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The **Interactive Catalog** provides an extensive collection of product specifications, application data, and technical literature that can be searched based on criteria you select.

This PDF catalog information was published in November 2000.



Sensing and Control  
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### Sensing and Control

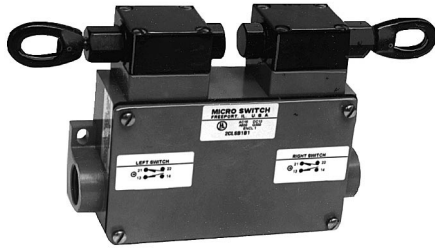
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## Momentary Cable Pull Limit Switches: For Signaling Applications



### 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.

### FEATURES

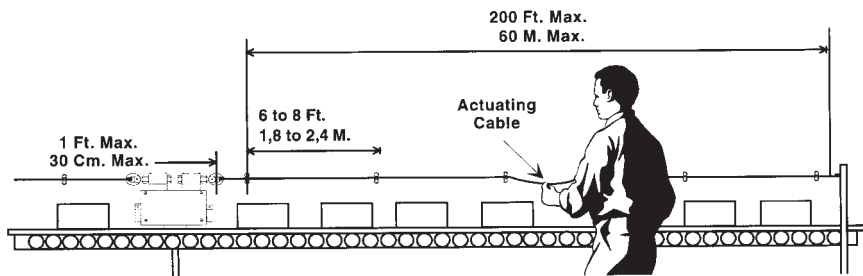
- Offered in Single Head and Duplex Head versions
- Optional direct acting contacts enhance reliability
- Duplex Head switches cover up to 400 ft. cable spans (200 ft. in each direction)
- Single Head switches have one normally open auxiliary contact, while Duplex Head switches have up to three normally 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

Limit/Enclosed

### TYPICAL APPLICATIONS

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

### TYPICAL DUPLEX HEAD SWITCH INSTALLATION



TECHNICAL DATA CLS SERIES SPECIFICATIONS

|                         |                                                                                |                                       |
|-------------------------|--------------------------------------------------------------------------------|---------------------------------------|
| Electrical              |                                                                                |                                       |
| Rate thermal current    | $I_{th} = 10\text{ A}$                                                         |                                       |
| Rate insulation voltage | $U_i = 660\text{ VAC}/660\text{ VDC}$                                          |                                       |
| Impulse voltage         | $U_{mp} = 2.5\text{ kV}$                                                       |                                       |
| Contact resistance      | $< 25\text{ milliohms}$                                                        |                                       |
| Operating rating        | AC15                                                                           | $U = 600\text{ V}; I = 1.2\text{ A}$  |
|                         |                                                                                | $U = 240\text{ V}; I = 3\text{ A}$    |
|                         |                                                                                | $U = 120\text{ V}; I = 6\text{ A}$    |
|                         | DC13                                                                           | $U = 250\text{ V}; I = 0.27\text{ A}$ |
|                         |                                                                                | $U = 24\text{ V}; I = 2.8\text{ A}$   |
| UL/CSA                  | A600/Q300                                                                      |                                       |
| Mechanical              |                                                                                |                                       |
| Protection class        | NEMA 1, 3, 4 and 13                                                            |                                       |
| Mechanical life         | $10^5$ operations maximum                                                      |                                       |
| Temperature Range       | $-1^{\circ}$ to $70^{\circ}\text{C}$ ( $30^{\circ}$ to $158^{\circ}\text{F}$ ) |                                       |
| 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

