1NO-1NC DIRECT ACTING 240V NEON INDICATOR
6 1NO-1NC DIRECT ACTING 120V NEON INDICATOR
7 1NO-1NC DIRECT ACTING 24V LED INDICATOR

MODIFICATION CODES
1 HEAD ASSEMBLED WITH ACTUATOR TO THE LEFT
2 HEAD ASSEMBLED WITH ACTUATOR TO THE FRONT
3 HEAD ASSEMBLED WITH ACTUATOR TO THE MOUNTING SURFACE

HEAD CODES
B MOMENTARY

Notes:
- Leave the MODIFICATION CODE blank if a modification is not required.
- Standard head orientation is with actuator to the right.
- Unit may be field modified.

EXAMPLE CATALOG LISTING

Catalog Listing	Description
CLSD4B-1	Single Head Cable Pull Limit Switch, Blue Body – PF 1/2, 1NO - 1NC Direct Acting, Momentary, Head assembled with actuator to the left

DUPLEX HEAD 2CLS ORDER GUIDE

2CLS ____ ____ ____ ____ ____ – ____

BODY CODE
A BLUE BODY – PG13.5
B BLUE BODY – 1/2 NPT
C BLUE BODY – 20MM
D BLUE BODY – PF1/2

PRIMARY BASIC SWITCH CODE – LEFT
1 1NO – 1NC DIRECT ACTING

OPERATING HEAD
B MOMENTARY, BOTH SIDES

MODIFICATION CODES
(See chart below for numbered modification codes.)

INDICATOR – PILOT LIGHT CODE
A 120V – 6W RED PILOT LIGHT
B 120V NEON INDICATOR
C 240V NEON INDICATOR
D 24V LED INDICATOR

AUXILIARY BASIC SWITCH CODE – RIGHT
1 1NO – 1NC DIRECT ACTING
3 2NO – 2NC (DPDT) SNAP ACTION (Monitoring Only)
4 1NO – 1NC WITH SDS OUTPUT (Monitoring Only)
9 NO SWITCH

Notes:
- No numbered modification code indicates both heads oriented to side (Duplex Head).
- Standard Conduit openings are left, center, and right with two conduit plugs furnished.
- Leave the INDICATOR – PILOT LIGHT CODE blank if a pilot light is not required.
- Leave the HEAD ORIENTATION NUMBERED MODIFICATION CODE blank if not required. Do not enter zero.

EXAMPLE CATALOG LISTING

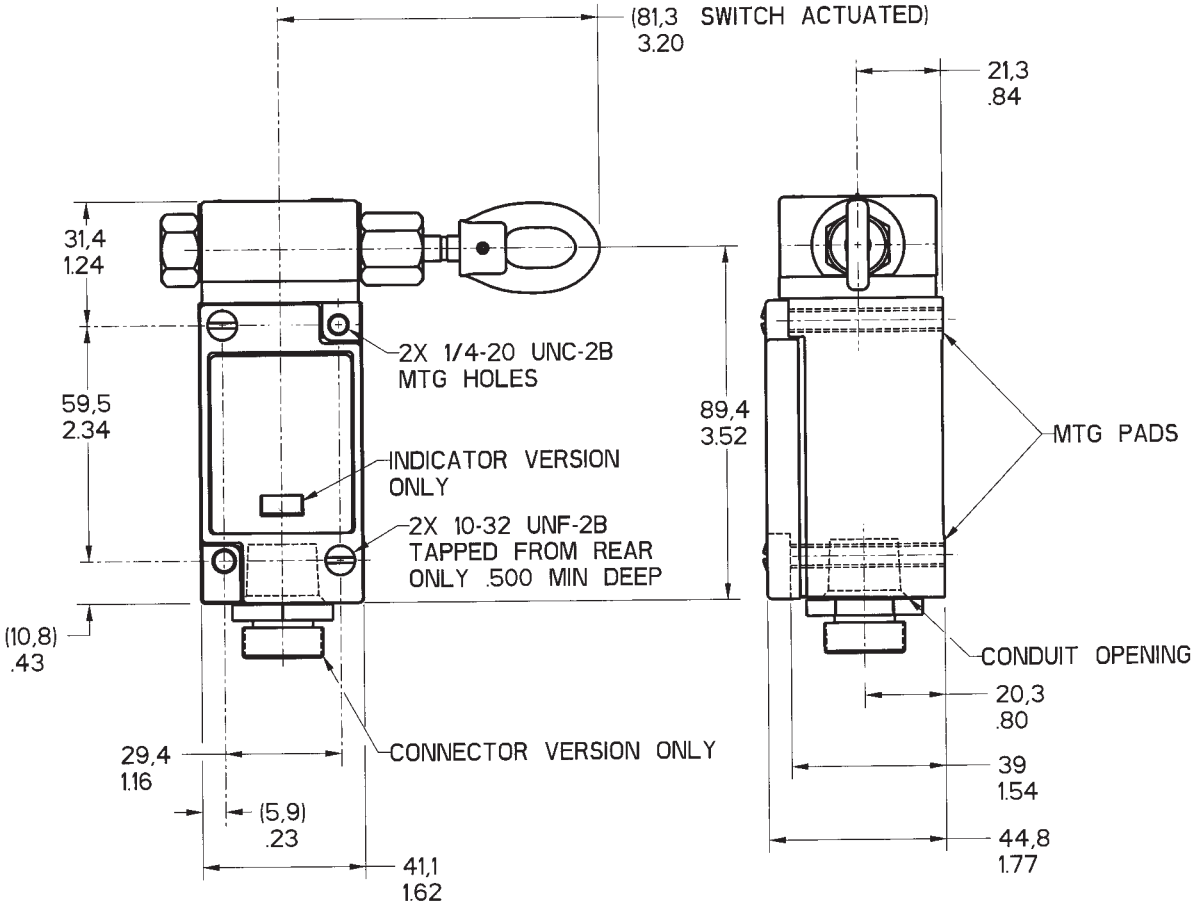
Catalog Listing	Description
2CLSB1B1-3	Duplex Head Cable Limit Switch, Blue Body – 1/2 NPT, 1NO – 1NC Direct Acting, Momentary – Both Sides, 1NO – 1NC Direct Acting, No Pilot Light, Left Head Front – Right Head Side

