



Ref : JAI / GC / 2026

Date : 16.01.2026



Dear Sir,

At the outset, we thank you all for patronizing our products. As you are aware, our **JAIBALAJI** products are the **ONLY PRODUCTS** available in India with  &  Markings and **IP-67** Protection. We are also an **ISO 9001 : 2015** Certified company offering **QUALITY PLUS** Products at **MOST COMPETITIVE PRICE**. **JAIBALAJI** Products are manufactured making use of **UL Listed V2 Flame Retardant Grade 960°** Glow Wire Tested Anti corrosive Anti-Acid unbreakable **Engineering Plastic** and are fully insulated. Our wide range of products are **Illuminated Push Buttons, Pilot lights, Push Button Stations (Plastic & Metal) LED Electronic Module Indicating lights (16.5 mm & 22.5 mm dia) Electronic signal Tower lights (LED & BULB) Electronic Proximity Sensors (Photo Sensors, Diffuse, Thro' Beam, Colour mark, Inductive & Capacitive) Electronic Timer Din Rail (Analog & Digital) Electronic Digital Counter / Timer, Digital Meters AC / DC Voltmeter, Ammeter, Digital Panel Meters, Frequency Meters, Variety of Limit Switches, like BC-9, BC-9T, JW Micro Adjustable, CEE EM 45, Precision, Miniature Snap Action, Mini Limit Switches, Heavy Duty Limit Switches JB - 2700, Extra Heavy Duty JC-1125 Limit Switches, Explosion Proof EPHA Limit Switches, Foot Switches, Engineering Plastic Industrial Plug & Sockets, and Connectors Cam Operated Rotary Switches, variety of different sizes of Junction Boxes (Engineering Plastic & Metal ) and Telescopic Brushes, Pullcord, Beltsway, Zero speed switch & Rocker switch. Distribution Boxes, Pendent Pushbutton stations, CEE EM 45 Mini Limit Switch, Bus bar Indicator & Reed Magnetic Switch**

## DEALERS ENQUIRIES ARE SOLICITED

This supersedes all previous Price Lists, Prices are subject to change without prior notice, Prices at the time of supply will be applicable.

Your continued patronage and kind co-operation will be very much appreciated.

Thanking you and assuring you of our best services always.

Yours faithfully,

for 



CHANAKYACHANDRAMOHAN

Encl : as above.

New No. 107, Sidco Industrial Estate

Post Box No. 27, Ambattur,

Chennai - 600 098. India

Phone : 0091 - 44 - 2625 1279

0091 - 44 - 2625 4469

0091 - 44 - 2625 4470

0091 - 44 - 2625 7174

0091 - 44 - 2625 7859

Fax : 0091 - 44 - 2625 5038

E-mail : dchandramohan@jaibalaji.firm.in

WEBSITE : [www.jaibalaji.firm.in](http://www.jaibalaji.firm.in)

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# CERTIFICATE

The Certification Body  
of TÜV SÜD South Asia Private Limited  
certifies that



**Jaibalaji Control Gears Pvt. Ltd**  
No. 107, Sidco Industrial Estate, Ambattur, Chennai, - 600098, India

has implemented Quality Management System  
in accordance with **ISO 9001:2015**  
for the scope of

**Design, Manufacture and Supply of  
Electromechanical, Electronic Controlling, Signalling Devices and  
Switchgears for Engineering and Industrial Automation**

The certificate is valid from **2024-03-22** until **2027-03-21**

Subject to successful completion of annual periodic audits

The present status of this certificate can be obtained through TÜV SÜD website by scanning below QR code and by entering the certificate number (without spaces) on web page. Further clarifications regarding the status & scope of this certificate may be obtained by consulting the certification body at [info.in@tuvsud.com](mailto:info.in@tuvsud.com)

Certificate Registration No. **99 100 02459**

Date of Initial certification: **2008-05-28**

Issue Date: **2024-03-19** Rev. **00**



Rahul Kale  
Head of Certification Body  
of TÜV SÜD South Asia Private Limited,  
**Mumbai**  
Member of TÜV SÜD Group





இந்திய தர நிர்ணய அமைவனம்

भारतीय मानक ब्यूरो  
BUREAU OF INDIAN STANDARDS

दक्षिणी क्षेत्रीय कार्यालय

: पोस्ट बॉक्स नं. 8290  
सी. आई. टी. कैंपस, चौथा क्रॉस रोड,  
तरामनी, चेन्नै - 600 113.  
Southern Regional Office : Post Box No. 8290  
CIT Campus, IV Cross Road,  
Taramani, Chennai - 600 113.

ANNEXURE TO ENDORSEMENT NO.16 DATED 20030206

1) LIMIT SWITCHES

RATED OPERATIONAL VOLTAGE : 415V  
RATED THERMAL CURRENT : 10A  
OPERATIONAL CURRENT : 1.5A(AC)  
RATED IMPULSE VOLTAGE : 1.5KV AC  
INSULATION VOLTAGE : 600V  
POLLUTION DEGREE : '2'  
IP CODE : IP 67  
UTILISATION CATEGORY : AC 15/DC 13  
CONDITIONAL SHORT CIRCUIT CURRENT : 100A  
DESIGNATION : A600/R300  
CONTACT ELEMENT : TYPE : ZA  
MECHANICAL DUTY CLASS : 3  
FREQUENCY OF OPERATIONAL CYCLES FOR ELECTRICAL DURABILITY : 300/HOUR

2) ROTARY SWITCHES:

UTILISATION CATEGORY : AC15  
RATED INSULATION VOLTAGE : 600V AC  
RATED IMPULSE VOLTAGE : 1.5KV AC  
RATED OPERATIONAL VOLTAGE : 415V AC,  
RATED FREQUENCY : 50Hz  
CORRESPONDING OPERATIONAL CURRENT : 1.8A, 2A, 4A, 6A, 8A, 10A  
CORRESPONDING THERMAL CURRENT : 7.5A, 12.5A, 20A, 32A, 40A, 80A  
POLLUTION DEGREE/CASE : 3/CASE A  
CLASS OF MECHANICAL DURABILITY : 3  
MATERIAL GROUP : III a

3) PUSH BUTTON SWITCH

UTILISATION CATEGORY : AC15  
RATED INSULATION VOLTAGE : 600V  
RATED IMPULSE VOLTAGE : 1.5KV AC  
RATED OPERATIONAL VOLTAGE : 415V AC, 50Hz  
RATED OPERATIONAL CURRENT : 1.8A  
RATED THERMAL CURRENT : 10A  
POLLUTION DEGREE/CASE : 3/CASE A  
CLASS OF MECHANICAL DURABILITY : 3  
DESIGNATION : A600/R300

DIRECTOR & HEAD (MARKS II)  
BIS, CHENNAI



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ANNEXURE TO ENDORSEMENT NO.16 DATED 20030266

4) AC INDICATOR LIGHTS (BULB)

Rated operational voltage	24, 48, 110, 230 V AC
Rated voltage of light	24, 48, 110, 230 V AC
Rated voltage of lamp	24, 48, 130, 130 V AC
Rated power	2.0, 2.0, 2.6, 2.6 Watts Max
Rated thermal power for mounting on metal plate	2.6, 2.6, 2.6, 2.6 Watts Max
Rated thermal power for mounting on enclosure	2.6, 2.6, 2.6, 2.6 Watts Max
Colour	Yellow, red, amber, blue, green, black, white, clear (for type and designation and colour, please see the catalogue enclosed)
Fixing hole diameter	22.5 mm, 22.5 mm, 22.5 mm, 22.5 mm
Means of connection	Single pin type small miniature with baynet cap holder
Nature of current applied and its frequency	AC 50 cycles
Type of lamp socket	Small miniature baynet cap holder with Nylon 66 (Grade 30) protective cover

  
DIRECTOR & HEAD (MARKS II)  
BIS, CHENNAI

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Southern Regional Office :

Post Box No. 8290

CIT Campus, IV Cross Road,

Taramani, Chennai - 600 113.

ANNEXURE TO ENDORSEMENT NO.16 DATED 20.3.2006

5) DC INDICATOR LIGHTS (BULB)

Rated operational voltage	24, 48, 110, 230 V DC
Rated voltage of light	24, 48, 110, 230 V DC
Rated voltage of lamp	24, 48, 130, 130 V DC
Rated power	2.2, 2.6, 2.6 Watts Max
Rated thermal power for mounting on metal plate	2.2, 2.6, 2.6 Watts Max
Rated thermal power for mounting on enclosure	2.2, 2.6, 2.6 Watts Max
Colour	Yellow, red, amber, blue, green, black, white, clear (for type and designation and colour, please see the catalogue enclosed)
Fixing hole diameter	22.5 mm, 22.5 mm, 22.5 mm, 22.5 mm
Means of connection	Single pin type holder small miniature with baynet cap holder
Nature of current applied and its frequency	DC
Type of lamp socket	Small miniature baynet cap holder with Nylon 66 (Grade 30) protective cover

DIRECTOR & HEAD (MARKS II)  
BIS, CHENNAI

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Taramani, Chennai - 600 113.

ANNEXURE TO ENDORSEMENT NO.16 DATED 2008.02.06

## 6) AC INDICATOR LIGHTS (LED - LIGHT EMITTING DIODE)

Rated operational voltage	12, 24, 48, 110, 230 V AC
Rated voltage of light	12, 24, 48, 110, 230 V AC
Rated voltage of LED	2.2, 2.2, 2.2, 2.2 V AC Max
Rated current/power	25 mA/300 mW
Rated thermal power for mounting on metal plate	25 mA/300 mW
Rated thermal power for mounting on enclosure	25 mA/300 mW
Colour	Yellow, red, amber, blue, green, black, white, clear (for type and designation and colour, please see the catalogue enclosed)
Fixing hole diameter	22.5 mm, 22.5 mm, 22.5 mm, 22.5 mm
Means of connection	Solder connection
Nature of current applied and its frequency	AC 50 cycles
Type of lamp socket	Nylon 66 (Grade GF 30) protective cover

  
DIRECTOR & HEAD (MARKS II)  
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तरामणी, चेन्नै - 600 113.

Southern Regional Office : Post Box No. 8290

CIT Campus, IV Cross Road,  
Taramani, Chennai - 600 113.

ANNEXURE TO ENDORSEMENT NO.16 DATED 20030206

7) DC INDICATOR LIGHTS (LED - LIGHT EMITTING DIODE)

Rated operational voltage	12, 24, 48, 110, 230 V DC
Rated voltage of light	12, 24, 48, 110, 230 V DC
Rated voltage of lamp	2.2, 2.2, 2.2, 2.2 V DC Max
Rated current/power	25 mA/300 mW
Rated thermal power for mounting on metal plate	25 mA/300 mW
Rated thermal power for mounting on enclosure	25 mA/300 mW
Colour	Yellow, red, amber, blue, green, black, white, clear (for type and designation and colour, please see the catalogue enclosed)
Fixing hole diameter	22.5 mm, 22.5 mm, 22.5 mm, 22.5 mm
Means of connection	Solder connection
Nature of current applied and its frequency	DC
Type of lamp socket	Nylon 66 (Grade GF 30) protective cover

DIRECTOR & HEAD (MARKS II)  
BIS, CHENNAI

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भारतीय मानक ब्यूरो  
BUREAU OF INDIAN STANDARDS

दक्षिणी क्षेत्रीय कार्यालय

: पोस्ट बॉक्स नं. 8290

सी. आई. टी. कैम्पस, चौथ क्रॉस रोड,  
तरावणी, चेन्नै - 600 113.

Southern Regional Office : Post Box No. 8290

CIT Campus, IV Cross Road,  
Taramani, Chennai - 600 113.

ANNEXURE TO ENDORSEMENT NO.16 DATED 20030206

8) MINIATURE LIMIT SWITCH

Rated operational voltage	: 240 V AC, 50 Hz
Rated operational current	: 3 A
Rated thermal current	: 10 Amp
Utilization category	: AC 15
Rated insulation voltage	: 600 V AC
Rated surge voltage	: 1500 V
Pollution degree	: 2
Rated conditional short circuit current	: 1000 A
Number of poles	: Single

\*\*\*\*\*

  
DIRECTOR & HEAD (MARKS II)  
BIS, CHENNAI

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# CERTIFICATION RECORD

The company named below has been authorized by CSA to represent the products listed in this record as "CSA Certified" and to affix the CSA Mark to these products according to the terms and conditions of the CSA Service Agreement and applicable CSA program requirements (including additional Markings).

File No: 114811 0 000

Class No: 3211 87 INDUSTRIAL CONTROL EQUIPMENT Miscellaneous Apparatus  
- Certified to US Standards

## SUBMITTOR

4576887 M/s Jai Balaji & Co.  
89, Sidco Industrial Estate  
P.O. No. 27  
Ambattur  
Chennai, 600098  
India

## FACTORY

4576887 M/s Jai Balaji & Co.  
89, Sidco Industrial Estate  
P.O. No. 27  
Ambattur  
Chennai, 600098  
India

November 18, 2002 (Replaces: September 22, 1999)

- Rotary Switches, JRS-XX Series, Model Numbers and ratings are as follows:

Model No	Voltage	Current
JRS 9	400 V	6 A
JRS 18	400 V	10 A
JRS 27	400 V	16 A
JRS 45	400 V	25 A
JRS 63	400 V	32 A
JRS 81	400 V	40 A
JRS 90	400 V	63 A

- Limit Switches, JLS Series, JW Series, CEE EM 45 Series, the electrical ratings / mechanism / contacts are same for all the models and are as follows:

Model No	Contact Designation
JLS XXX	B300 / P600
JW XX	B300 / P600
CEE EM 45-XX	B300 / P600
JC XXXX	B300 / P600
JB XXXX	B300 / P600

Note: The suffixes -XXX indicate Model Numbers with different lever heads.

- Proximity Switches JB Series details are given below:

Model No	Type	DC Volts	DC Amps	AC Volts	AC Amp
JB 8 PILM	3 Wire DC	30 V DC	200 mA	--	--
JB 12 PIFM	3 Wire DC	30 V DC	200 mA	--	--
JB 18 PILM	3 Wire DC	30 V DC	200 mA	--	--
JB 30 PILM	3 Wire DC	30 V DC	200 mA	--	--
JB 36 AILM	2 Wire DC	--	--	230 V	300 mA
JB 50 PILM	2 Wire DC	30 V DC	200 mA	--	--

- Contact Switch Element for Push Buttons, Model Nos and Rating are as follows:

Model No	Contact Type	Designation	AC Rating	DC Rating
			Voltage/Current	Voltage/Current
JB1	N O	B300/P600	400 V/10 A	600 V/5 A
JB2	N C	B300/P600	400 V/10 A	600 V/5 A

● Pilot Lights

Model	Rated Voltage	Max Current mA
ML, PL	12 V, 24V, 48 V, 110 V ac/dc, 230 V ac and 220 V dc	25 mA
MB	12 V ac/dc	180 mA
	24 V ac/dc	80 mA
	48 V ac/dc	40 mA
	110 V ac/dc, 230 V ac and 220 V dc	25 mA

Note: These devices are certified as components only for use in other certified equipment where the suitability of the combination is determined by CSA International.

