

# CVS

---

## CONTROLS

### Instruction Manual

## CVS 870 Limit Switch

### Introduction

The CVS 870 Limit Switch is designed for valves and actuators in hazardous locations. The limit switch is CSA approved and is rated EX db IICT6/EX tb IIIC T85°C explosion proof, class 1, zone 1. It also carries ATEX certification, and has an IP67 enclosure rating.

Equipped with standard NAMUR shaft and Stainless Steel bracket, for easy mounting to all NAMUR mount actuators.

Secure water resistant case with multi angle top and side visual indicator.

Red to indicate fully closed position, and yellow to indicate fully open position.

Standard switch configurations are 2 single pole double throw mechanical switches. Optional 2 double pole double throw switches or proximity sensors are available. Also available in Stainless Steel, model number CVS 875.



### Features

- Die cast, powder coated aluminum housings
- Multi angle visual valve position from both sides and top view
- Spring loaded splined "Quick Set" cam. Eliminates the need to re-adjust after initial setting.
- Dual cable entries: 2x3/4 NPT
- NAMUR Standard shaft and bracket
- Explosion proof, ExdbIICT6, weather proof.
- Multi point terminal strip
- Ambient Temperature rating, -20°C to 60°C  
\*(Tested to -50°C)

#### Head Office

3900 101 Street  
Edmonton, Alberta  
T6E 0A5  
Canada  
Office: (780) 437-3055  
Fax: (780) 436-5461



Website: [www.cvs-controls.com](http://www.cvs-controls.com)

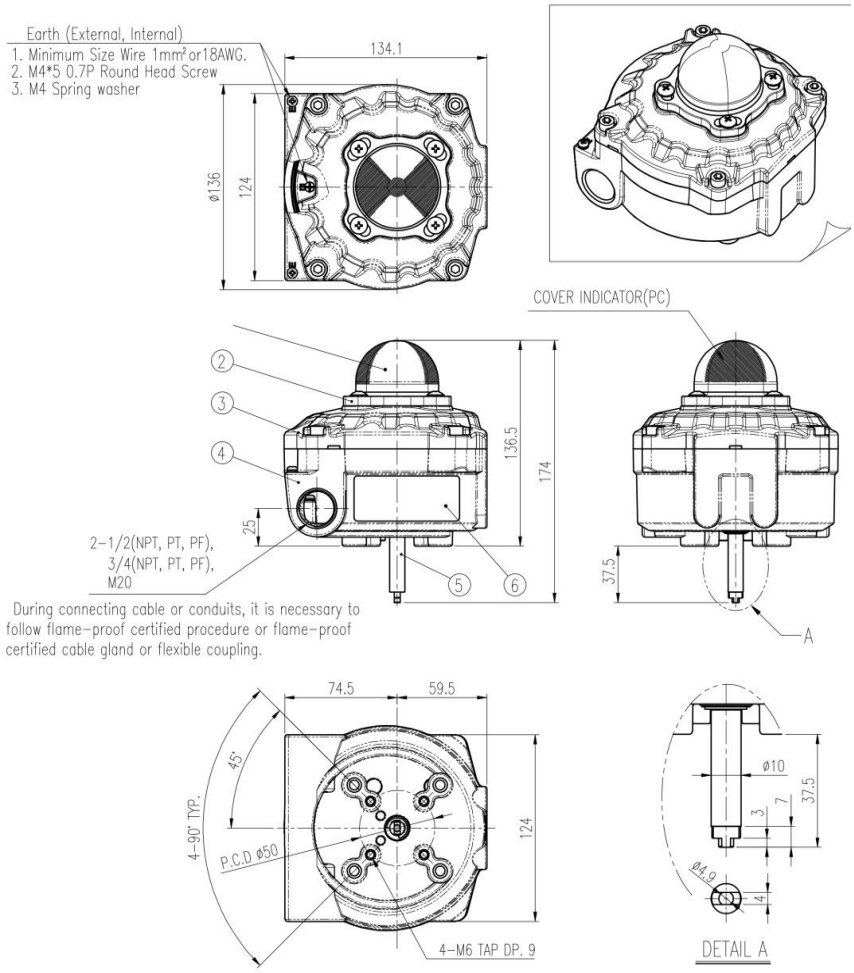
Email: [info@cvs-controls.com](mailto:info@cvs-controls.com)

#### Calgary Sales Office

3516 114 Avenue SE  
Calgary, Alberta  
T2E 6Z3  
Canada  
Office: (403) 250-1416  
Fax: (403) 291-9487

# SPECIFICATIONS

## Dimensions-(mm)



During connecting cable or conduits, it is necessary to follow flame-proof certified procedure or flame-proof certified cable gland or flexible coupling.

## Installation

The CVS Limit Switch uses NAMUR standard shaft and mounting bracket. Suitable for various applications, without the need for further modification.

