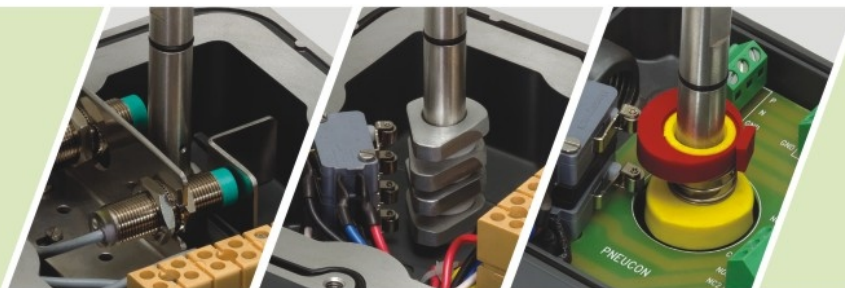


# Limit Switch Enclosure



**BUILT IN RELIABILITY**



## Company Profile

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PNEUCON AUTOMATION is an associate company of Pneucon Valves Pvt Ltd who are pioneer in Design, Development and Manufacture of complete range of Control Valves. Pneucon Automation is promoted to manufacture complete range of AUTOMATED ON-OFF VALVES to meet the diverse automation demands of the modern process industries.

### DESIGN AND ENGINEERING

Pneucon Engineering department's mission is design innovation. Our ability, experience and expertise through the use of sophisticated technology and CAD/CAE equipment results in the production of high quality automated valves for wide range of applications.

### QUALITY

Pneucon limit switch enclosures are produced in strict compliance with the Quality Management System requirements and in conformance with the engineering codes in practice and relevant standards.

### MANUFACTURING

Pneucon manufacturing unit is equipped with latest machineries, equipments and test facilities. Our production team of skilled workers ensure to employ latest state-of-the-art modern techniques in the entire cycle of production

under stringent quality control procedures. The valves and components are manufactured to the highest degree of accuracy to ensure a trouble free long life and guaranteed interchangeability of spares.

### CUSTOMER SERVICE

Pneucon has fully integrated customer service division, which is fully geared to react speedily to all customers enquiries and whatever technical support needed.

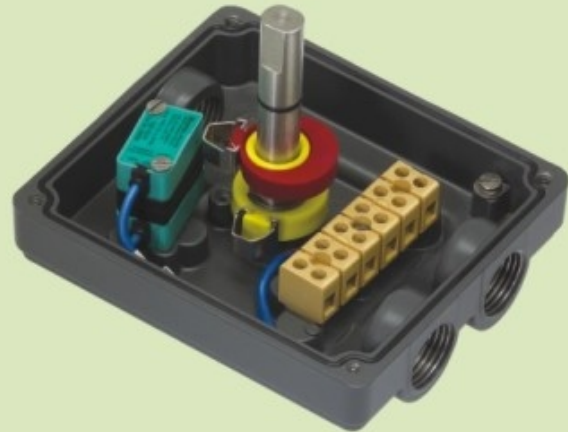


## Weatherproof Valve Position Limit Switch Enclosure

The LSWP-Weatherproof Limit Switch enclosure offers a wide range of signaling options in a compact corrosion resistant aluminum alloy housing. The Limit Switch indicator, represent a true indication of valve position. It is infinitely adjustable & delivers a 100% change of indication, displaying 90° of rotation by utilizing an amplified mechanical drive.

### Integrated Characteristics / Features:

- Enclosure - IP67 degree of protection as per IS/IEC-60529/2001 Certified by CMRI Dhanbad Certificate No.: CIMFR/TC/P/H387.
- Intrinsically Safe Exib II B/II C T6 Certified by CMRI Dhanbad as per guidelines of Clause 12 of IS/IEC 60679-11:2006 & Clause 29 of IS/IEC 60079-0:2004 Certificate No.: CIMFR/TC/P/H388.
- Rigid & compact design body constructed from Aluminum Alloy Die Casting capable of operating even in arduous conditions.
- Dome position Indicator constructed from high import resistance poly carbonate material which offers instant visual recognition.
- The locked serrated easy to adjust, spring loaded cam ensures easy setting with tool.
- Three cable entries are provided as a Standard.
- Complies with NAMUR Mounting Standard.
- Range of mounting accessories having the compatibility with the various Actuators available.
- Temperature range -20°C +80°C, other range available on request.