**Features:**

Centrally located common terminal. Wiping contact snap action, Standard temperature rating - 40 to 85 degree Celcius.

**Actuators:**

Button, Straight lever short, medium and long Roller lever, Short and roller lever Medium and Simulated Roller.

**Characteristics:**

**Electrical:** 50 mA to 25 Amps

**Circuitry:** SPDT, SPST, NO/NC

**Operating Force:** 25 to 280 gms

**Typical Applications:**

- Refrigerator
- Pressure Switch
- Electro Mechanical Timer
- Washing machine
- Electric Rice Cooker
- Vending Machine
- Food Processor
- Electronic Voting Machine
- Microwave Oven
- Servo Stabiliser
- Elevator
- Mixer Grinder
- Floor Cleaning Machine
- Center Lock in Automobiles
- Trivector Meter
- Bag Sealing Machine
- Door Opening Closing
- On Line Starter
- Telephones

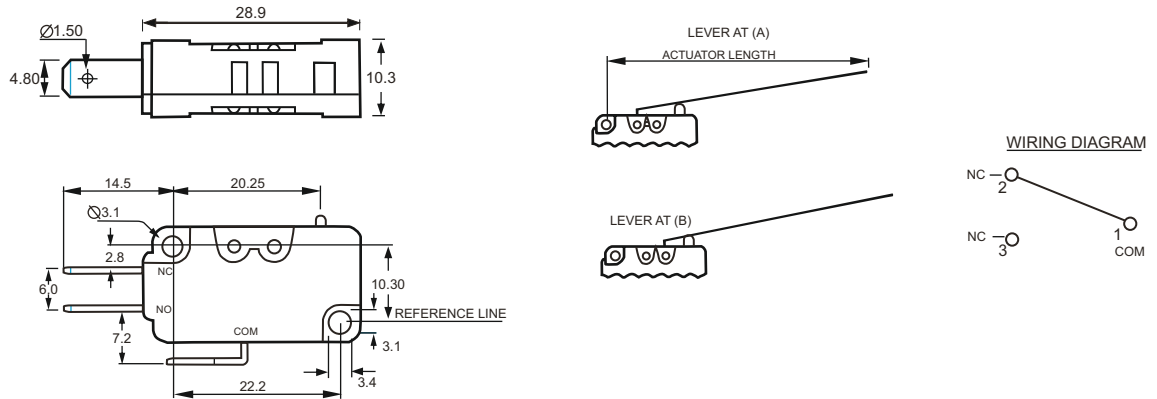
GENERAL CHARACTERISTICS	
Product	Miniature Snap action Switch
Reference Standards	IEC 947-5-1 / EN 60947-5-1 / UL 508 / CSA / 22.2 / IS 13947-5-1
Approvals	Breau of Indian Standards, CE
Protection class	IP44
Temperature storage	Minus 40 Degree Celsius to plus 70 degree Celsius
Temperature working	Minus 25 Degree Celsius to plus 70 degree Celsius
Mechanical Life	Three million operations
Frequency of operation	2500 operation per hour

















ELEMENT CHARACTERISTICS	
Thermal Current	10 Amps
Insulation Voltage	600 VAC
Dielectric strength	2500 Volts per Minute
Insulation resistance	2 Meg. Ohms.
Contact Resistance	Less than 25 Milli Ohms
Short circuit protection	10 Amps High Rupturing Capacity Fuse
Rated Impulse Voltage	1500 Volts
Utilisation category	AC 15, DC 13
Contact type	Type 'C'

RATINGS: AC RATING INDUCTIVE - NEMA A 600				
Voltage	Make		Break	
	A	VA	A	VA
120	60	7200	6	720
240	30	7200	3	720
480	15	7200	1.5	720
600	12	7200	1.2	720

RATINGS: DC RATING INDUCTIVE - NEMA P 600				
Voltage	Make		Break	
	A	VA	A	VA
125	1.1	138	1.1	138
250	0.55	138	0.55	138
600	0.2	138	0.2	138



	Model No.	OPERATING FORCE				ACT LENGTH (mm) TOL.+ 0.6	MRP Rs.	Image	Model No.	OPERATING FORCE				ACT LENGTH (mm) TOL.+ 0.6	MRP Rs.
		0.1A	3A	5A	10A					0.1A	3A	5A	10A		
	JMS/B/S	15	15	45	75		<b>90.00</b>		JMS/ISL/S-B	3	3	8	17	70.5	<b>117.00</b>
	JMS/B/H	75	75	170	285		<b>99.00</b>		JMS/ISL/H-B	12	12	28	65	70.5	<b>135.00</b>
	JMS/IPL/S-A	4	4	10	20	70.0	<b>108.00</b>		JMS/ISM/S-A	10	10	30	45	31.5	<b>108.00</b>
	JMS/IPL/H-A	20	20	40	70	70.0	<b>117.00</b>		JMS/ISM/H-A	38	38	94	150	31.5	<b>117.00</b>
	JMS/IPL/S-B	2	2	6	15	74.5	<b>108.00</b>		JMS/ISM/S-B	7	7	17	28	36.0	<b>117.00</b>
	JMS/IPL/H-B	10	10	25	60	74.5	<b>117.00</b>		JMS/ISM/H-B	22	22	58	95	36.0	<b>135.00</b>
	JMS/IPM/S-A	8	8	25	40	35.5	<b>108.00</b>		JMS/IRM/S-A	8	8	25	40	34.0	<b>144.00</b>
	JMS/IPM/H-A	35	35	90	145	35.5	<b>108.00</b>		JMS/IRM/H-A	35	35	90	145	34.0	<b>153.00</b>
	JMS/IPM/S-B	5	5	15	25	40.0	<b>108.00</b>		JMS/IRM/S-B	5	5	15	25	38.5	<b>144.00</b>
	JMS/IPM/H-B	20	20	55	90	40.0	<b>108.00</b>		JMS/IRM/H-B	25	25	55	90	38.5	<b>153.00</b>
	JMS/IPS/S-A	15	15	45	75	22.0	<b>99.00</b>		JMS/IRS/S-A	15	15	45	75	22.0	<b>144.00</b>
	JMS/IPS/H-A	75	75	170	285	22.0	<b>108.00</b>		JMS/IRS/H-A	75	75	170	285	22.0	<b>153.00</b>
	JMS/ISL/S-A	5	5	12	22	66.0	<b>117.00</b>		JMS/IRS/S-B	12	12	35	60	26.5	<b>144.00</b>
	JMS/ISL/H-A	22	22	45	75	66.0	<b>135.00</b>		JMS/IRS/H-B	60	60	135	235	26.5	<b>153.00</b>

# JAIBALAJI

## PRECISION LIMIT SWITCHES WITH MARKS

### CATALOGUE CUM PRICE LIST

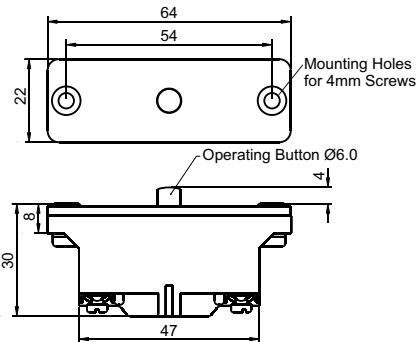
**JAIBALAJI** Precision Limit Switches are designed for industrial duty applications. They are small in size, reliable in operation, have exceptionally long life and are accurate. The wide variety of switch operating mechanisms coupled with the choice of either single pole 1NO+1NC or double pole 2NO+2NC changeover contacts permit easy selection and application for many needs.

#### Electrical and Mechanical Rating

Utilisation Category : AC 15 and DC 13 as per IEC 947-5-1 and IS/IEC :60947/Pt5/Sec-1  
 Thermal current (I th) : 15A  
 Insulation Voltage (UI) : 600 V AC

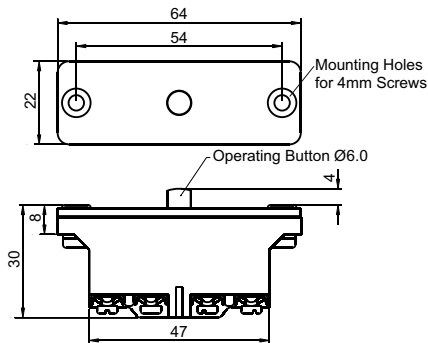
Contact Combination : Single pole 1 NO + 1 NC changeover contacts  
 Frequency of operation : Double pole 2 NO + 2 NC changeover contacts  
 Mechanical and Electrical life : 2500 operations per hour (max)  
 Operating force : 20x10<sup>6</sup> operations without operator  
 Terminal capacity : 10x10<sup>6</sup> operations with operator  
 : 3.50 Kg  
 : 2.5mm<sup>2</sup> solid or stranded conductors

#### Precision Basic Limit Switch 1 NO + 1 NC Contacts



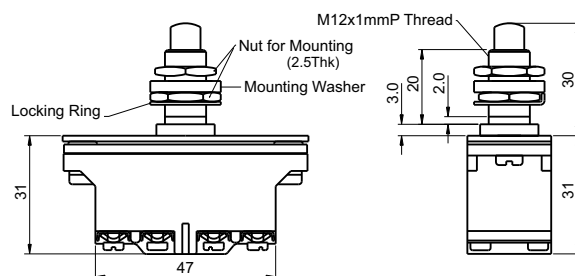
Model	Contacts	M.R.P.Rs
JO1	1NO+1NC	495

#### Precision Basic Limit Switch 2 NO + 2 NC Contacts



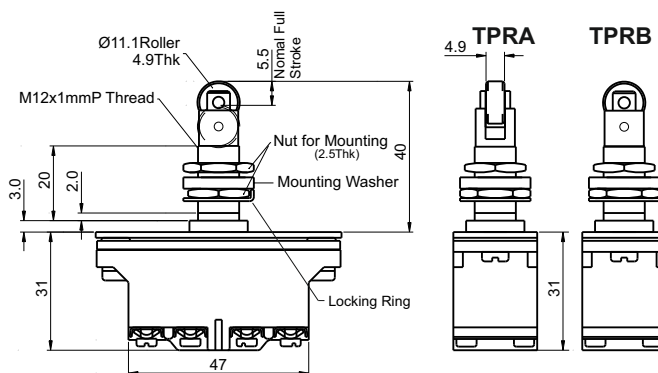
Model	Contacts	M.R.P.Rs
JO2	2NO+2NC	594

#### Precision Limit Switch with Top Push Button



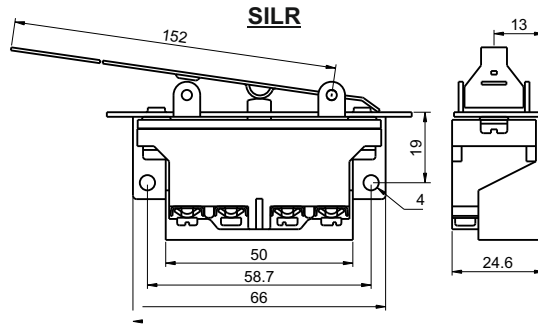
Model	Contacts	M.R.P.Rs
JO1TPB	1NO+1NC	630
JO2TPB	2NO+2NC	765

#### Precision Limit Switch with Top Push Roller

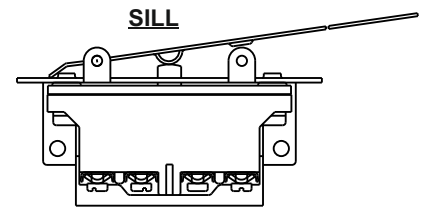


Model	Contacts	M.R.P.Rs
JO1TPRA	1NO+1NC	630
JO2TPRA	2NO+2NC	765
JO1TPRB	1NO+1NC	630
JO2TPRB	2NO+2NC	765

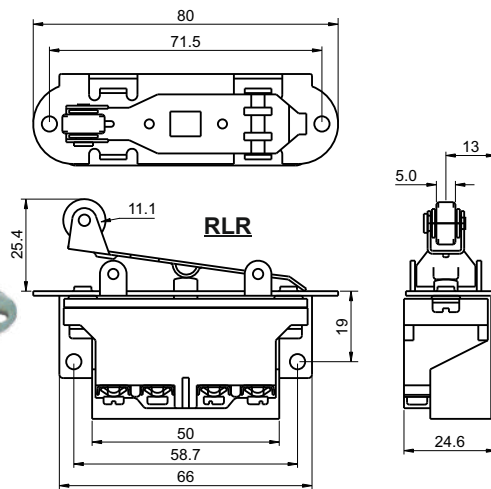
**Precision Limit Switch  
with 6 inch(150mm) long Lever**



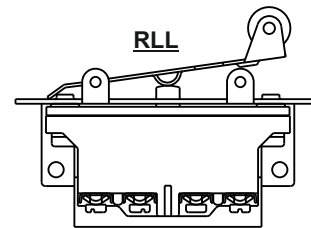
Model	Contacts	M.R.P.Rs
JO1SILR	1NO+1NC	630
JO2SILR	2NO+2NC	765
JO1SILL	1NO+1NC	630
JO2SILL	2NO+2NC	765



**Precision Limit Switch  
with Roller Lever**



Model	Contacts	M.R.P.Rs
JO1RLR	1NO+1NC	630
JO2RLR	2NO+2NC	765
JO1RLL	1NO+1NC	630
JO2RLL	2NO+2NC	765



**With 10mm Roller**

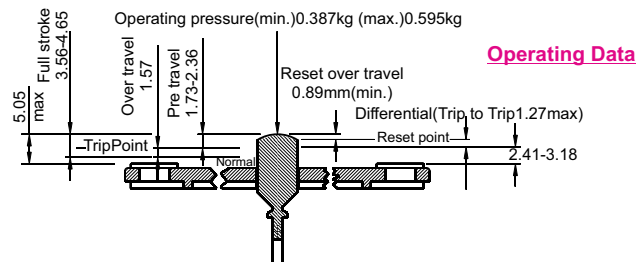
Model	Contacts	M.R.P.Rs
JO1RLR	1NO+1NC	666
JO2RLR	2NO+2NC	810
JO1RLL	1NO+1NC	666
JO2RLL	2NO+2NC	810

Also Available  
Precision Limit Switch Lever Type with 10mm Roller

**Operational current and voltage**

AC 15 rating	Single pole (1 NO + 1 NC changeover contacts)		Double pole (2 NO + 2 NC changeover contacts)	
	110V	4.0A	3.0A	3.0A
240V	2.0A	1.5A	1.5A	
440V	1.0A	0.8A	0.8A	
600V	0.8A	0.6A	0.6A	
DC 13 rating	Single throw	Double throw	Single throw	Double throw
	115V	2.0A	0.5A	1.0A
230V	0.5A	0.2A	0.3A	0.1A
600V	0.1A	0.02A	0.1A	

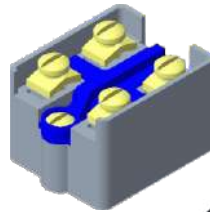
The Above Types of Switches are also available with **Gold Plated Contacts** (At extra cost)