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

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

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

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

PRIMARY BASIC SWITCH CODE – LEFT

1 1NO – 1NC DIRECT ACTING

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

OPERATING HEAD

B MOMENTARY, BOTH SIDES

- 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 |

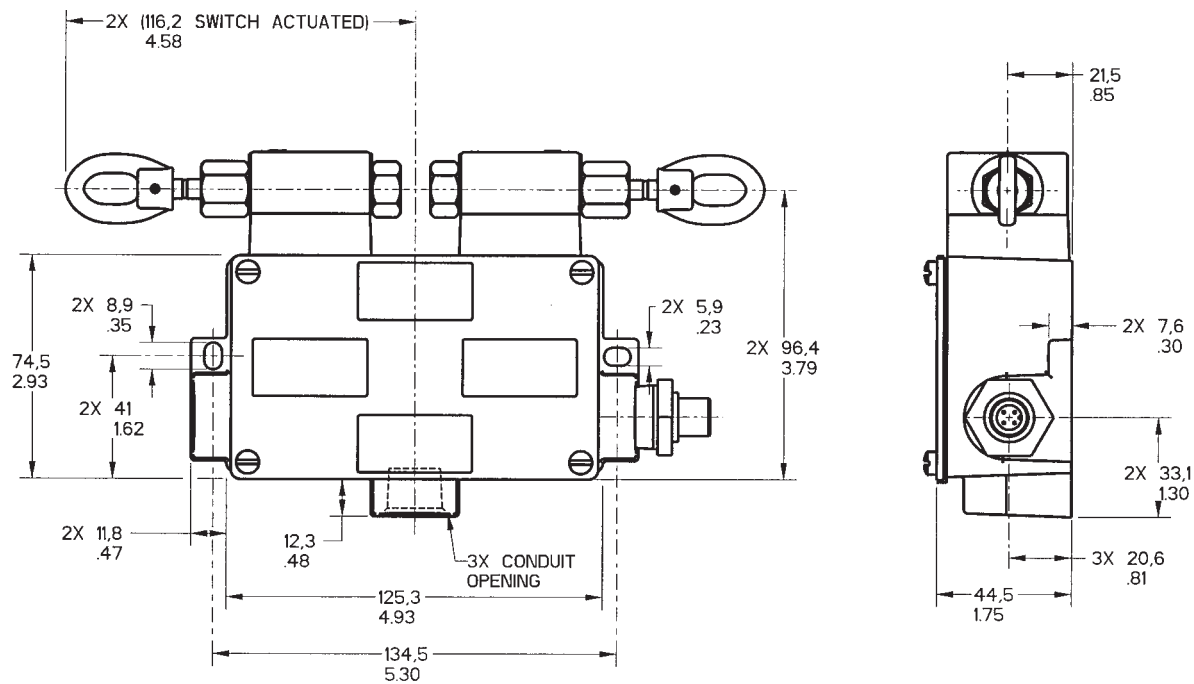
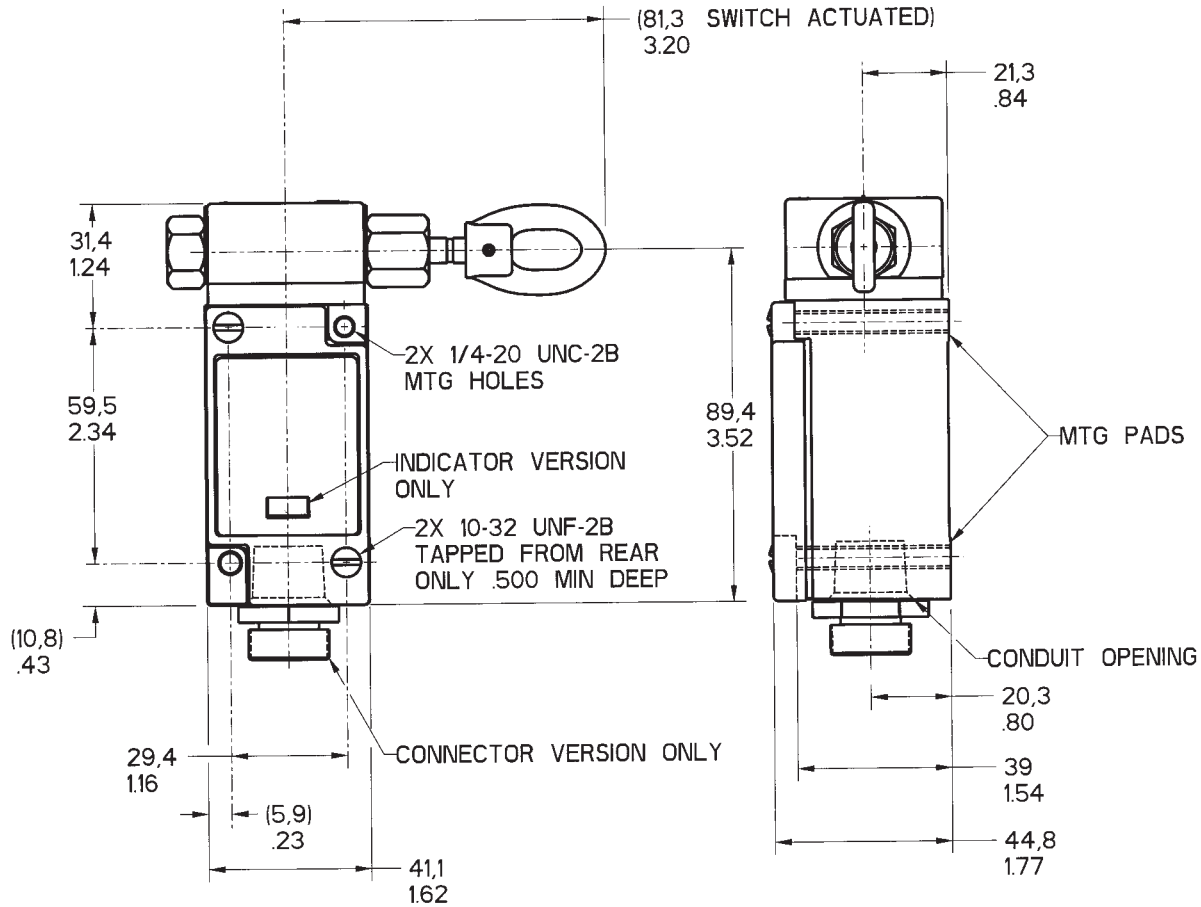
| HEAD ORIENTATION<br>NUMBERED MOD CODES |           |            |
|----------------------------------------|-----------|------------|
| MOD CODE                               | LEFT HEAD | RIGHT HEAD |
| 1                                      | FRONT     | FRONT      |
| 2                                      | FRONT     | REAR       |
| 3                                      | FRONT     | SIDE       |
| 4                                      | REAR      | FRONT      |
| 5                                      | REAR      | REAR       |
| 6                                      | REAR      | SIDE       |
| 7                                      | SIDE      | FRONT      |
| 8                                      | SIDE      | REAR       |

Limit/Enclosed

## Momentary Cable Pull Limit Switches: For Signaling Applications

### MOUNTING DIMENSIONS

(For reference only)



Limit and Enclosed Switches

CLS Series

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.

Limit/Enclosed

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В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

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