# Flameproof Valve Position Limit Switch Enclosure

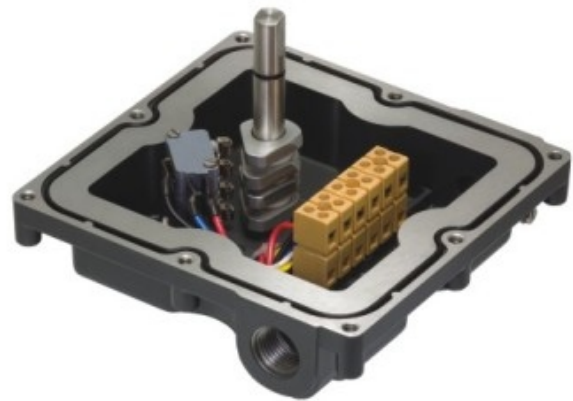
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The LSFP-Flameproof Limit Switch enclosure offers a wide range of signaling options in a compact corrosion resistant aluminum alloy housing. The Limit Switch indicator, represent a true indication of valve position. It is infinitely adjustable & delivers a 100% change of indication, displaying 90° of rotation by utilizing an amplified mechanical drive.

## Integrated Characteristics / Features:

- Enclosure - IP67 degree of protection as per IS/IEC-60529/2001 & Zone 1 & 2 and Gas Group: II C as per IS/IEC 60079-1:2007 Certificate No.: CIMFR/TC/P/1491.

- Rigid & compact design body constructed from Aluminum Alloy Die Casting capable of operating even in arduous conditions.
- Dome position Indicator constructed from high import resistance poly carbonate material which offers instant visual recognition.
- The locked serrated easy to adjust, spring loaded cam ensures easy setting with tool.
- Two cable entries are provided as a Standard.
- Complies with NAMUR Mounting Standard.
- Range of mounting accessories having the compatibility with the various Actuators available.
- Temperature range -20°C +80°C, other range available on request.



## Mounting

- As per ISO 5211
- Two different designs available  
Fix bracket | Adjustable bracket
- All bracket are available in MS powder coated for general purpose and SS316 graded material for high corrosion resistance.
- Bracket with special slot for easy adjustments along X & Y axis for perfect alignment.



## Internals

The locked serrated easy to adjust, spring loaded CAM ensures easy setting with tool.



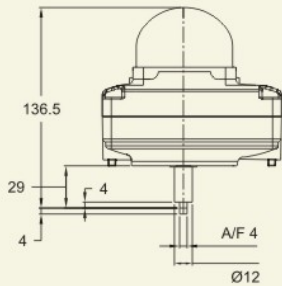
## Dome

The Dome is manufactured with unique double die process. Black & Red parts are inserted in transparent and Yellow part simultaneously which ensures long life and high visibility.

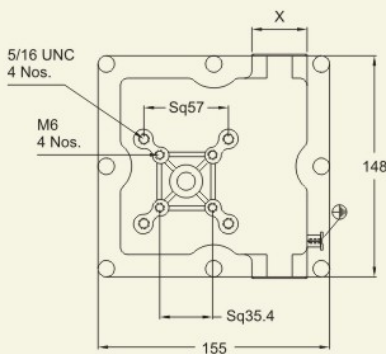
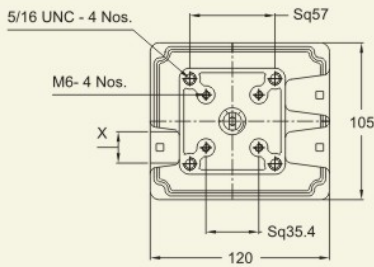
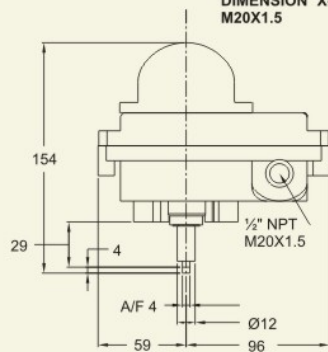


