

# LIMIT SWITCH BOX MODEL - APL210N



## FEATURES AND BENEFITS

- Powder Coated Aluminium Switchbox to IP67 fitted with 2 x SPDT switches for indication of fully open and fully closed positions.
- Solid and compact design with high visibility beacon indicator.
- Captive cover bolts are safely retained during installation and maintenance.
- The spring loaded splined cams are easily adjustable with no tools required.
- Dual cable entries are provided.
- The switchbox is mounted to the actuator using a NAMUR standard stainless steel mounting bracket.

## OPTIONS:

- Proximity Sensors
- 3-Way Indication
- Various Colours
- IP68

## MATERIAL

ITEM	COMPONENT	MATERIAL
1	Housing Cover & Body	Aluminium Die-Casting
2	Shaft	Stainless Steel
3	Indicator Cover	Polycarbonate
4	Cam	Polycarbonate
5	Spring	Stainless Steel
6	Housing Cover Bolt	Stainless Steel
7	O-Ring	NBR
8	Bushing	Bronze
9	E-Ring (Shaft)	Stainless Steel
10	Earth Lug	Stainless Steel
11	Indicator	ABS/Polycarbonate
12	Bracket	Stainless Steel

## APPLICATIONS

Challenger Valves and Actuators are the **“Right Choice for Valves and Actuation”** when quality matters.

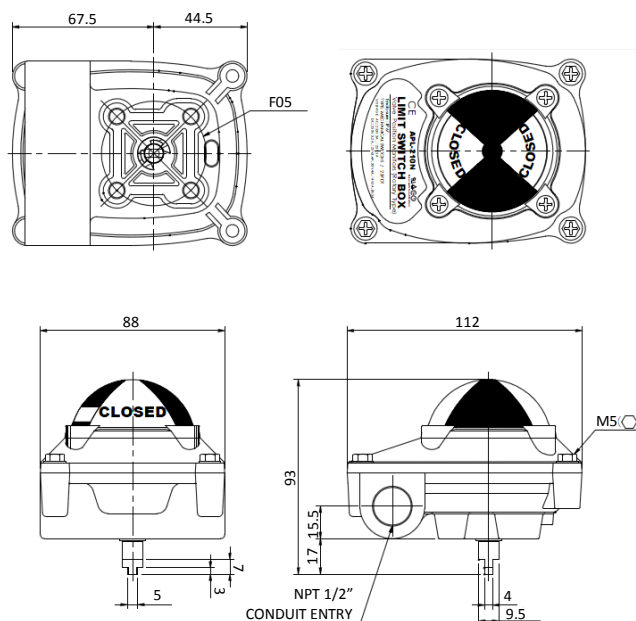
Servicing industries such as : Water & Waste Water, Mining, Desalination, Pumping, Industrial Processing, Irrigation, Materials Handling and Chemical Services.



## TECHNICAL SPECIFICATION

- **Enclosure:** Weatherproof IP67
- **Cable Entries:** Two NPT 1/2"
- **Ambient Temperature:** -20°C - 80°C
- **Terminal Strips:** 8 points (0.08-2.5mm<sup>2</sup>)
- **Position Indicator:** 0-90°  
(90° turn free join close: red & open: yellow)
- **Switches:** Mechanical Switch x 2  
Proximity Sensor x 2
- **Painting:** Chromate Polyester Powder Coating

## DIMENSIONS [MM]

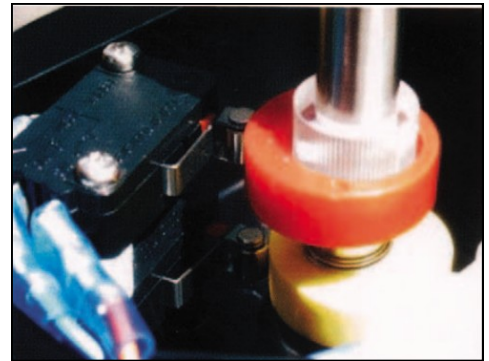


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## STANDARD SWITCHES - MECHANICAL

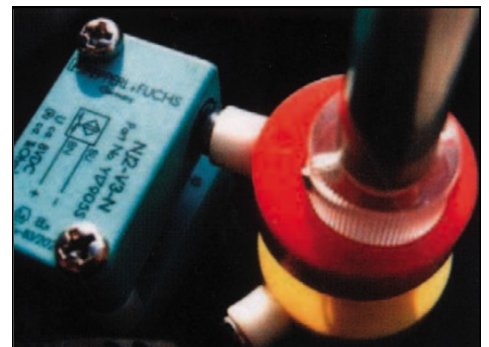
- 2SPDT Switches
- Contact Arrangement:
  - 250V AC/16A
  - 250V DC/0.3A
  - 125V DC/0.6A
  - 30V DC/10A
- Operating Frequency:
  - 600 Operating per minute max (Mechanically)



## PROXIMITY SWITCHES

### NJ2-V3-N P&F

- Intrinsically Safe
- Inductive Proximity Sensor
- Voltage Range - 8V DC
- Operating Distance



## ADJUSTMENTS

Challenger limit switch boxes are factory set, and should not require any adjustment, however if final adjustment in the field is required the following procedures must be followed.

### Adjustment Mechanical Switch

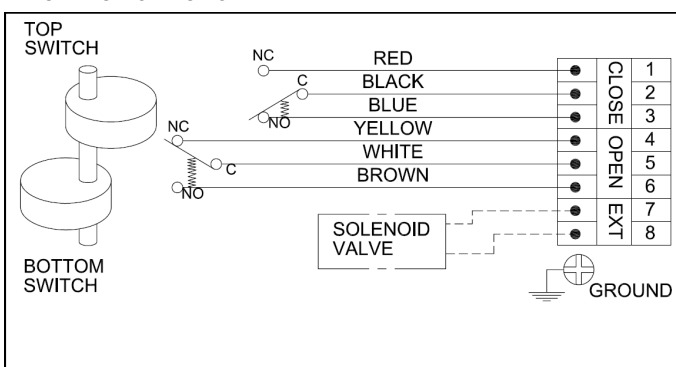
1. Isolate Electrical Supply
2. Unscrew captive bolts
3. Remove the top cover, be careful not to damage the 'O' ring seal.
4. You will find two coloured quick set cams (1) & (2), one cam for each limit switch
5. Gently press down and rotate each spring loaded cam, against the mechanical switch lever until the desired contact is made and release. The cam is now set in the desired position.

### Adjustment Proximity Sensor

1. Isolate Electrical Supply
2. Unscrew captive bolts
3. Remove the top cover, being careful not to damage the 'O' ring seal.
4. You will find two coloured quick set cams (1) & (2), one cam for each sensor.
5. The proximity cams have a target indicators fitted, one for each cam, simply press down and rotate each spring loaded cam to the target marked on the proximity sensor and release the cam.

## WIRING DIAGRAM

### MECHANICAL SWITCHES



### PROXIMITY SWITCHES