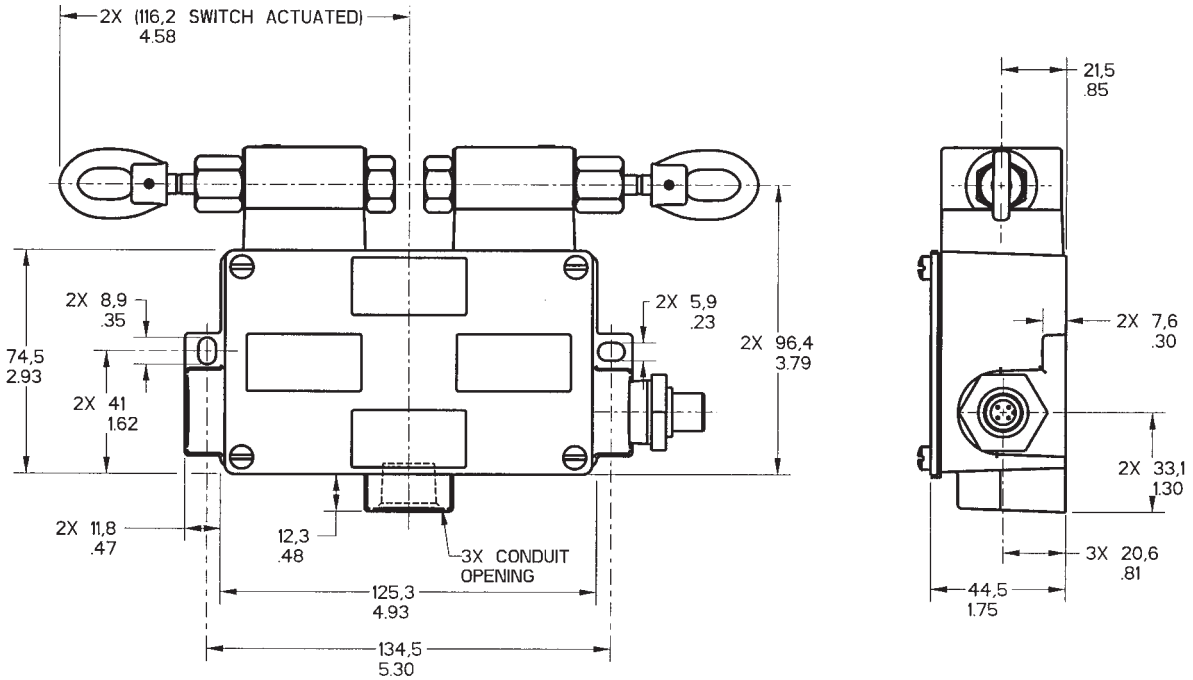
HEAD ORIENTATION NUMBERED MOD CODES

MOD CODE	LEFT HEAD	RIGHT HEAD
1	FRONT	FRONT
2	FRONT	REAR
3	FRONT	SIDE
4	REAR	FRONT
5	REAR	REAR
6	REAR	SIDE
7	SIDE	FRONT
8	SIDE	REAR

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MOUNTING DIMENSIONS
(For reference only)





Momentary Cable Pull Limit Switches: For Signaling Applications



INSTALLATION HARDWARE

- Aircraft cable precut to 25, 50, 100, 150 and 200 feet lengths
- Lockout attachment
- End springs for long cable spans to compensate for temperature variations
- Installation hardware kit supports cable installations of 25 ft. and 50 ft.

INSTALLATION HARDWARE ORDER GUIDE

Catalog Listings	Description
CLSZC1	25 ft. Red Aircraft Cable, finished cable dia. 0.187 in
CLSZC2	50 ft. Red Aircraft Cable, finished cable dia. 0.187 in
CLSZC3	100 ft. Red Aircraft Cable, finished cable dia. 0.187 in
CLSZC4	150 ft. Red Aircraft Cable, finished cable dia. 0.187 in
CLSZC5	200 ft. Red Aircraft Cable, finished cable dia. 0.187 in
CLSZ1S	End Spring
CLSZ00	Installation Kit includes: 4 thimbles, 8 wire rope clamps, 1 turnbuckle (w/lock nuts), 9 eyebolts (w/hardware), 1 endspring, 1 conduit fitting

Notes:
1. Eyebolts should be spaced 1.8 to 2.4 m (6 to 8 ft.) apart.
2. One used for each 7.5 m (25 ft.) of cable span.