# Dimensions

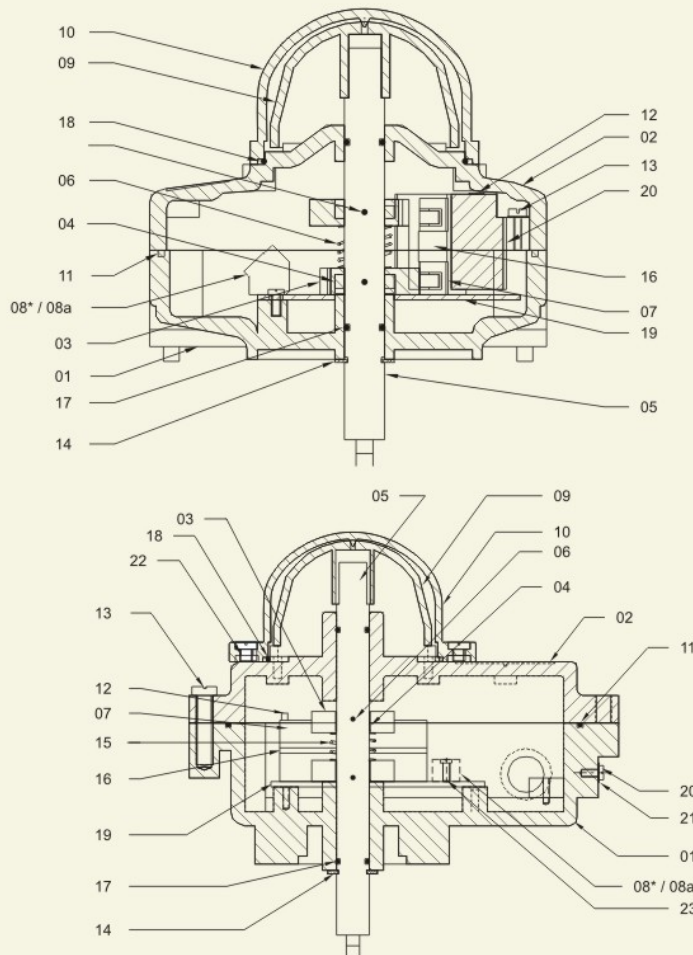
**DIMENSION 'X' - ½" NPT  
M20X1.5**



**DIMENSION 'X' - ½" NPT  
M20X1.5**



# Cross Section



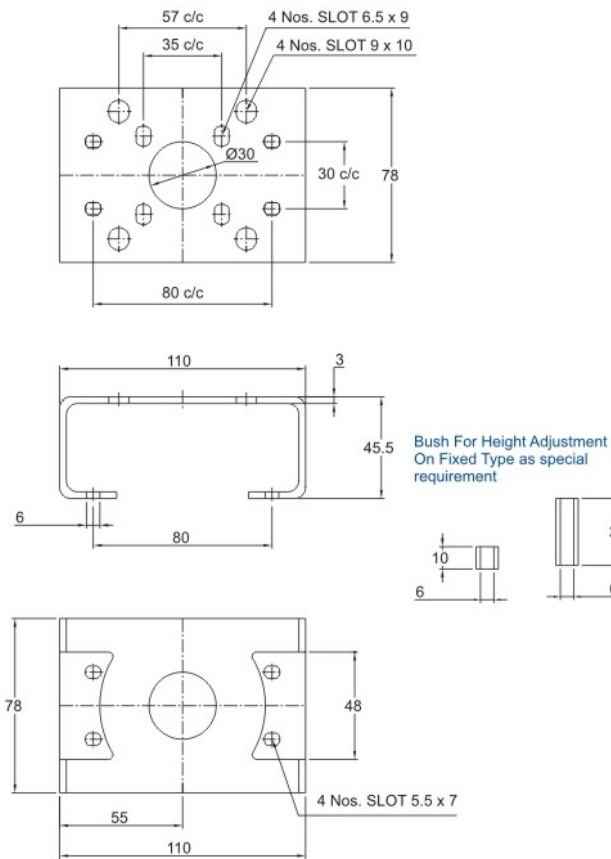
# MATERIAL OF CONSTRUCTION

01	HOUSING	ALUMINIUM ALLOY HE-30
02	COVER	ALUMINIUM ALLOY HE-30
03	CAM	DELTRIN
04	CAM-LOCK	DELTRIN
05	SHAFT	STAINLESS STEEL
06	SPRING DOWEL	SPRING STEEL
07	MICROSWITCH (SPDT)	HONEYWELL/CHERRY/P&F
08*	THREE WAY TERMINAL BLOCK	POLYAMIDE
08a	CONNECTOR STRIP 6 WAY	POLYAMIDE
09	INDICATOR	ABS PLASTIC
10	INDICATOR COVER	POLYCARBONATE