Post Box No. 27, 89 (New No. 107),SIDCO Industrial Estate,Ambattur, Chennai -600 098. India  
Phone: +91 44 26251279 / 26257859 / 26254470 Fax: +91 44 26255038.  
E-mail: dchandramohan@jaibalaji.firm.in Web: jaibalaji.in

## BC-9 MINI LIMIT SWITCHES

### CATALOGUE AND PRICE LIST



**BASIC SWITCH**  
**BC9M 'E'**  
MRP. Rs.378



**JMLS JWA**  
M.R.P. Rs.720



**JMLS LA**  
M.R.P. Rs.720



**JMLS TAR**  
M.R.P. Rs.720



**JMLS TNR**  
M.R.P. Rs.720



**JMLS TPB**  
M.R.P. Rs.720



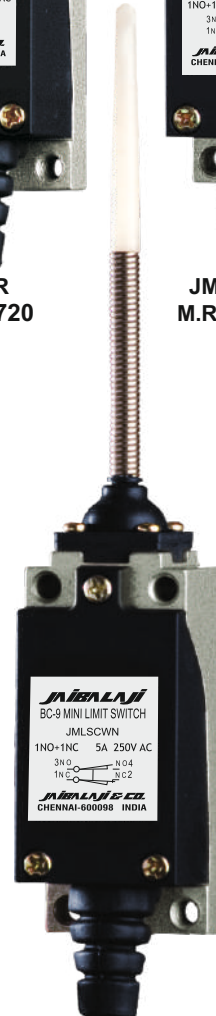
**JMLS L-1**  
M.R.P. Rs.720



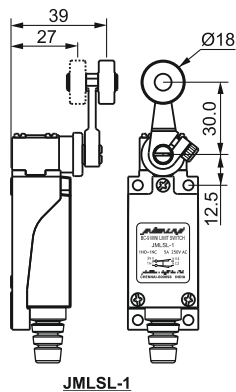
**JMLS TPR**  
M.R.P. Rs.720



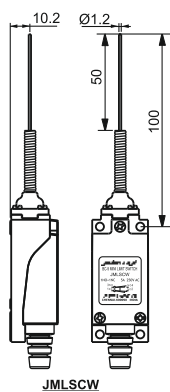
**JMLS CW**  
M.R.P. Rs.720



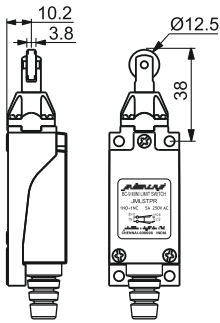
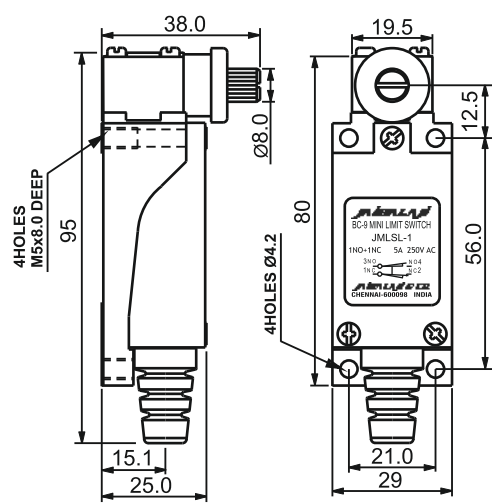
**JMLS CWN**  
M.R.P. Rs.720



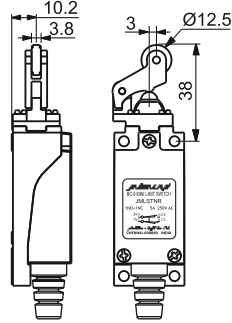
JMLSLS-1



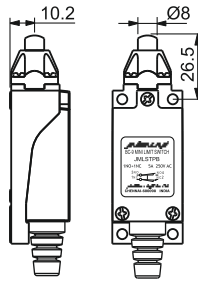
JMLSCW



JMLSTPR

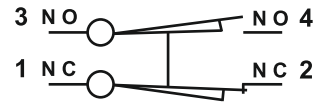


JMLSTNR

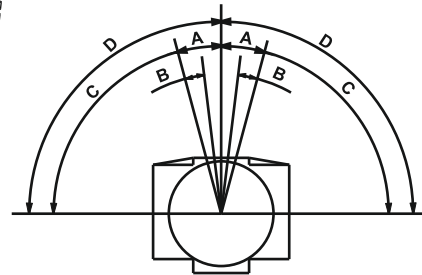


JMLSTPB

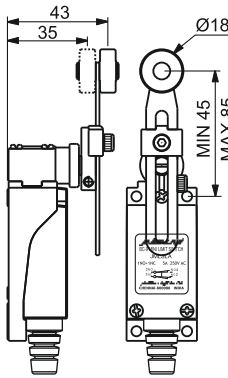
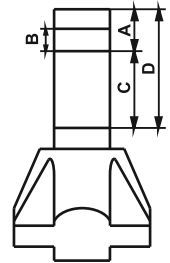
Wiring Diagram



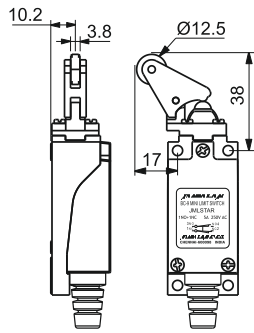
Angular Motion



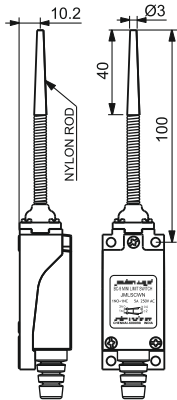
Linear Motion



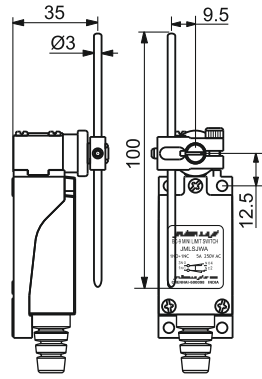
JMLSLA



JMLSTAR



JMLSCWN



JMLSJWA

MODEL	JMLSLS-1 JMLSLA JMLSJWA (max)	JMLSTPR JMLSTPB (mm) (max)	JMLSCWN (mm) (max)	JMLSTAR (mm) (max)
A -Travel to Trip	15°	1.5	30	2.0
B -Travel to Reset from Trip Point	8°	0.8	-	-
C -Over Travel	75°	4.0	20	3.5
D -Total Travel	90°	5.5	50	5.5
Operating Force	600gms At30 Radius	900gms	90gms	900gms

PRODUCT SPECIFICATIONS

Utilization Category: AC15and DC13 as per IEC-60947-5 & IS: 13947-5-1  
 Rated Insulation Voltage : 250V AC  
 Rated Thermal Current Ith : 5A  
 Contact Ratings : AC15 RATING 250V, 50Hz, 2.0A, DC13 RATING 125V, 0.1A  
 Mechanical Life Span : 10 x 10<sup>6</sup> Operations  
 Enclosure Category : IP-64  
 Max. Operation Speed : 120 cycles/minute  
 Tightening Torque of Terminal Screw : 0.8 Nm(Max.)  
 Applicable wire : Conductor size: 0.75 - 1.25 mm<sup>2</sup>  
 Outer Dia of cable: 6-9 mm



Post Box No. 27, 89 (New No. 107),SIDCO Industrial Estate,Ambattur, Chennai -600 098. India  
 Phone: +91 44 26251279 / 26257859 / 26254470 Fax: +91 44 26255038.  
 E-mail: dchandramohan@jaibalaji.firm.in Web: jaibalaji.in

# Limit Switches

TYPE CEE EM 45 SERIES

IP 67

CATALOGUE CUM PRICE LIST



PUSH ROD

ANGULAR ROLLER

NORMAL ROLLER

GENERAL

**JAIBALAJI** manufactures a wide range of Limit switches tested to rigid quality standards. Jaibalaji switches are ISI marked as per IS/IEC:60947-Pt5/Sec-1

**JAIBALAJI** Limit switches with wide range and high quality are used for import substitution. The range includes:

- STANDARD OIL TIGHT TYPE BC-9
- MICRO ADJUSTABLE TYPE JW
- PRECISION TYPE JO
- HEAVY DUTY JB 2700
- EXTRA HEAVY DUTY TYPE JC - 1125
- GENERAL PURPOSE TYPE CEE EM 45

## SPECIAL FEATURES

- Completely oil & water tight and dust and damp proof.
- Ample wiring space for easy termination.
- Flame retardant thermoplastic barriers between terminals to prevent short circuit.
- Serrated terminal to give firm grip to straight wire.

## TECHNICAL DATA:

Electrical Contact rating	: 1NO+1NC 2NO + 2NC																		
Continuous Current (Ith <sub>2</sub> )	: 10A																		
Rated Voltage A.C.	: 500V																		
D.C.	: 600V																		
Permissible ambient temperature	: -40°C to +85°C																		
Mechanical Life	: 15 million Switching cycles.																		
Contact Life A. C.	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td>Breaking Current -A</td> <td>1</td> <td>3</td> <td>6</td> <td>10</td> </tr> <tr> <td>Switching Cycles-million</td> <td>15</td> <td>5</td> <td>2.5</td> <td>1</td> </tr> <tr> <td></td> <td>(11)</td> <td>(4)</td> <td>(1.8)</td> <td>(0.7)</td> </tr> </table>				Breaking Current -A	1	3	6	10	Switching Cycles-million	15	5	2.5	1		(11)	(4)	(1.8)	(0.7)
Breaking Current -A	1	3	6	10															
Switching Cycles-million	15	5	2.5	1															
	(11)	(4)	(1.8)	(0.7)															

Frequency of operation	: 6000 cycles/hour
------------------------	--------------------

<p>Making and breaking capacity and operational current - 40 - 60 Hz, p.f. 0.3 to 1</p> <p>AC 15 duty</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Voltage</th> <th>Rated Operating current (Ie)</th> <th>Rated making capacity</th> <th>Rated breaking capacity</th> </tr> <tr> <th>V</th> <th>A</th> <th>A</th> <th>A</th> </tr> </thead> <tbody> <tr><td>24</td><td>6(3)</td><td>90(30)</td><td>60(30)</td></tr> <tr><td>125</td><td>6(3)</td><td>90(30)</td><td>60(30)</td></tr> <tr><td>220</td><td>6(3)</td><td>90(30)</td><td>60(30)</td></tr> <tr><td>380</td><td>6(3)</td><td>90(30)</td><td>60(30)</td></tr> <tr><td>415</td><td>4(3)</td><td>90(30)</td><td>60(30)</td></tr> <tr><td>500</td><td>4(3)</td><td>90(30)</td><td>60(30)</td></tr> </tbody> </table>	Voltage	Rated Operating current (Ie)	Rated making capacity	Rated breaking capacity	V	A	A	A	24	6(3)	90(30)	60(30)	125	6(3)	90(30)	60(30)	220	6(3)	90(30)	60(30)	380	6(3)	90(30)	60(30)	415	4(3)	90(30)	60(30)	500	4(3)	90(30)	60(30)	<p>Breaking Capacity - D.C.</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Voltage</th> <th>Resistive load(DC1)</th> <th>Inductive load(DC11)</th> </tr> <tr> <th>V</th> <th>A</th> <th>A</th> </tr> </thead> <tbody> <tr><td>24</td><td>10 (7)</td><td>10 (7)</td></tr> <tr><td>110</td><td>2.2(1.5)</td><td>1.3(0.91)</td></tr> <tr><td>220</td><td>0.9(0.62)</td><td>0.4(0.28)</td></tr> <tr><td>440</td><td>0.4(0.28)</td><td>0.2(0.14)</td></tr> <tr><td>600</td><td>0.3(0.21)</td><td>0.14(0.1)</td></tr> </tbody> </table>	Voltage	Resistive load(DC1)	Inductive load(DC11)	V	A	A	24	10 (7)	10 (7)	110	2.2(1.5)	1.3(0.91)	220	0.9(0.62)	0.4(0.28)	440	0.4(0.28)	0.2(0.14)	600	0.3(0.21)	0.14(0.1)
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<p><b style="color: red;">NEW BASIC SWITCHES</b></p> <p>WITH SLOW MAKE AND BREAK CONTACTS</p>	<p>Electrical Contact rating</p> <p>2NO + 2 NC</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">AC 15 rating</td> <td>Double pole : 2 No + 2NC Changeover contacts</td> </tr> <tr> <td>110V</td> <td>3.0A</td> </tr> <tr> <td>240V</td> <td>1.5A</td> </tr> <tr> <td>440V</td> <td>0.5A</td> </tr> <tr> <td>600V</td> <td>0.6A</td> </tr> <tr> <td>DC 13 rating</td> <td>Single Throw      Double throw</td> </tr> <tr> <td>115V</td> <td>1.0A                      0.2A</td> </tr> <tr> <td>230V</td> <td>0.3A                        0.1A</td> </tr> <tr> <td>400V</td> <td>0.1A</td> </tr> </table>	AC 15 rating	Double pole : 2 No + 2NC Changeover contacts	110V	3.0A	240V	1.5A	440V	0.5A	600V	0.6A	DC 13 rating	Single Throw      Double throw	115V	1.0A                      0.2A	230V	0.3A                        0.1A	400V	0.1A
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115V	1.0A                      0.2A																		
230V	0.3A                        0.1A																		
400V	0.1A																		

S.No.	Model	Contacts	M.R.P Rs.
1	CEE EM 45 - 108	-	450
2	CEE EM 45 - 117	-	450
3	CEE EM 45 - 126	-	450
4	CEE EM 45 - 108 PCE	2NC OR 2NO	495
5	CEE EM 45 - 117 PCE	2NC + 1NO	495
6	CEE EM 45 - 126 PCE	2NO + 1NC	495

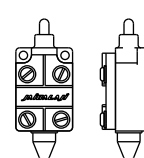

Flexibility of replacing complete contact block without changing the operating characteristic

The twin break silver contacts provide quick make and break action with high contact pressure

Completely protected against cutting lubricant and fine dust penetration by using special 'O' rings and gaskets

Available in 2NO + 2NC configuration in the same as 1NO + 1NC version, thus reducing additional limit switches and control relays

