

1CPS

Cable Pull Safety Switch

Technical Data

Mechanical life 1 000 000 operations

Degree of protection IP 67
NEMA 1, 4, 12, 13

Temperature range *Operating:*
-25 °C to +80 °C /
-13 °F to +176 °F
without condensation

Approvals IEC/EN 60947-1
IEC/EN 60947-5-1
IEC/EN 60947-5-5
AC15 A300
DC13 Q300
UL & CSA
BG Applied for

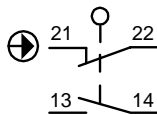
Vibration 10 Hz - 500 Hz, 5 g

Shock 15 g

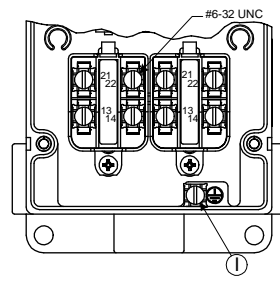
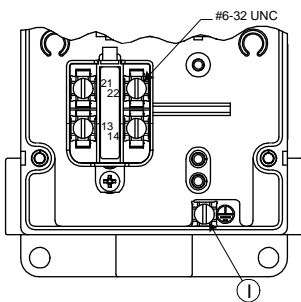
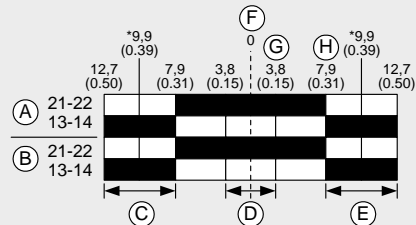
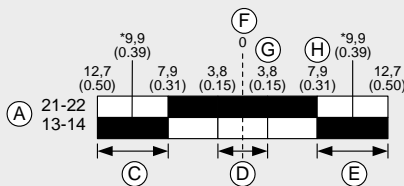
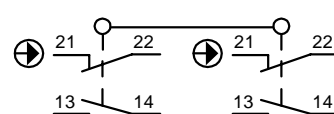
Contact material Silver standard
Gold plated optional

Included accessories None

1 NORMALLY CLOSED/
1 NORMALLY OPEN



2 NORMALLY CLOSED/
2 NORMALLY OPEN



- A Left switch
- B Right switch
- C Slackened cable
- D Proper cable tension
- E Pulled cable
- F Cable tension = 111 N (25 lb)
- G Cable tension = 133 N (30 lb)
- H Cable tension = 178 N (40 lb)
- I Ground screw
- Contact closed
- Contact open

Conduit
Thread

A = 1/2" NPT

C = 20 mm

▲ Gold-plated contacts

Ordering:

1CPS

X

Example: 1CPSA1A

1

5▲

2

6▲

X

CPS Series

Cable Pull Safety Switch



FEATURES

- Direct opening action \rightarrow of NC (normally closed) contacts
- 2CPS: 2NO/2NC, 1NO/3NC or 4NC contact configurations
1CPS: 1NO/1NC, 2NO/2NC, 1NO/3NC or 4NC contact configurations
- Typical cable span of 76 m (250 ft) in an environment with a temperature change of $\pm 17^{\circ}\text{C}$ ($\pm 30^{\circ}\text{F}$). Longer spans are possible depending upon temperature change and installation (ref. note on page 6 for more details or Application note - Effect of Temperature on Cable Pull Switch Operation)
- Choice of three actuator configurations (2CPS)
- Removable contact block version available (2CPS)
- Large wiring cavity with straight-through wiring
- 24 Vdc or 120 Vac bright, multicluster LED status indicator light available on 2CPS. Single high intensity LED on 1CPS
- Gold-plated contacts are standard on 2CPS, available on 1CPS
- Die-cast zinc housing
- Optional hardware packs available

TYPICAL APPLICATIONS

- Long conveyor systems found in warehouses and distribution centers
- Conveyor systems having a high amount of vibration
- Conveyor systems that experience wide temperature swings
- Long conveyor systems where easy through wiring, or highly visible trip status is required
- Hose down conditions
- Packaging equipment
- Assembly lines



(Applied for)



CPS Series Cable Pull Safety Switches provide a readily accessible emergency stop signal. This is a cost-effective means compared to using multiple emergency stop push-buttons. (Cable Pull Safety Switches are not, however, to be used as a means of personnel safeguarding. They may be used to prevent further injury or damage to equipment when used for emergency stop signaling.)

The CPS Series Cable Pull Safety switch is designed to provide emergency stop protection for exposed conveyor and assembly lines. The internal mechanism latches on both slackened cable (push) and pulled cable. This capability also enhances productivity by eliminating nuisance stops due to variations in temperature, stretch of cable over time, and other application variables.

The 1CPS is intended for use in applications where the cable span is 76 m (250 ft) or shorter. It is an economical solution for shorter runs or zone protection typical to automated systems. The 2CPS series is intended for use in very long cable runs of 152 m (500 ft) or shorter, such as long conveyor lines found in warehouses.

A line in the midpoint of the cable tension window indicates proper cable tension, providing easy set-up. The direct opening switch contacts are held closed when the actuating cable is under proper tension and the reset knob is set to RUN. When the actuating cable is pulled, slackened or broken, a cam positively opens the NC (Normally Closed) switch contacts. The snap action, trip operation causes the switch contacts to change state and mechanically latch almost simultaneously when the cable is pulled, slackened or broken. The NC switch contacts remain open until the CPS is reset by properly tensioning the cable and manually rotating the reset knob.