11	GASKET	NBR
12	SCREW FOR MICROSWITCH	STAINLESS STEEL
13	NON FALLING SCREW	STAINLESS STEEL
14	'E' TYPE CIRCLIP	SPRING STEEL
15	SPRING	SPRING STEEL
16	PAD	POLYAMIDE
17	SHAFT 'O' RING	NBR
18	INDICATOR 'O' RING	NBR
19*	PRINTED CIRCUIT BOARD	-
20	HEAD SCREW FOR EARTHING	STAINLESS STEEL
21	WASHER FOR HEAD SCREW	STAINLESS STEEL
22	PHILIPS HEAD SCREW	STAINLESS STEEL
23	SCREW FOR CONN. STRIP	STAINLESS STEEL

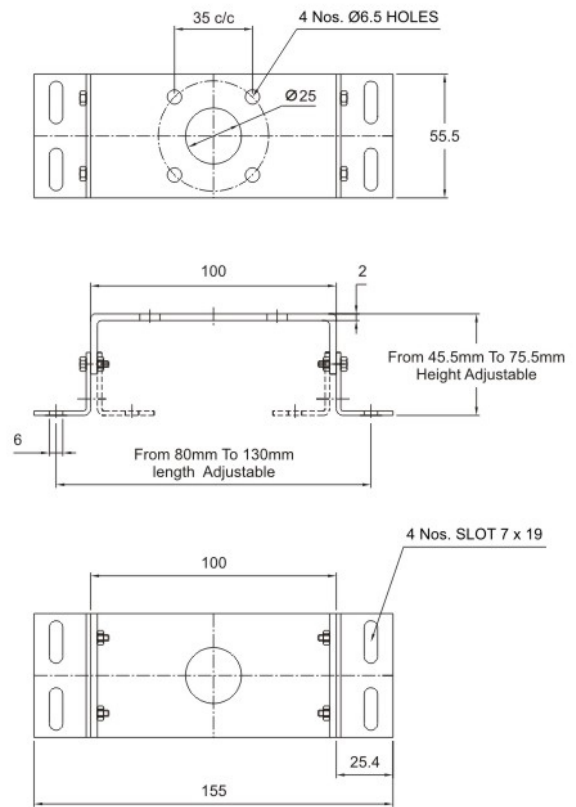
Note: Above marked with \* is applicable for Limit Switch with PCB Card design