## SELECTION TABLE

Execution	Design	Contacts		Type	MRP Rs.		Enclosure according to IS/IEC: 60947
		Arrangement	No. of contacts		1NO+1NC	2NO+2NC	
 open 	With Push-rod	Normal		45-9 E	252		IP 00
		Snap Action	1NO + 1NC	45-18 E	279		
		Extended Stroke	1NO + 1NC	45-27E	252		
		Overlapping	1NO + 1NC	45-36E	279		
	With Push-rod and plastic protective cover	Normal	1NO + 1NC	45-9 PCE	279		IP 40
		Snap Action	1NO + 1NC	45-18PCE	297		
		Extended Stroke	1NO + 1NC	45-27PCE	279		
		Overlapping	1NO + 1NC	45-36PCE	297		
  	With Push-rod	Normal	1NO + 1NC	45-9	711		IP 67
		Snap Action	1NO + 1NC	45-18	729	1737	
		Extended Stroke	1NO + 1NC	45-27	711		
		Overlapping	1NO + 1NC	45-36	729		
	With Normal Roller Lever	Normal	1NO + 1NC	45-45	711		IP 67
		Snap Action	1NO + 1NC	45-54	729	1737	
		Extended Stroke	1NO + 1NC	45-63	711		
		Overlapping	1NO + 1NC	45-72	729		
	With Angular Roller Lever	Normal	1NO + 1NC	45-81	711		IP 67
		Snap Action	1NO + 1NC	45-90	729	1737	
		Extended Stroke	1NO + 1NC	45-99	711		
		Overlapping	1NO + 1NC	45-09	729		
	With Roller Lever	Snap Action	1NO + 1NC	45-54 LA	1611	2826	IP 67
		Snap Action	1NO + 1NC	45-54 L1	1611	2826	
	With Angular/Normal Roller Lever	Normal	1NO + 1NC	45-45PGS A/N	711		
		Snap Action	1NO + 1NC	45-54PGS A/N	729	1737	

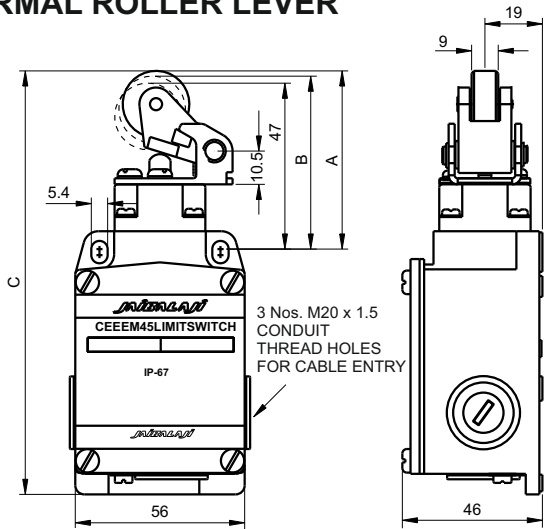
The Above Types of Switches are also available with **Gold Plated Contacts** (At extra cost)

The Above Types of Switches are also available for **High Temperature (150°C)** (At extra cost)

and with **LED Indicator** (At extra cost)

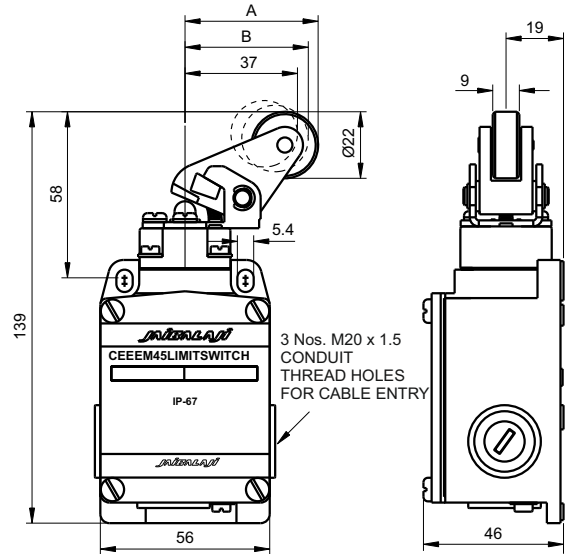
DO NOT SCALE/DIMENSIONS ARE IN MM

**IN OIL TIGHT DIE CAST ALUMINIUM HOUSING  
NORMAL ROLLER LEVER**



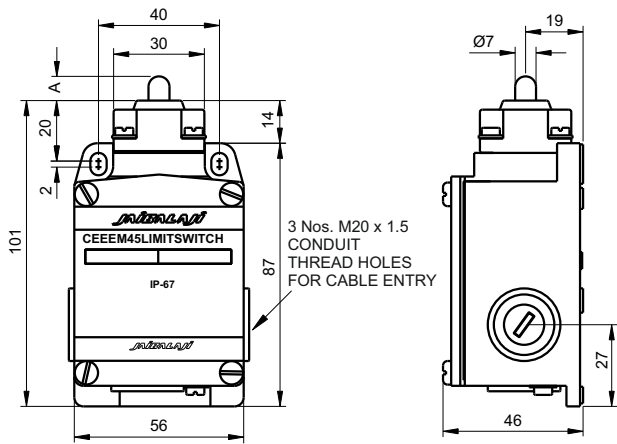
TYPE	A	B	C
45-45	56	55	137
45-54	56	53	137
45-63	58	57	137
45-72	56	56	137

**ANGULAR ROLLER LEVER**



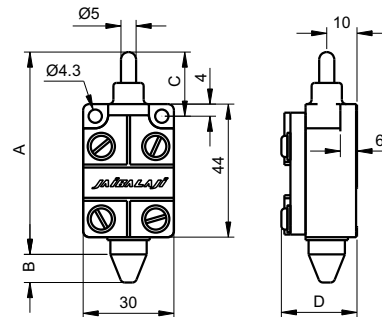
TYPE	A	B
45-81	44	43
45-90	44	41
45-99	45	45
45-09	44	43

**PUSH ROD ACTUATOR**



TYPE	A
45-9	6
45-18	4
45-27	8
45-36	6

**OPEN EXECUTION**



TYPE	A	B	C	D
45-9E	67	7	21	25
45-9PCE	67	7	21	30
45-18E	65	2	19	25
45-18PCE	65	2	19	30
45-27E	67	9	21	25
45-27PCE	67	9	21	30
45-36E	67	7	21	25
45-36PCE	67	7	21	30

Manufactured by :

**JAIBALAJI**  
CONTROL GEARS PVT. LTD

POST BOX NO. 27

89, (NEW NO:107), SIDCO INDUSTRIAL ESTATE  
AMBATTUR, CHENNAI - 600 098.

PHONE : 26251279, 26257859, 26254469

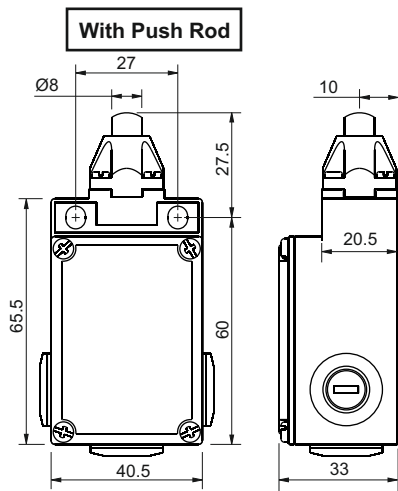
FAX : 044-26255038.

E-MAIL : dchandramohan@jaibalaji.firm.in

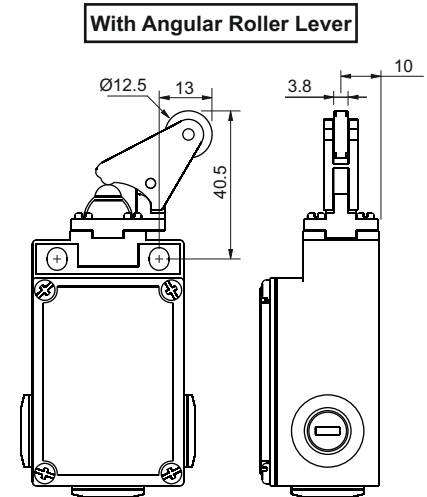
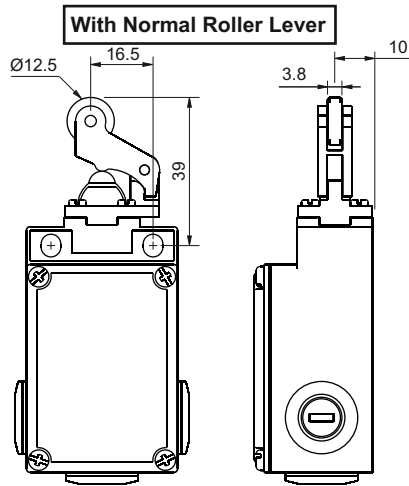
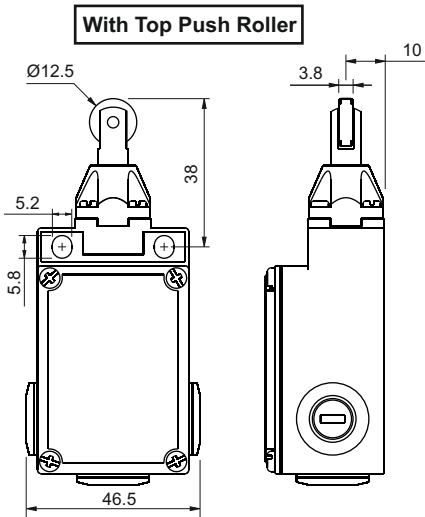
# JAIBALAJI

## CEE EM 45 MINI LIMIT SWITCH

### CATALOGUE CUM PRICE LIST



Utilization category : AC15 and Dc13 as per IEC-60947-5 and IS:13947-5-1  
 Rated Insulation Voltage : 250 V AC  
 Rated Thermal Current Ith : 5A  
 Contact Ratings : AC 15 Rating 250V,50Hz,2.0A DC 13 Rating 125V,0.1A  
 Mechanical life : 10 x 10<sup>6</sup> operations  
 Enclosure Category : IP - 64  
 Cable Entry : M16x1.5 P Thread (3 Places)



Head	Contact	Code No.	Plastic Roller MRP Rs.	Metal Roller MRP Rs.
Top Push Rod	Normal Action	<b>AAR VEE 9 - 9</b>		<b>486</b>
	Snap Action	<b>AAR VEE 9 - 18</b>		<b>513</b>
Top Push Roller Plastic	Normal Action	<b>AAR VEE 9 - 27 *</b>	<b>513</b>	<b>549</b>
	Snap Action	<b>AAR VEE 9 - 36 *</b>	<b>531</b>	<b>567</b>
With Normal Roller Lever - Plastic	Normal Action	<b>AAR VEE 9 - 45 *</b>	<b>558</b>	<b>585</b>
	Snap Action	<b>AAR VEE 9 - 54 *</b>	<b>585</b>	<b>621</b>
With Angular Roller Lever - Plastic	Normal Action	<b>AAR VEE 9 - 63 *</b>	<b>558</b>	<b>585</b>
	Snap Action	<b>AAR VEE 9 - 72 *</b>	<b>585</b>	<b>621</b>
Roller Lever	Snap Action	<b>AAR VEE 9 - L1 *</b>	<b>693</b>	<b>729</b>
Roller Lever Adjustable	Snap Action	<b>AAR VEE 9 - LA*</b>	<b>693</b>	<b>729</b>
Cat Whisker	Snap Action	<b>AAR VEE 9 - CW</b>		<b>738</b>
Cat Whisker Nylon	Snap Action	<b>AAR VEE 9 - CWN</b>		<b>738</b>
With Steel Rod	Snap Action	<b>AAR VEE 9 - JWA</b>		<b>738</b>

\*Add Suffix M for Metal Roller



**JAIBALAJI**  
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# JAIBALAJI

## VEE EER 45 - GENERAL PURPOSE LIMIT SWITCH

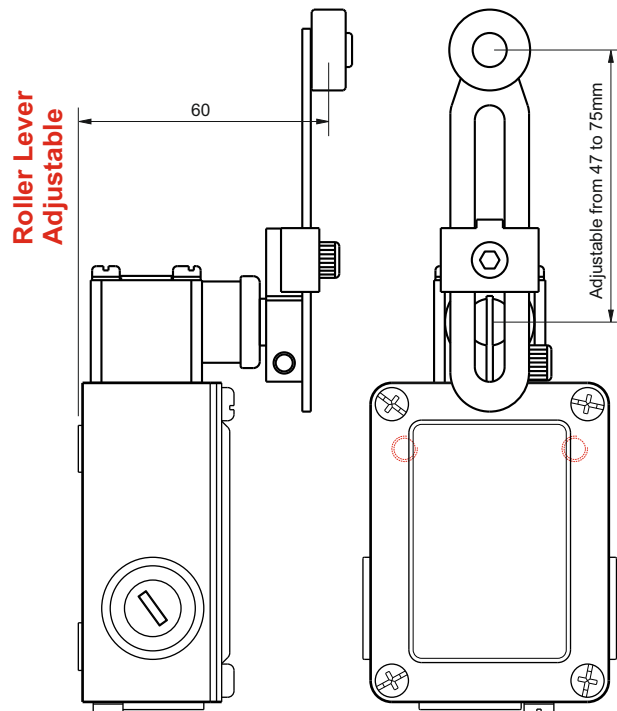
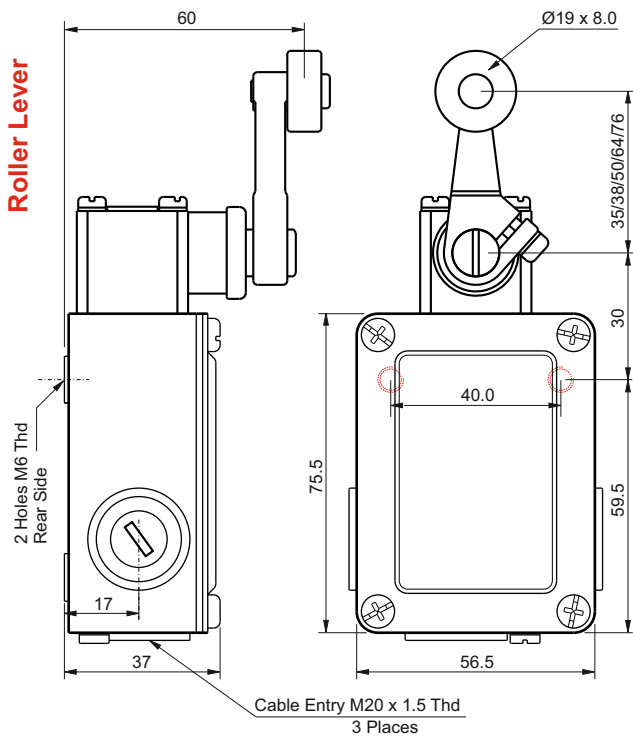


Utilization category  
Thermal Current Ith  
Insulation Voltage  
Contact Combination  
Mechanical life  
Enclosure  
Terminal Capacity

: AC15 and DC13 as per IS / IEC-60947-5  
: 10A @ 240V AC / 30V DC  
: 600V AC  
: 1 NO + 1 NC  
: 10 x 10<sup>6</sup> operations  
: Die Cast Aluminium  
: 2.5<sup>2</sup> mm Solid OR Stranded