**Ensure all supply pressure to the valve, actuator, and other related devices is off prior to installation.**

Install NAMUR mounting bracket using supplied fasteners. Determine correct application height and install side mounting brackets accordingly.

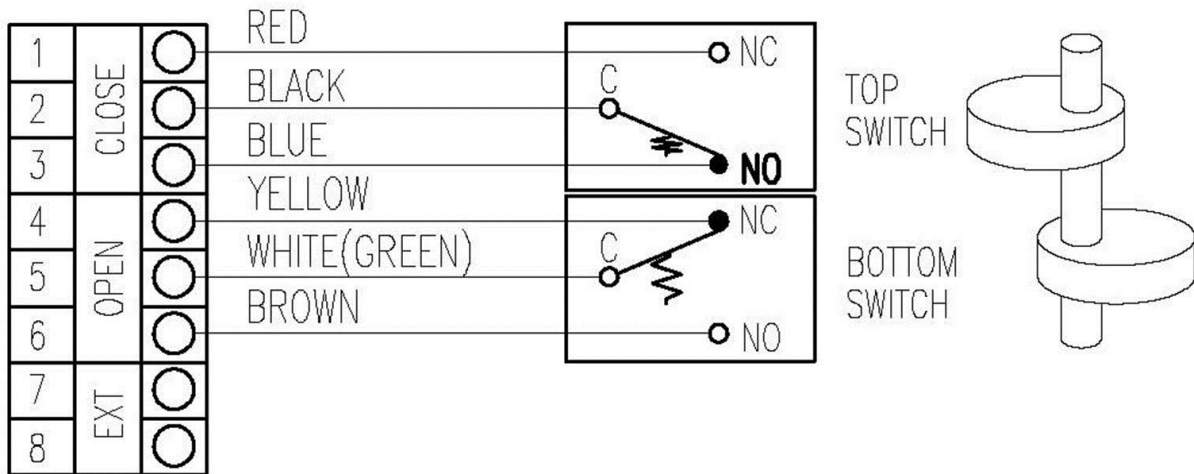
Install assembled CVS 870 Limit Switch and Bracket to valve or actuator accordingly.



CVS 870 Limit Switch with CVS350SR Rack and Pinion actuator, and CVS 6700 Series Trunnion Ball Valve

## Installation

### CVS 870M1, 2 SPDT Wiring:



\*EXT may be used for optional solenoid valve.

The CVS 870 Limit Switch accurately monitors and transmits the valve position at the user specified open/close set points.

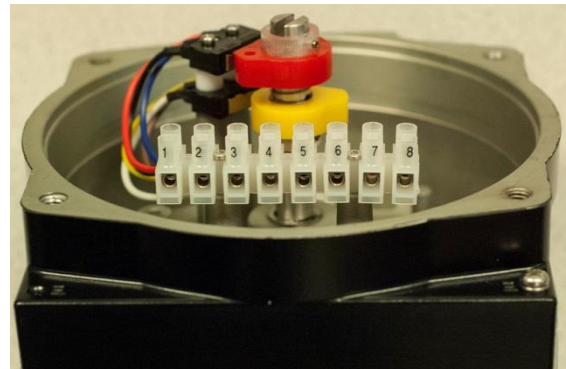
Standard CVS 870 Limit Switch is 2 Single Pole Double Throw (14VDC 5A, 30VDC 4A, 125VDC 0.4A, 250VDC 0.2A, 125VAC 5A, 250VAC 3A)

Additional configurations through to 2 Double Pole Double Throw available. Contact a CVS controls representative for more information.

Prior to wiring the CVS 870 Limit Switch, ensure no explosive gas or material is present.

Ensure all power has been turned off.

For power connections that are unused, use blind plugs which are explosion proof certified.



## “Quick Set” Cam Adjustment – Open/Closed

Additional adjustments should not be required after initial setting. However, should there be a need to make further adjustments to the CVS 870 Limit Switch, this is easily done at the field level with only a 5mm hex key to remove the cover.

Once open, adjustment to fully closed (red cam) may be made by depressing the cam and turning in either direction to obtain necessary adjustment.

The same may also be done for fully open (yellow cam) by lifting the cam and rotating. Cams are on a spring loaded splined shaft and will re seat when let go.

### NOTES:

---



Red Cam Adjustment – Fully Closed



Yellow Cam Adjustment – Fully Open

CVS Controls Ltd. strives for the highest levels of quality and accuracy. The information included in this publication is presented for informational purposes only. CVS Controls Ltd. reserves the right to modify or change, and improve design, process, and specifications without written notice. Under no circumstance is the information contained to be interpreted to be a guarantee/warranty with regard to our products or services, applicability or use.

Selection, use and maintenance are the sole responsibility of the end user and purchaser. CVS Controls assumes no liability for the selection use and maintenance of any product.