# Bracket Dimensions

## Fixed Type\*



## Adjustable Type



# Ordering Information

<b>Limit Switch</b>	Weatherproof Flameproof Intrinsically Safe	<b>LSWP</b> <b>LSFP</b> <b>LSIS</b>
<b>Design</b>	W/O PCB with PCB	1* 2
<b>Switch Selection</b>	Ref. Switch Selection Chart	■
<b>No of Switches</b>		1 2* 3 4
<b>Cable Entry</b>	½" NPT(F) M20X1.5(F)	<b>A*</b> <b>B</b>
<b>Bracket MOC</b>	Mild Steel Stainless Steel	<b>MS*</b> <b>SS</b>
<b>Type of Bracket</b>	Fixed Type Adjustable	<b>F*</b> <b>A</b>

## Switch Selection Chart

Make	Switch Model	Rating	Type	Code
HONYWELL	V15S05-CZ100A05-01	5Amp 125 OR 250VAC 0.1Amp 48V DC, NO / NC		01*
HONYWELL	V7-1C17E9-201	15Amp 125 OR 250VAC 0.5Amp 125V DC, 0.25Amp 250V DC, NO / NC		02
P & F	NJ2-12-GM-N	8V DC, NC	EEx ia	03
P & F	NCB2-12GM35-NO	8V DC, NC	EEx ia	04
P & F	NBN4-12GM40-ZO	24V, 100mA, NO		05
P & F	NBN4-12GM35-NO	8V DC, NC	EEx ia	06
P & F	NJ4-12GM50-WS	220AC, 200mA 50Hz, 60Hz, NO		07
P & F	NJ5-18GM-N	8V DC, NC	EEx ia	08
P & F	NBB5-18GM50-ZO	24V DC, 100mA, NO		09
P & F	NJ4-12GK-N	8V DC, NC	EEx ia	10
P & F	NJ2-V3-N	8V DC, 3mA, NC	EEx ia	11
P & F	NBB3-V3-Z4	10-60V DC, 100mA, NO		12
P & F	SJ3.5-N	8V DC, NC	EEx ia	13

Note: Above marked with \* is default for Limit Switch if not specified.

### Ordering Example: LSWP-1-01-2-A-MS-F

Weatherproof Limit Switch Enclosure without PCB Card is provided, with Honeywell Micro Switches 2 Nos., each 1 No & 1NC, use 5Amp max. ½" NPT(F) Cable Entry, with a Milled Steel Fixed Type Bracket.

# Certificates

को २० एवं ई० अ० सं० परीक्षण प्रकोष्ठ - CIMFR TESTING CELL  
सीएसआईआर - केन्द्रीय खन एवं ईंधन अनुसंधान संस्थान  
(विज्ञान, विद्या और प्रौद्योगिकी के समन्वय परिसर)  
ESTD. १९६६

**IMFR** TESTING CELL

**CSIR-CENTRAL INSTITUTE OF MINING AND FUEL RESEARCH**  
ISO 9001 REGISTERED  
FORMERLY : CENTRAL MINING RESEARCH INSTITUTE  
(COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH)  
बरवा रोड, धनबाद - 826015 (भारत) - BARWA ROAD, DHANBAD - 826015 (INDIA)  
परीक्षण प्रमाण पत्र - **TEST CERTIFICATE**

(FORM NO. CIMFR: DQM: FLP: F-04: REV-02)  
(Flame & Explosion Laboratory)

Equipment ID NO. 307/13 Code No. FLP/133A/13-14

**SCHEDULE**

[For association with the report of test sent under cover of this office letter No. CIMFR/TC/P/1/387 Dated 6<sup>th</sup> September, 2013 to M/S. PNEUCON AUTOMATION PRIVATE LIMITED, PLOT NO. 1/235B, OFF. BLOSSOM HIGH SCHOOL, KOLSHET BALKUM ROAD, THANE - 400 607 in respect of the apparatus mentioned below submitted to CIMFR for Test.]

**Apparatus Name:** Weatherproof (IP-67) enclosure for Limit Switch Assembly, in cast aluminium Alloy LM-6 construction.

**Material:** Cast Aluminium alloy LM-6 construction.

**Cat./Type No.:** Model No.: LSWP

**Rubber Gasket:** NBR 'O' ring gasket 1.7mm thick is provided in the groove of body and cover joint, 2 nos. NBR 'O' ring gasket 1.85mm thick is provided in the groove of the operating rod for IP-67 degree of protection. For further details refer drawings.