Model : VEE EER 45 - 9L M.R.P. Rs. 1296  
VEE EER 45 - 18L M.R.P. Rs. 1323

Model : VEE EER 45 - 9LA M.R.P. Rs. 1296  
VEE EER 45 - 18LA M.R.P. Rs. 1323

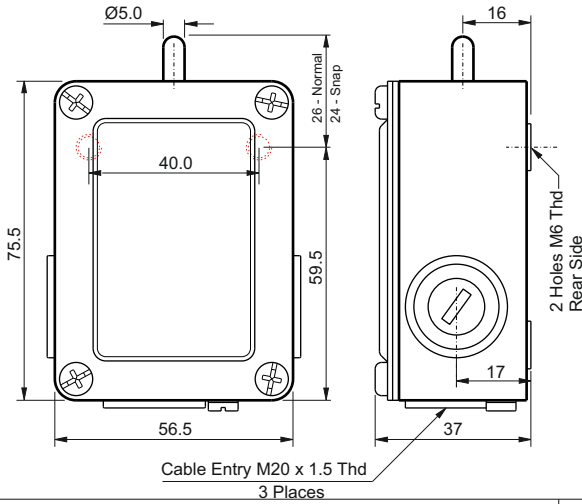


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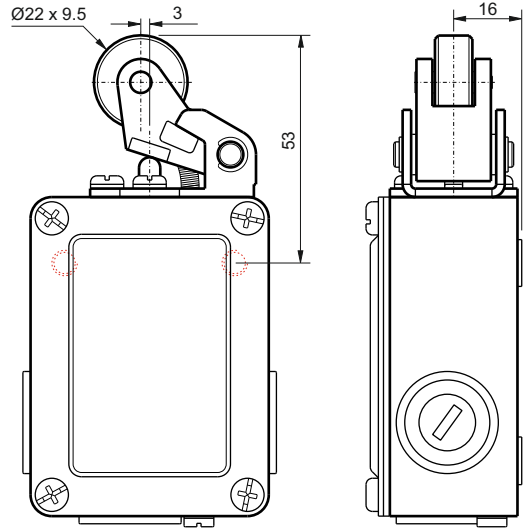
**Model : VEE EER 45 - 9TP M.R.P. Rs. 648**  
**VEE EER 45 - 18TP M.R.P. Rs. 684**

**Top Push Plunger**



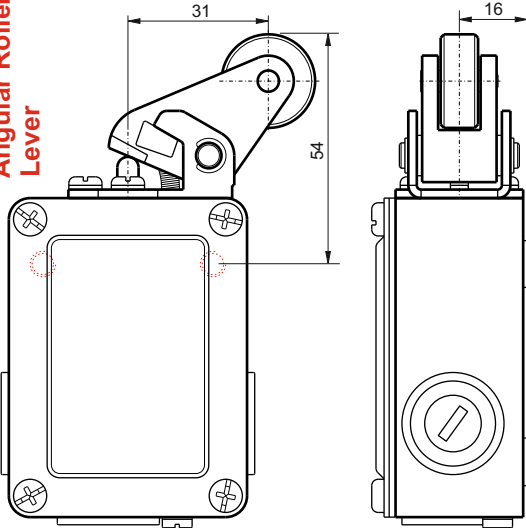
**Model : VEE EER 45 - 9NL M.R.P. Rs. 648**  
**VEE EER 45 - 18NL M.R.P. Rs. 684**

**Normal Roller Lever**



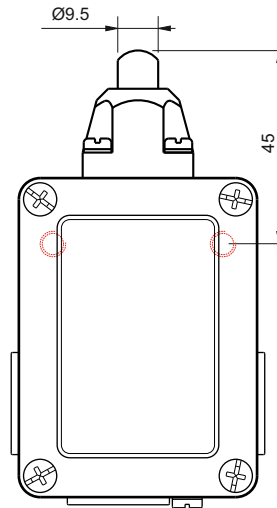
**Model : VEE EER 45 - 9AL M.R.P. Rs. 648**  
**VEE EER 45 - 18AL M.R.P. Rs. 684**

**Angular Roller Lever**



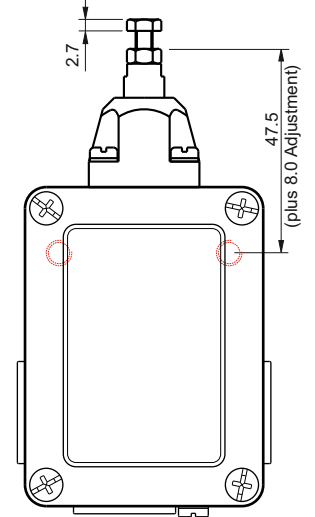
**Model: VEE EER 45 - 9TPB M.R.P. Rs. 648**  
**VEE EER 45 - 18TPB M.R.P. Rs. 684**

**Top Push Button**



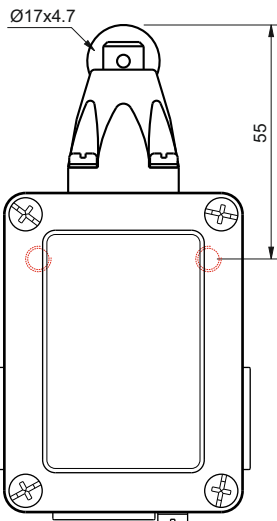
**Model: VEE EER 45 - 9TPBA M.R.P. Rs. 648**  
**VEE EER 45 - 18TPBA M.R.P. Rs. 684**

**Top Push Button Adjustable**



**Model: VEE EER 45 - 9TPR M.R.P. Rs. 648**  
**VEE EER 45 - 18TPR M.R.P. Rs. 684**

**Top Push Roller**



Type	Contact	Model	Trip Travel (Max)	Total Travel
Roller Lever 35/38/50/64/76	Normal Action	VEE EER 45 - 9L	25°	50°
	Snap Action	VEE EER 45 - 18L	20°	50°
Roller Lever Adjustable	Normal Action	VEE EER 45 - 9LA	25°	50°
	Snap Action	VEE EER 45 - 18LA	20°	50°
Top Push Roller	Normal Action	VEE EER 45 - 9TPR	3.0mm	5.5
	Snap Action	VEE EER 45 - 18TPR	2.0mm	5.0
With Normal Roller Lever	Normal Action	VEE EER 45 - 9NL	4.0mm	7.0
	Snap Action	VEE EER 45 - 18NL	2.5mm	7.0
With Angular Roller Lever	Normal Action	VEE EER 45 - 9AL	3.5mm	5.0
	Snap Action	VEE EER 45 - 18AL	3.5mm	5.0
Top Push Button	Normal Action	VEE EER 45 - 9TPB	3.0mm	5.5
	Snap Action	VEE EER 45 - 18TPB	2.0mm	5.0
Top Push Button Adjustable	Normal Action	VEE EER 45 - 9TPBA	3.0mm	5.5
	Snap Action	VEE EER 45 - 18TPBA	2.0mm	5.0
Top Push Plunger	Normal Action	VEE EER 45 - 9TP	4.5mm	8.0
	Snap Action	VEE EER 45 - 18TP	2.0mm	5.0

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DUST AND DAMP PROOF IP 67 WITH

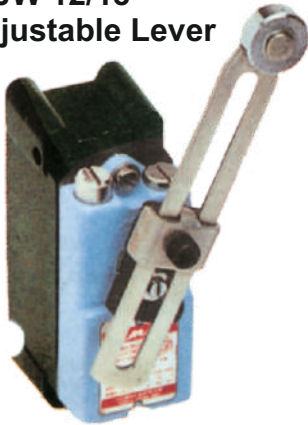
IS/IEC:60947



Pt-5 / Sec-1

## CATALOGUE CUM PRICE LIST

**JW 12/18**  
Adjustable Lever



**JW 12/18**  
with 38 Lever



**JW 12/18**  
with 76.2 Lever



**JW 12/18**  
with Fork Lever



**JW 32/38**

Micro adjustable Roller



**JW 42/48**

Micro adjustable Push rod



**JW 12/18**  
with Offset Lever

CONFORMS TO IS/IEC:60947 Pt5 Sec1  
PROTECTION IP 67

### LEVER ARM OPERATED

JW - 12 1 NO 1 NC

JW - 18 2 NO 2 NC

### MICRO ADJUSTABLE LIMIT SWITCHES

- ★ MICRO TRIP TORQUE ADJUSTMENT
- ★ RESET POSITION ADJUSTMENT
- ★ REVERSE ACTION SETTING ADJUSTMENT
- ★ RAPID SETTING ADJUSTMENTS OF ROTARY OPERATION LEVER THROUGH 360° AND SCHEME CHANGES WITHOUT DISMOUNTING
- ★ FOUR POSSIBLE MOUNTING POSITIONS

### ROLLER PLUNGER OPERATED

JW - 32 1 N.O 1 N.C.

JW - 38 2 N.O. 2 N.C. AND

### PUSH ROD PLUNGER OPERATED

JW - 42 1 N.O 1 N.C.

JW - 48 2 N.O. 2 N.C.

### MICRO METER ADJUSTMENT LIMIT SWITCHES

PLUNGER TYPE SWITCHES SHOULD BE USED WHERE A MICROMETER ADJUSTMENT OF THE PLUNGER IS REQUIRED. THESE SWITCHES ARE SUITABLE FOR USE ON MACHINES WHERE SHORT, CONTROLLED CAM MOVEMENTS ARE PRESENT. OPERATION MUST BE IN LINE WITH PLUNGER AXIS OR CAN BE PERPENDICULAR TO THE PLUNGER AXIS ON THE ROLLER PLUNGER TYPES.

## LEVER ARM OPERATED

APPROXIMATE DIMENSIONS NOT FOR CONSTRUCTION (Dimensions in mm)

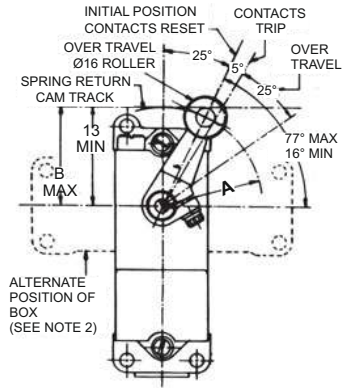
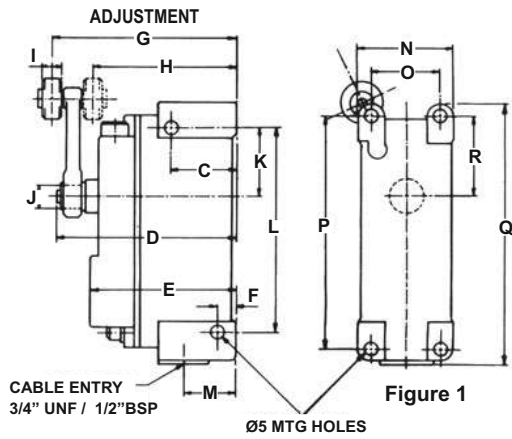


Figure 1 and 2 JW-12, JW-18

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Length of Arm 5 mm	Arm Length Plus 5 mm	24	68	56	5	68 - 70	56 - 58	8	11	23	78	19	37	27	89	98	29

OPERATING TORQUE 3.16 Kg Cm Repeat Accuracy + 0.025 with 35 mm arm.

NOTE 1: For reverse operation place arm and roller in similar position to left of centre line and reverse position of return spring.

NOTE 2: If roller is used in dotted position (side view) it will not pass over cover, and unit must be mounted accordingly.

## ROLLER PLUNGER & PUSH ROD PLUNGER OPERATED

APPROXIMATE DIMENSIONS NOT FOR CONSTRUCTION (Dimensions in mm)

SH ROD PLUNGER TYPE-

arm must actuate push rod line with rod axis. Care must be taken to avoid exceeding the overtravel

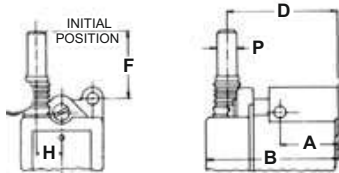


Figure 1 Type JW-42, JW-48

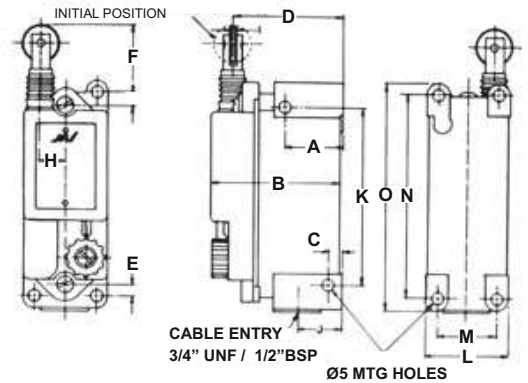
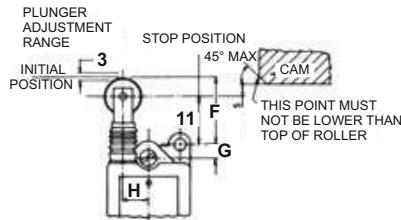
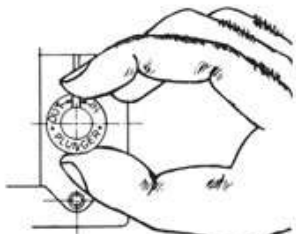
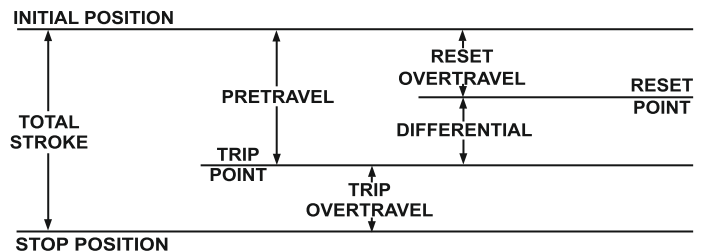


Figure 2 Type JW-32, JW-38



MICRO ADJUSTMENT

Pretravel 2mm  
 Differential 1mm  
 Total stroke 6mm  
 Operating force 1.4kg.  
 Reset force 0.5kg.  
 Reset overtravel 1mm  
 Trip overtravel 4mm  
 Repeat accuracy + 0.30  
 Plus or minus 1.6 mm depending upon setting of plunger adjustment.



Figures 1 & 2 types JW-32, JW-38, JW-42, JW-48

Type	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
JW-32, JW-38 JW-42, JW-48	24	56	5	46	5	28	6	10	3	19	78	37	27	89	98	8

Non Plug-in Small Precision Limit Switches are designed specifically for use on modern machine tools, to control starting, stopping or reversing of electrical motors including safety and signalling light, lifting gear, hoists, conveyors, etc.

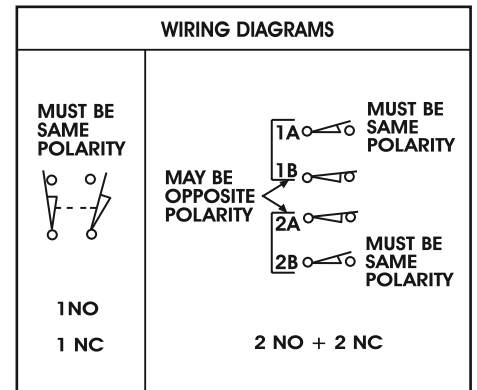
The two pole limit switches are identical in appearance and size to the popular single pole version. Two pole limit switches are desirable in many installations and can reduce the number of limit switches and control relays used.