When the direct opening switch contacts open, the auxiliary contacts also actuate (open contacts close and closed contacts open). The auxiliary contacts are electrically isolated from the direct opening switch contacts. These NO (Normally Open) contacts may be used for monitoring or signaling.

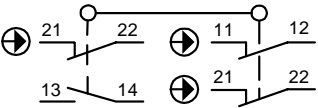
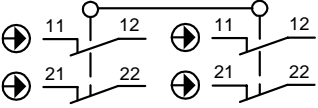
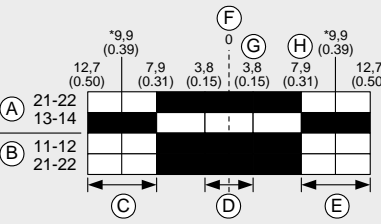
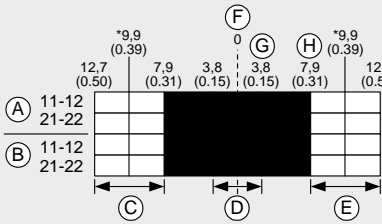
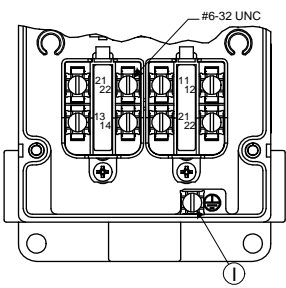
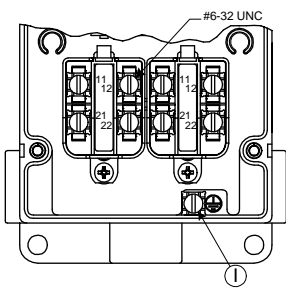
The CPS complies with: Low Voltage Directive 73/23/EEC, as amended by directive 93/68/EEC; Machinery Directive 98/37/EEC only as the directives relate to the components being used in a safety function; IEC/EN 60947-1; IEC/EN 60947-5-1; IEC/EN 60947-5-5.

WARNING

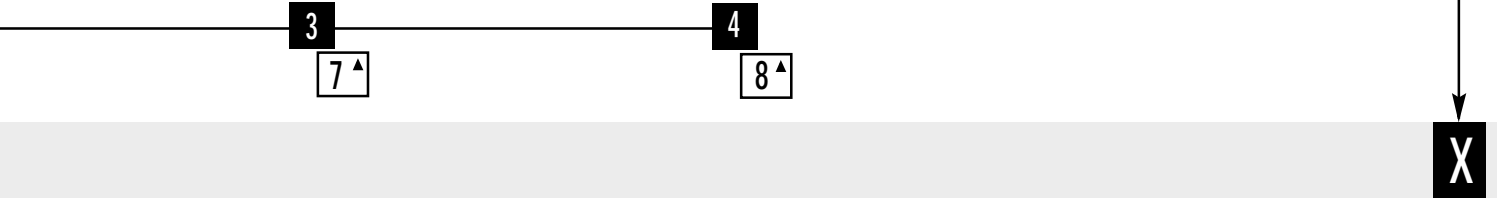
MISUSE OF DOCUMENTATION

- The information presented in this product sheet (or catalogue) is for reference only. DO NOT USE this document as system installation information.
- Complete installation, operation and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

	<p>3 NORMALLY CLOSED/ 1 NORMALLY OPEN</p> 	<p>4 NORMALLY CLOSED</p> 	<p>Indicator-Pilot Light Code</p>
			<p>A : 24 V LED</p>
			<p>B : 120 V LED</p>

CPS





1CPSA1B

1CPS Series, Cable Pull Safety Switch, Cable, Maintained, 1NC/1NO Direct Opening, 1 / 2 NPT, Silver Contacts, 120 Vac LED

Product Specifications	
Product Type	Cable Pull Safety Switch
Actuator	Cable , Maintained
Switch Type	1NC/1NO Direct Opening
Contact Material	Silver
Termination Type	1/2 NPT
Ampere Rating	50 mA to 10 A (Thermal)
Voltage	600 Vac and 250 Vdc Maximum
Housing Material	Zinc Die-Cast
Series Name	1CPS Series
Shock	15 G
Vibration	10 Hz - 500 Hz, 5 G
Sealing	IP67, NEMA/UL 1, 4, 12, 13
Approvals	UL, CSA, CE
CSA File #	LR57326
UL File #	E37138, E 157416
Agency Approvals and Standards	EN60947-1, EN-60947-5-1, EN60947-5-5
Mechanical Life	1 Million
Operating Temperature Range	-25 °C to 85 °C [-13 °F to 185 °F]
Availability	Global
UNSPSC Code	302119
UNSPSC Commodity	302119 Switches and controls and relays
Contact Block	Removable with Heavy Duty Wiring Receptacles
Indicator	120 Vac Red LED
Note 1	Low Voltage Directive 73/23/EEC , as amended by directive 93/68/EEC . Machinery Directive 98/37/EEC only as the directives relate to the components being used in a safety function.