**Drawing:**

Sl. No.	Drawing No.	Date	Title
1.	900101	19/06/2013	WEATHERPROOF (IP-67) ENCLOSURE FOR LIMIT SWITCH ASSEMBLY.

**NAME & ADDRESS OF APPLICANT/MANUFACTURER:**

M/S. PNEUCON AUTOMATION PRIVATE LIMITED,  
PLOT NO. 1/235B, OFF. BLOSSOM HIGH SCHOOL,  
KOLSHET BALKUM ROAD, THANE - 400 607

Declaration by the applicant/manufacturer as to standards with which the apparatus complies of IS/IEC 60529:2001.

**As to Weatherproof Protection:** IS/IEC 60529:2001 (For IP-67)

**Note:** The CIMFR has however not checked & tested the compliance of the apparatus to any standard other than IS/IEC 60529:2001 for IP-67 degree of protection.

Page 2 of 3  
*Navin Kumar*

को २० एवं ई० अ० सं० परीक्षण प्रकोष्ठ - CIMFR TESTING CELL  
सीएसआईआर - केन्द्रीय खन एवं ईंधन अनुसंधान संस्थान  
(विज्ञान, विद्या और प्रौद्योगिकी के समन्वय परिसर)  
ESTD. १९६६

**IMFR** TESTING CELL

**CSIR-CENTRAL INSTITUTE OF MINING AND FUEL RESEARCH**  
ISO 9001 REGISTERED  
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(COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH)  
बरवा रोड, धनबाद - 826015 (भारत) - BARWA ROAD, DHANBAD - 826015 (INDIA)  
परीक्षण प्रमाण पत्र - **TEST CERTIFICATE**

FORMAT NO.: (CIMFR: DQM: FLP02: F-01: REV-01)  
(Flame & Explosion Laboratory)

Prototype Report No.: CIMFR/TC/P/1/49/ Dated: 13<sup>th</sup> March, 2014  
Equipment ID NO.: 49/14 Code No.: FLP/264/13-14  
Application Ref. No.: PAPL/FLP/004/13-14 Dated: 23/12/2013

- Applicant :** M/S. PNEUCON AUTOMATION PRIVATE LIMITED  
PLOT NO. 1/235B, OFF. BLOSSOM HIGH SCHOOL,  
KOLSHET BALKUM ROAD,  
THANE - 400 607
- Manufacturer :** Same as above
- Apparatus :** FLP-WP (IP-67) ENCLOSURE FOR LIMIT SWITCH ASSEMBLY.
- Designated by :** Model No.: LSWP
- Gas Group, Zone :** Gas Group: IIC and Zone 1 & 2 atmosphere only.
- Electrical ratings:** rated at 15Amp., 250V AC/ 220V DC (max.).
- Temperature Class:** (See Result#A2)
- Degree of Ingress Protection:** IP-67 (See Result#A3)
- Material of Construction:** Cast Aluminium Alloy LM-6 construction. Refer drawing for material thickness at different locations of the enclosure.

**10. Description of the apparatus:** FLP-WP (IP-67) ENCLOSURE FOR LIMIT SWITCH ASSEMBLY.

**A.**

Description	Volume (in cc)		Min. Wall Thickness (mm)	Nos. & Size of Bolts/Fasteners
	Gross	Net		
Single Enclosure	450 cc	350 cc	12mm	8 nos. M6X20mm long Allen Bolts screws.

**B.**

Glass details	Max no. of aperture on cover	Max. No. & size of cable entries
Nil	One no. shaft.	2 nos. cable entries of size M20x1.5pitch is provided on the enclosure body maintaining threaded length 16mm, for attachment of certified & approved FLP/WP double compression type cable gland.

**Note:** For further details refer drawings.

Page 1 of 8  
*Navin Kumar*



**PNEUCON**  
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Web: www.pneucconautomation.com