Protected against oil, cutting lubricants and fine dust penetration by using compressed rubber rings, special gaskets, pressure die cast zinc top and aluminium bottom cover.

All the parts are anti-corrosive material and paints.

Spring return, Snap action, Quick make and Quick break contacts.

Operational current and voltage				
AC 15 rating	Single pole 1 NO + 1 NC Changeover contacts		Double pole 2 NO + 2 NC Changeover contacts	
	110 V	4 A		3.0 A
240 V	2 A		1.5 A	
440 V	1 A		0.8 A	
600 V	0.8 A		0.6 A	
DC 13 rating	Single throw	Double throw	Single throw	Double throw
115 V	2.0 A	0.5 A	1.0 A	0.2 A
230 V	0.5 A	0.2 A	0.3 A	0.1 A
600 V	0.1 A	0.02 A	0.1 A	-



1 N.O.1 N.C. contacts are Single Pole, Double Throw one circuit normally open and one circuit normally closed. These circuits are electrically separate, but cannot be used on opposite polarities.

2 N.O. 2 N.C. contacts: Each pole is electrically separate from the other and can be used on opposite polarities. The contacts of each pole, double throw-these circuits are electrically separate, but cannot be used on opposite polarities

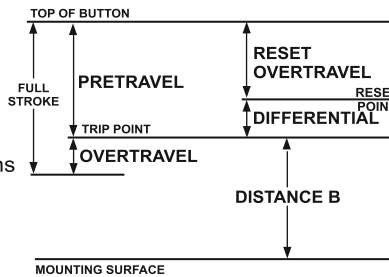
APPROXIMATE DIMENSIONS NOT FOR CONSTRUCTION (Dimensions in mm.)  
Operating Data for types JO1 and JO2

**TECHNICAL DATA:**

Thermal rating 10A  
 Operating temperature - 20° to + 70° C  
 Storage temperature - 40° to + 70° C  
 Transfer time 5 to 6 ms.  
 Bounce time 5 ms.  
 Repeat Accuracy ± 1/100th  
 Mechanical Life 20 million operations  
 Tips Nickel Silver Solid

**TERMINAL CAPACITY:**

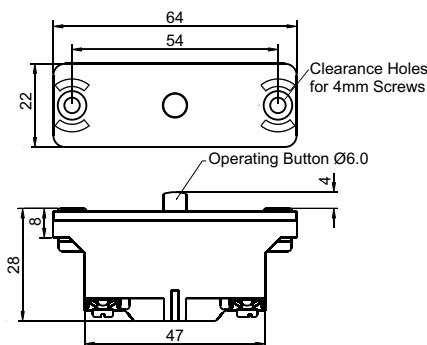
Flexible 2 x 1.5 mm<sup>2</sup> max.  
 Solid 1 x 2.5 mm<sup>2</sup> max.



	Type JO1	Type JO2
Pretravel	1.5-1.9	1.5-1.9
Full Stroke	2.6-3.2	2.6-3.2
Differential	0.8-1.2	0.6-1.2
Reset Overtravel	0.4-1.0	0.4-1.2
Distance 'B' From top of button to mounting surface at trip point	2.4-2.0	2.4-2.0
Operating force	0.3-0.4 kg.	0.2-0.4 kg.

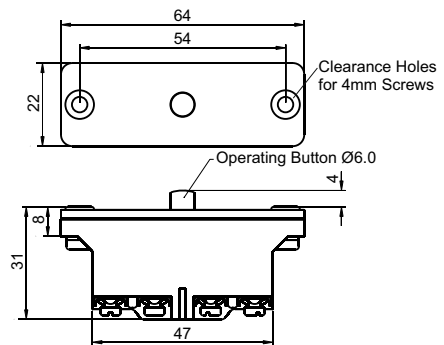
**SNAP SWITCH DIMENSIONS**

**APPROXIMATE DIMENSIONS NOT FOR CONSTRUCTION**



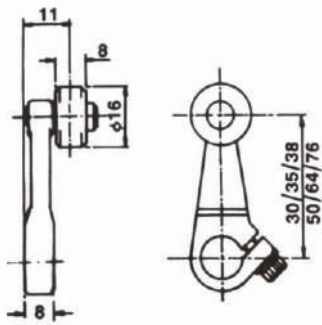
**JO 1**

28

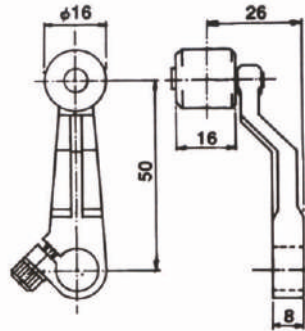


**JO 2**

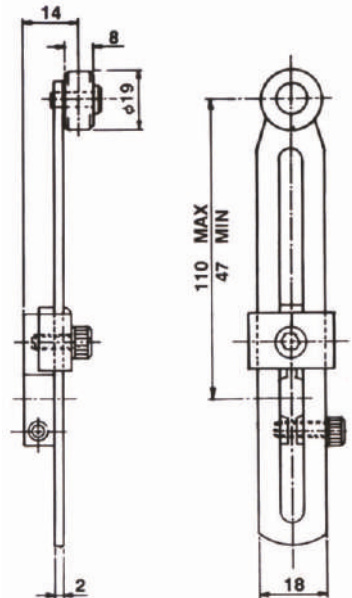
(Dimensions in mm)



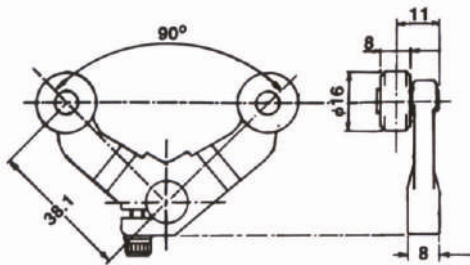
ROLLER LEVER



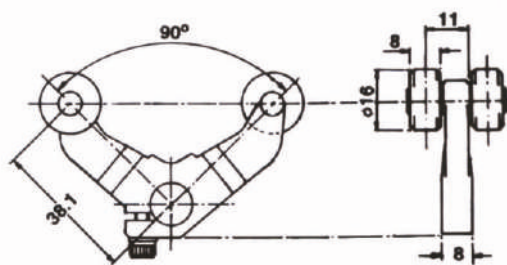
OFFSET LEVER



ADJUSTABLE LEVER



FORK TYPE INLINE ROLLERS



FORK TYPE OFF SET ROLLERS

S.No.	Type	Contacts	Ordering Code	MRP Rs.
1	JW 12 Without lever	1 NO + 1 NC	JW 12	1647
2	JW 12 With 35 mm long lever	1 NO + 1 NC	JW 12	1818
3	JW 12 With 38 mm long lever	1 NO + 1 NC	JW 12	1854
4	JW 12 With 50 mm long lever	1 NO + 1 NC	JW 12	1881
5	JW 12 With 64 mm long lever	1 NO + 1 NC	JW 12	1917
6	JW 12 With 76.2 mm long lever	1 NO + 1 NC	JW 12	1962
7	JW 12 With Adjustable lever	1 NO + 1 NC	JW 12	1980
8	JW 12 With 2" Offset lever	1 NO + 1 NC	JW 12	2034
9	JW 18 Without lever	2 NO + 2 NC	JW 18	1935
10	JW 18 With 35 mm long lever	2 NO + 2 NC	JW 18	2124
11	JW 18 With 38 mm long lever	2 NO + 2 NC	JW 18	2151
12	JW 18 With 50 mm long lever	2 NO + 2 NC	JW 18	2187
13	JW 18 With 64 mm long lever	2 NO + 2 NC	JW 18	2214
14	JW 18 With 76.2 mm long lever	2 NO + 2 NC	JW 18	2268
15	JW 18 With Adjustable lever	2 NO + 2 NC	JW 18	2286
16	JW 18 With 2" Offset lever	2 NO + 2 NC	JW 18	2322
17	Push Rod Button	1 NO + 1 NC	JW 22	1575
18	Push Rod Button	2 NO + 2 NC	JW 28	1881
19	Micro Adjustable Roller Plunger	1 NO + 1 NC	JW 32	1737
20	Micro Adjustable Roller Plunger	2 NO + 2 NC	JW 38	2043
21	Micro Adjustable Push Rod Plunger	1 NO + 1 NC	JW 42	1710
22	Micro Adjustable Push Rod Plunger	2 NO + 2 NC	JW 48	2025

The Above Types of Switches are also available with **Gold Plated Contacts** (At extra cost)

The Above Types of Switches are also available for **High Temperature (150°C)** (At extra cost) and with **LED Indicator** (At extra cost)

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# JAI BALAJI

**BC 9**

**OIL TIGHT LIMIT SWITCHES**

**IP 67**

WITH     MARKS

CATALOGUE CUM PRICE LIST



RECOGNITION OF  
*Quality Plus*

## PRICE LIST

Description	Type	Ordering Code	1 NO + 1 NC MRP Rs.	2 NO + 2 NC MRP Rs.
Roller Lever	38mm length	JLSL 1	1800	2853
	76mm length	JLSL 2	1800	2853
	50mm length	JLSL 3	1800	2853
	64mm length	JLSL 4	1800	2853
	50mm Offset	JLSL 0	1863	3033
Adjustable Roller Lever	32 to 82.5mm	JLSL A	1800	2853
Fork Lever	Roller in line	JLSF	1926	3096
	with offset roller	JLSFLO	1962	3132
Top Push	Roller type	JLSTPR	1800	2853
	Button type	JLSTPBA	1800	2853
Side Push	Roller type	JLSSPR	1926	3096
	Button type	JLSSPBA	1926	3096
Cat Whisker	Nylon rod	JLSCW	1800	2853
	Steel rod	JLSJW	1800	2853
Pull cord	Pull cord	JLSPC	2853	3870
Belt sway	Belt sway	JLSBS	2853	3870
Top push Normal Roller	Top push Normal Roller	JLSTNR	1800	2853
General Purpose	Angular Roller Lever	JLSGS	1566	2736
	Ang Metal Roller Lever	JLSGS	1638	2817

### Ordering Code for **Maintained Contact Models**

Description	Type	Ordering Code	1 NO + 1 NC MRP Rs.	2 NO + 2 NC MRP Rs.
Roller Lever	38mm length	JLSL-1(M)	1980	3150
	76mm length	JLSL-2(M)	1980	3150
	50mm length	JLSL-O(M)	2052	3222
Adjustable Roller Lever	32 to 82.5mm	JLSLA(M)	1980	3150
Fork Lever	Roller in line	JLSLF(M)	2160	3330
	with offset roller	JLSLFLO(M)	2160	3330
Cat Whisker	Steel rod	JLSJW(M)	1980	3150




The Above Types of Switches are also available with **Gold Plated Contacts** (At extra cost)

The Above Types of Switches are also available for **High Temperature (150°C)** (At extra cost)  
and with **LED Indicator** (At extra cost)

### Accessory:

Oil tight conduit entry to the limit switch for 3/4" dia 16 TPI BS threads BCCE.

**JALIBALJI BC9 OIL TIGHT LIMIT SWITCHES**

**JAI BALAJI** manufactures a wide range of **JAI BALAJI** Limit Switches tested to rigid quality standards. **JAI BALAJI** BC 9 series Limit Switches comply with IS 13947/pt-5/sec-1 of 2004 & IEC 947-5-1 and carry the unique  mark. **JAI BALAJI** Limit Switches are certified by  International Canada and U.S. They also conform to European standard 

## FEATURES

### **JAI BALAJI** BC9 Oil Tight Limit Switches

- Completely oil & water tight and dust & damp proof
- Ample wiring space for easy termination
- Flame retardant thermo-plastic barriers between terminals to prevent short-circuit
- Serrated terminals to give firm grip to straighten wire
- Flexibility of replacing complete contact blocks without changing the operating characteristic
- The S.P.D.T twin-break silver contacts provide quick make-and-break action with high contact pressure
- The brass forged lever with steel roller and all stainless steel parts provide high rigidity and corrosion resistance.

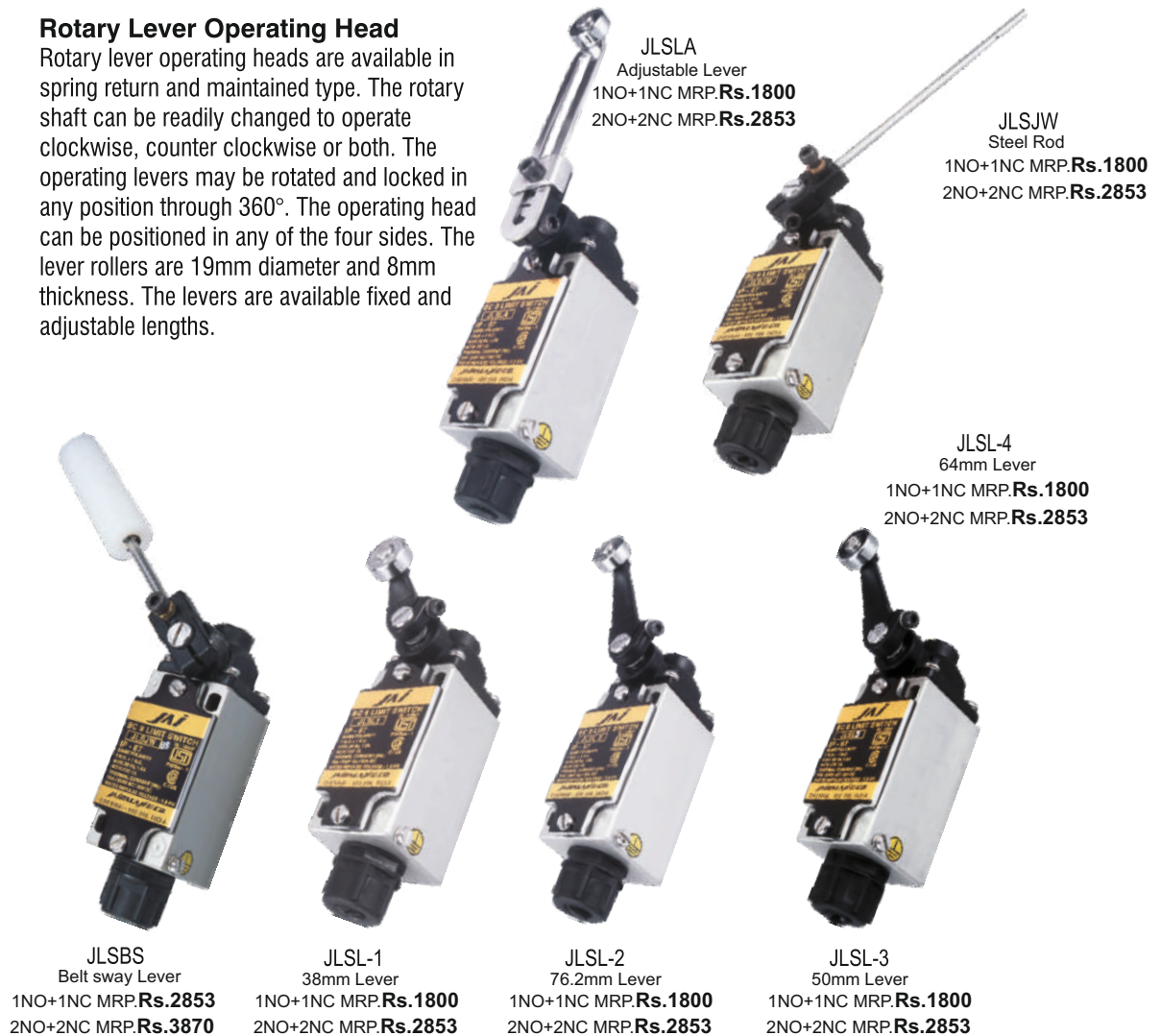
## MODELS

### **JAI BALAJI** BC9 Oil Tight Limit Switches

BC 9 JLS type limit switches are available with a variety of operating heads to meet diverse applications

#### Rotary Lever Operating Head

Rotary lever operating heads are available in spring return and maintained type. The rotary shaft can be readily changed to operate clockwise, counter clockwise or both. The operating levers may be rotated and locked in any position through 360°. The operating head can be positioned in any of the four sides. The lever rollers are 19mm diameter and 8mm thickness. The levers are available fixed and adjustable lengths.



### Top Push Operating Head

BC9 Top Plunger limit switches are available in three designs. One has an adjustable top push button which has a hex, bolt and lock nut, the length of which can be adjusted upto 8mm (Adjustment is accomplished by locking the 8mm spanner in the spindle and then by turning the threaded 4mm hex. Head operating plunger and securing it with a lock nut).



JLSTPBA  
1NO+1NC MRP.**Rs.1800**  
2NO+2NC MRP.**Rs.2853**

JLSTPR  
1NO+1NC MRP.**Rs.1800**  
2NO+2NC MRP.**Rs.2853**

JLSTNR  
1NO+1NC MRP.**Rs.1800**  
2NO+2NC MRP.**Rs.2853**

The second type has a steel roller of 11.1 mm diameter and 3.85mm thickness. The top push operating heads are easier to apply because the operating direction and repeat accuracy is less critical.

### Side Push Operating Head

Jai BC 9 Side plunger limit switches are in two different designs. One has adjustable push button which can be adjusted upto 8mm (Adjustment is accomplished by locking the 8mm spanner in the spindle and then by turning the threaded 4mm hex. Head operating plunger and securing it with a lock nut).



JLSSPBA  
1NO+1NC MRP.**Rs.1926**  
2NO+2NC MRP.**Rs.3096**

JLSSPR  
1NO+1NC MRP.**Rs.1926**  
2NO+2NC MRP.**Rs.3096**

The second type has steel roller of 12mm diameter and 3.85mm thickness. In our BC 9 Side plunger roller type limit switches there is a provision to change the positioning of the roller plunger from horizontal to vertical position and vice versa by unscrewing the plunger cap nut and it is ready to operate as per the choice

JLSPC  
1NO+1NC MRP.**Rs.2853**  
2NO+2NC MRP.**Rs.3870**

### Cat Whisker Operating Head

BC 9 Cat whisker limit switches are available in two designs with 137mm long operating lever. One type consists of 3.2 diameter nylon rod fixed with stainless steel tension spring from the bottom. The second type consists of 6.2 diameter stainless steel tension spring. Both these types can be operated in any direction from the centre.



JLSCW  
1NO+1NC MRP.**Rs.1800**  
2NO+2NC MRP.**Rs.2853**

### Fork Lever Operating Head :

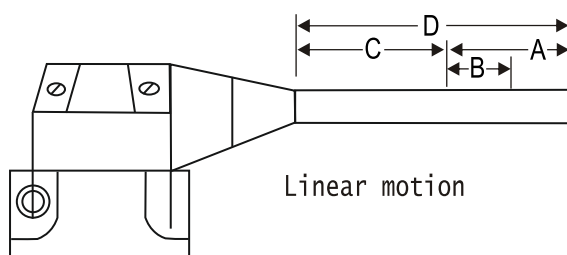
Each of the two arms of length 38mm has a roller of 19mm diameter and 8mm thickness either in line or offset. Available in spring return or maintained type.



JLSF  
Fork Roller Lever  
1NO+1NC MRP.**Rs.1926**  
2NO+2NC MRP.**Rs.3096**

JLSPC WR  
1NO+1NC MRP.**Rs.2934**  
2NO+2NC MRP.**Rs.4104**

### Diagram for Operating Data



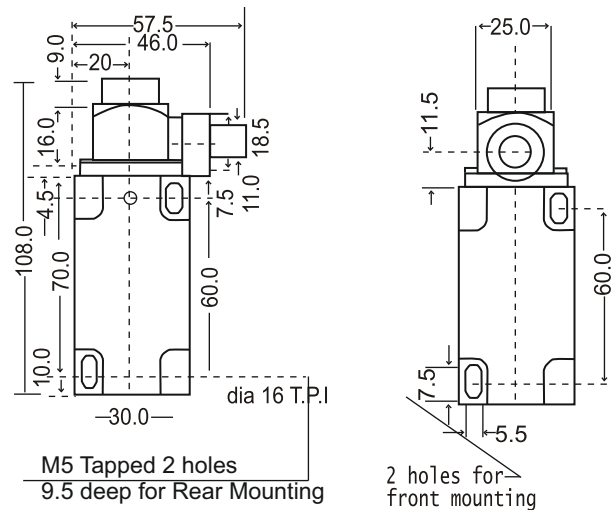
# ELECTRICAL & MECHANICAL RATINGS

Utilisation Category AC 15 and DC 13 as per IS/IEC 60947

Thermal Current (1th) 10A  
 Insulation Voltage (Ui) 600 V AC  
 ISI Licence No. CM/L-2015427

## Operating Current and Voltage

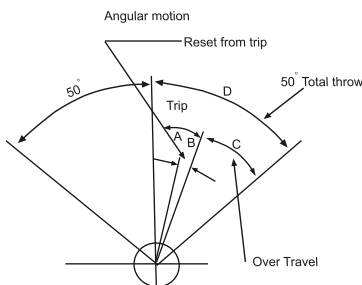
AC 15 rating 6A at 110v; 3A at 220V;  
 1.5A at 400V; 1.2A at 550V  
 DC 13 rating 0.2A at 110V; 0.1A at 220V,  
 Contact combination 1 NO + 1 NC SPDT switch  
 change-over contact  
 Frequency of operation 2500 operations per hour  
 Mechanical life  $20 \times 10^6$  operations  
 Enclosure category Die cast enclosure to IP-67  
 as per IS 13947 / Pt5 / Sec1 of 2004  
 Terminal capacity 2.5mm solid or stranded



## Weights

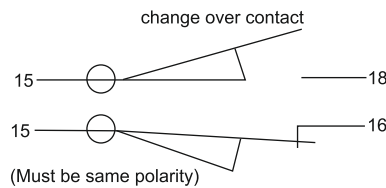
Oil tight limit switches 500 gms approx.  
 General purpose limit switches 400 gms approx.

## Accessory



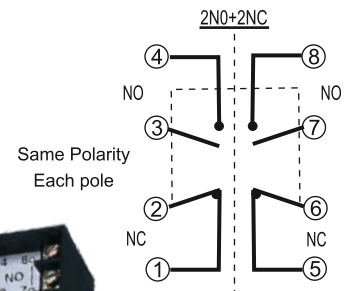
- A Travel to trip
- B Travel to reset from trip point
- C Over travel
- D Total travel

## Wiring Diagram: 1NO + 1NC



Basic Switch **BC9E**  
 1NO+1NC MRP.**Rs.864**

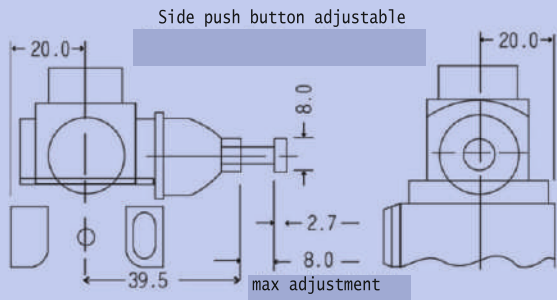
## Wiring Diagram: 2NO + 2NC



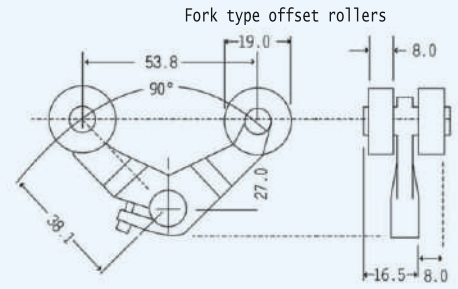
Basic Switch **BC9E**  
 2NO+2NC MRP.**Rs.1224**

BC 9 Types	JLSL 1 JLSL 2 JLSL A JLSJ W JLSL F JLSLF 0	JLSL 1M JLSL 2M JLSL AM JLSJWM JLSLFM JLSLFOM	JLSTPR JLSTPBA mm	JLSSPR JLSSPBA mm	JLSCW
Travel to trip A	10°	50°+	1.3+	2.0+	20°+
Travel to reset from trip point B	6°	50°+	1.1	1.7	18°+
Over travel C	40°	40°*	5.5	5.1	50°*
Total travel D	50°	90°+	6.8	7.0	250°*
Force to trip (max) kg	1.0	0.5	2.0	2.0	0.285
Force to be applied at a radius of (mm)	28	38	-	-	25.5

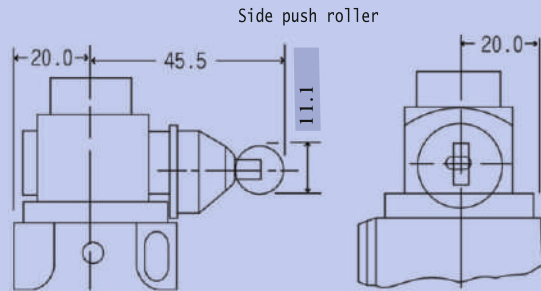
+ Maximum \* Minimum



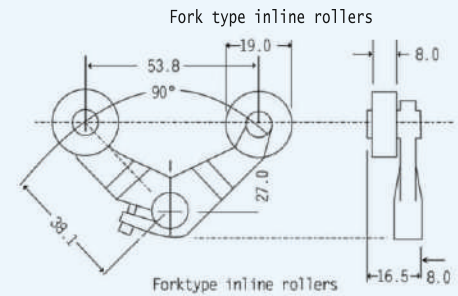
Side push button adjustable



Fork type offset rollers

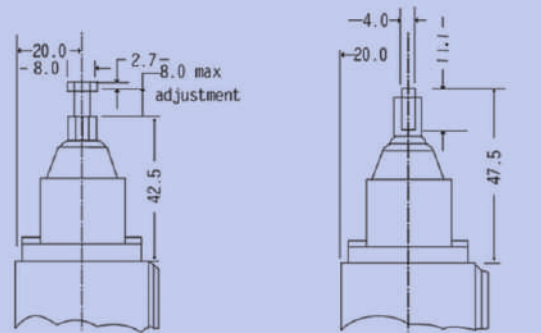


Side push roller



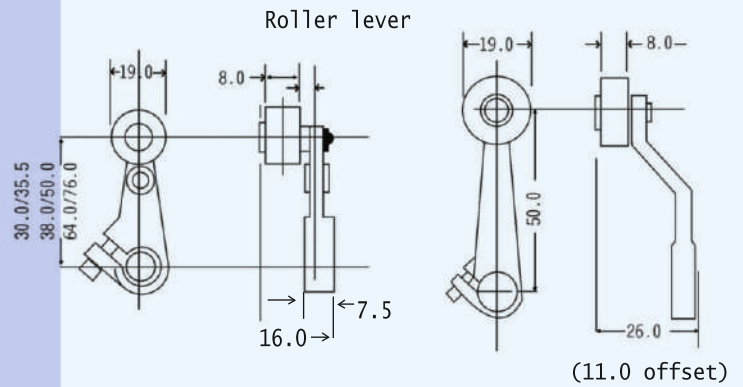
Fork type inline rollers

Forktype inline rollers



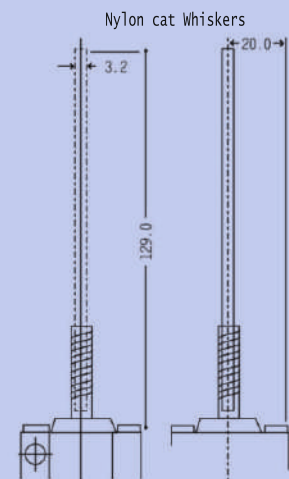
Top push button adjustable

Top push roller

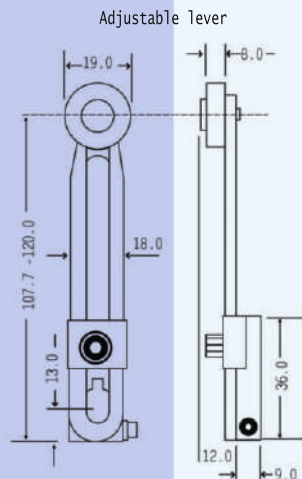


Roller lever

(11.0 offset)

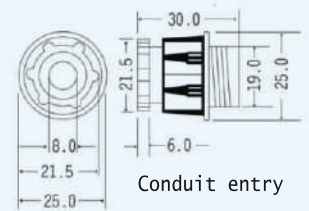


Nylon cat Whiskers



Adjustable lever

Surface mounted side operated



Conduit entry

Manufactured by:

**JAIBALAJI**  
CONTROL GEARS PVT. LTD

Post Bag No. 27,  
89 (New No. 107), SIDCO Industrial Estate,  
Ambattur, Chennai - 600 098 (India).  
Phone: 26251279 / 26257859 / 2625 4470.  
Fax: 0091-044-2625 5038.  
E-mail: dchandramohan@jaibalaji.firm.in

# JAI BALAJI

**BC 9 'T'**

**OIL TIGHT LIMIT SWITCHES**

**IP 67**

WITH     MARKS

CATALOGUE CUM PRICE LIST



RECOGNITION OF  
*Quality Plus*

PRICE LIST

Description	Type	Ordering Code	1 NO + 1 NC MRP Rs.
Roller Lever	38mm length	<b>BC9 T JLSL - 1</b>	<b>1512</b>
	76mm length	<b>BC9 T JLSL - 2</b>	<b>1512</b>
	50mm length	<b>BC9 T JLSL - 3</b>	<b>1512</b>
	64mm length	<b>BC9 T JLSL - 4</b>	<b>1512</b>
	50mm Offset	<b>BC9 T JLSL - O</b>	<b>1566</b>
Adjustable Lever	32 to 82.5 mm	<b>BC9 T JLSL - A</b>	<b>1512</b>
Fork Lever	Roller inline	<b>BC9 T JLSF</b>	<b>1710</b>
	with Offset roller	<b>BC9 T JLSFLO</b>	<b>1773</b>
OffsetLever	with 50mm Al roller	<b>BC9 T JLSFLO</b>	<b>1890</b>
Top Push	Roller Type	<b>BC9 T JLSTPR</b>	<b>1512</b>
	Button Type	<b>BC9 T JLSTPB</b>	<b>1512</b>
	Button Adjustable	<b>BC9 T JLSTPBA</b>	<b>1512</b>
Side Push	Roller Type	<b>BC9 T JLSSPR</b>	<b>1620</b>
	Button Adjustable	<b>BC9 T JLSSPBA</b>	<b>1620</b>
Cat Whisker	Nylon Rod	<b>BC9 T JLSNCW</b>	<b>1512</b>
	SS Spring	<b>BC9 T JLSSCW</b>	<b>1539</b>
Side operating	Steel rod	<b>BC9 T JLSJW</b>	<b>1512</b>
	Steel rod Adjustable	<b>BC9 T JLSJWA</b>	<b>1512</b>
	Steel rod 'U' Type	<b>BC9 T JLSUW</b>	<b>1512</b>

The Above Types of Switches are also available with **Gold Plated Contacts** (At extra cost)

The Above Types of Switches are also available with **LED Indicator** (At extra cost)

Ordering code for **Maintained contact models**

Description	Type	Ordering Code	1 NO + 1 NC MRP Rs.
Roller Lever	38mm length	<b>BC9 T JLSL - 1(M)</b>	<b>1683</b>
	76mm length	<b>BC9 T JLSL - 2(M)</b>	<b>1683</b>
Adjustable Lever	32 to 82.5 mm	<b>BC9 T JLSL - A(M)</b>	<b>1683</b>
Fork Lever	Roller inline	<b>BC9 T JLSLF(M)</b>	<b>1863</b>
	with Offset roller	<b>BC9 T JLSFLO(M)</b>	<b>1826</b>
Side operating	Steel rod	<b>BC9 T JLSJW(M)</b>	<b>1683</b>
	Steel rod 'U' Type	<b>BC9 T JLSUW(M)</b>	<b>1683</b>

**JALIBALAJI BC9 'T' OIL TIGHT LIMIT SWITCHES**

**JAIBALAJI BC 9'T' Top Push Operating Heads**

BC-9'T' Top Plunger Limit Switches are available in three designs. One has an adjustable top push button which has a hex. bolt and lock nut, the length of which can be adjusted upto 8mm (adjustment is accomplished by locking the 8mm spanner in the spindle and then by turning the threaded 4mm Hex. Head operating plunger and securing it with a lock nut).

The second type has a solid button of 9.5mm without any adjustment.

The third type has a nylon roller of 17mm diameter and 4.7 mm thickness. The top push operating heads are easier to apply because the operating direction and repeat accuracy is less critical.

**JLSTPR**  
Top Push Roller  
1NO+1NC MRP.**Rs.1512**



**JLSTPB**  
Top Push Button  
1NO+1NC MRP.**Rs.1512**



**JLSTPBA**  
Top Push Adjustable  
1NO+1NC MRP.**Rs.1512**



**JAIBALAJI BC 9'T' Side Push Operating Head**

Jaibalaji BC 9'T' Side Plunger Limit Switches are in two different designs. One has adjustable push button which can be adjusted upto 8mm. (Adjustment is accomplished by locking the 8mm spanner in the spindle and then by turning the threaded 4mm hex. Head operating plungers and securing it with a lock nut).

The second type has Nylon Roller of 17mm diameter and 4.7mm thickness. In our BC 9'T' Side Plunger Roller type Limit Switch there is a provision to change positioning of the Roller Plunger from horizontal to vertical position and vice versa by unscrewing the plunger cap nut and it is ready to operate as per the choice.

**JLSSPBA**  
Side Push Adjustable  
1NO+1NC MRP.**Rs.1620**



**JLSSPR**  
Side Push Roller  
1NO+1NC MRP.**Rs.1620**



**JAIBALAJI BC 9'T' Cat Whisker Operating Head**

BC 9'T' Cat Whisker Limit Switches are available in two designs with 137mm long operating lever. One type consists of 3.2 dia Nylon Rod fixed with stainless steel tension spring from the bottom. The second type consists of 6.2 dia stainless steel tension spring. Both these types can be operated in any direction from the centre.

**JLSNCW**  
Nylon Rod  
1NO+1NC MRP.**Rs.1512**



**JLSSCW**  
S S Spring  
1NO+1NC MRP.**Rs.1539**



**JALBALAJI** manufactures a wide range of limit switches tested to rigid quality standards. **JALBALAJI** BC9'T' series Limit switches comply with IS/IEC 60947/pt-5/sec-1 and carry the unique  mark. **JALBALAJI** Limit switches are certified by  International Canada and US. They also conform to European standard 

### **JALBALAJI BC 9'T' Series Oil Tight Limit Switches Features**

- Completely oil & water tight and dust & damp proof.
- Ample wiring space for easy termination.
- Flame retardant thermo-plastic barriers between terminals to prevent short-circuit.
- Serrated terminals to give firm grip to straighten wire.
- Flexibility of replacing complete contact blocks without changing the operating characteristics.
- The S.P.D.T twin-break silver contact provides quick make- and- break action with high contact pressure.
- The brass-forged lever with nylon roller & all stainless steel parts provides high rigidity and corrosion resistance.

### **JALBALAJI BC 9'T' Oil Tight Switches Models**

BC 9'T' JLS type limit switches are available with a variety of operating heads to meet diverse applications.

### **JALBALAJI BC 9'T' Rotary Lever Operating Head**

Rotary Lever Operating Heads are available in spring return and maintained type. The rotary shaft can be readily changed to operate clockwise, counter clockwise or both. The operating levers may be rotated and locked in any position through 360. The operating head can be positioned in any of the four sides. The lever rollers are 19mm diameter and 16mm thickness. The levers are available in fixed and adjustable lengths.

**JLSJW**  
Steel Rod  
1NO+1NC MRP.**Rs.1512**



**JLSUW**  
1NO+1NC MRP.**Rs.1512**



**JLSL-0**  
Offset Lever  
1NO+1NC MRP.**Rs.1566**



**JLSL-1**  
38mm Lever  
1NO+1NC MRP.**Rs.1512**



**JLSL-2**  
76.2mm Lever  
1NO+1NC MRP.**Rs.1512**



**JLSL-A**  
Adjustable Lever  
1NO+1NC MRP.**Rs.1512**



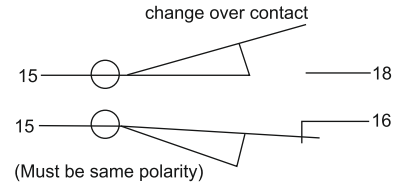
## OPERATING CURRENT AND VOLTAGE

AC 15 rating	: 6A at 110 V; 3A at 220V; 1.5A at 400V; 1.2A at 550V
DC 13 rating	: 0.2A at 110V; 0.1A at 220V
Contact combination	: 1 NO + 1 NC SPDT switch change-over contact
Frequency of operation	: 2500 operations per hour
Mechanical life	: 20 X 10 operations
Enclosure Category	: Die cast enclosure to IP-67 as per IS 2147-1962
Terminal Capacity	: 2.5mm <sup>2</sup> Solid or stranded

## ELECTRICAL & MECHANICAL RATINGS

Utilisation Category	: AC 15 and DC 13 as per IS/IEC 60947 Pt-5/Sec-1
Thermal Current (1th)	: 10A
Insulation Voltage (Ui)	: 600 V AC
ISI Licence No.	: CM/L-2015427

## WIRING DIAGRAM



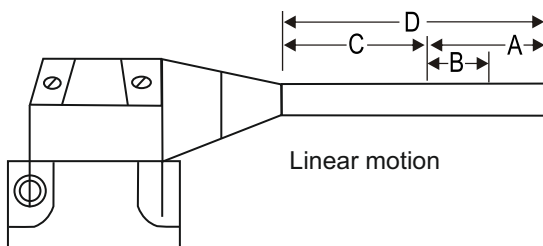
## JAIBALAJI BC9'T' Fork Lever Operating Head

Each of the two arms of length 38mm has a roller of 19mm diameter and 16mm thickness either in line or offset. Limit Switches all lever type are available in spring return or maintained type.

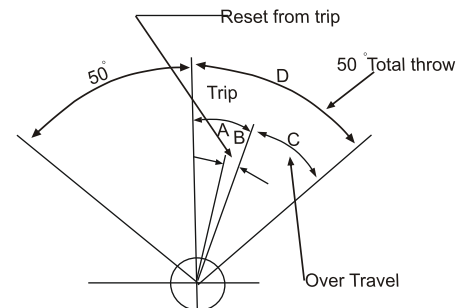


**JLSF**  
Fork type Roller in line  
1NO+1NC MRP.**Rs.1701**

Diagram for Operating Data



## Angular motion

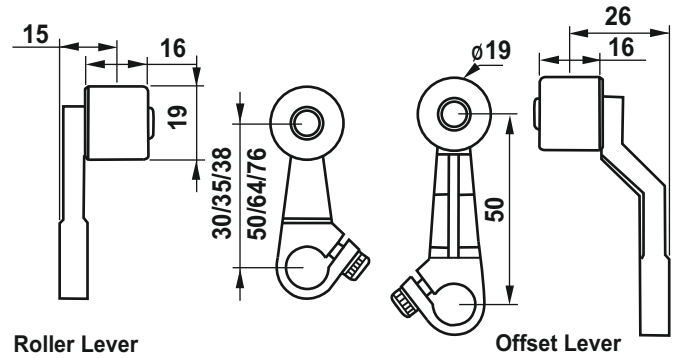
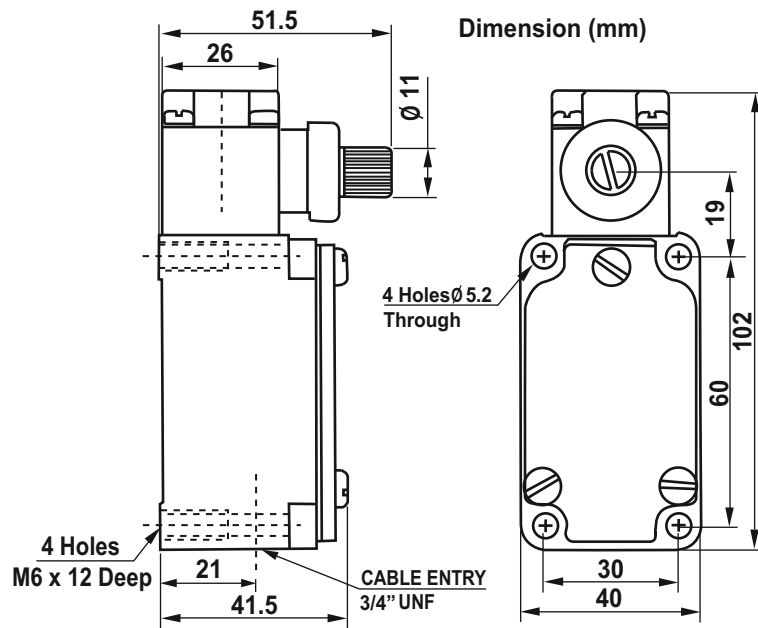


- A Travel to trip
- B Travel to reset from trip point
- C Over travel
- D Total travel

BC-9'T' Types	JLSL 1	JLSL 1M	JLSTPR JLSTPBA JLSTPB	JLSSPR JLSSPBA	JLSNCW JLSSCW JLSCW
	JLSL 2	JLSL 2M			
	JLSL A	JLSL AM			
	JLSJ W	JLSJWM			
	JLSUW	JLSUWM			
	JLSL F	JLSLFM			
	JLSL O	JLSLFOM			
	mm	mm	mm	mm	mm
Travel to trip A	10°	50° +	1.3+	2.0+	20° +
Travel to rest from trip point B	6°	50° +	1.1	1.7	19° +
Over travel C	40°	40° *	5.5	5.1	5° *
Total travel D	50°	90° +	6.8	7.0	25° *
Force to trip (max) Kg	1.0	0.5	2.0	2.0	0.285
Force to be applied at a radius of (mm)	28	38	-	-	25.5

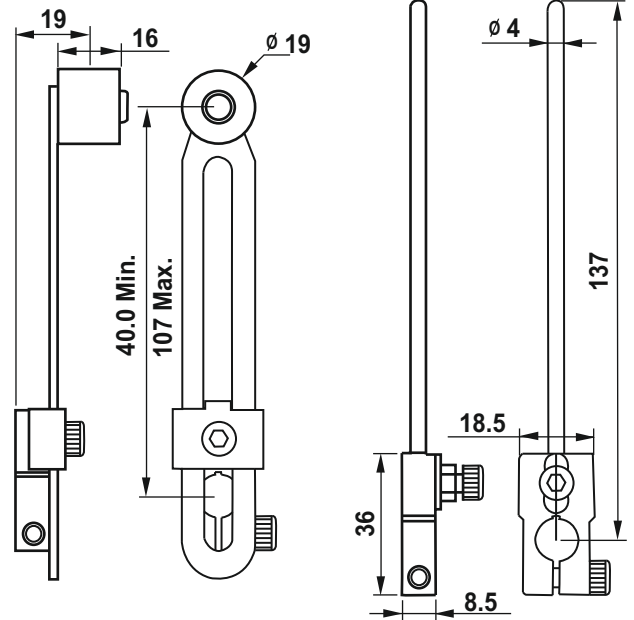
+ Maximum \* Minimum

**DIMENSIONS (MM)**



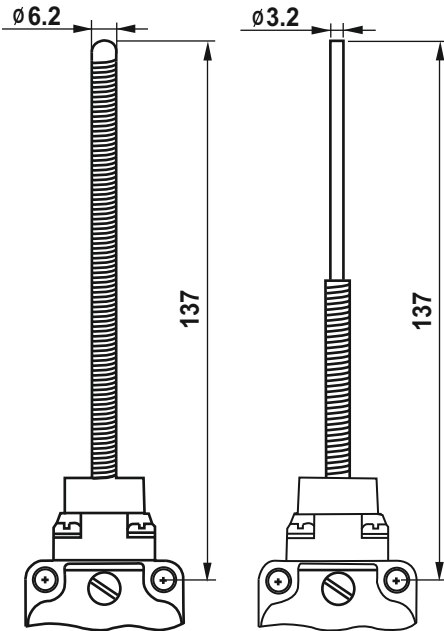
Roller Lever

Offset Lever



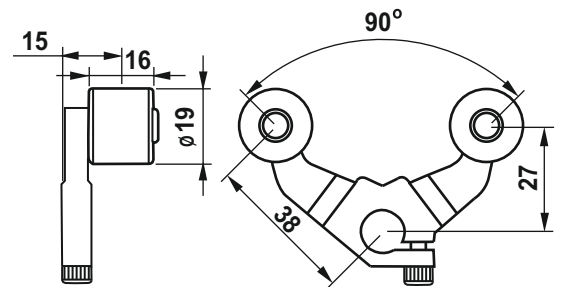
Adjustable Lever

Antenna Type Lever

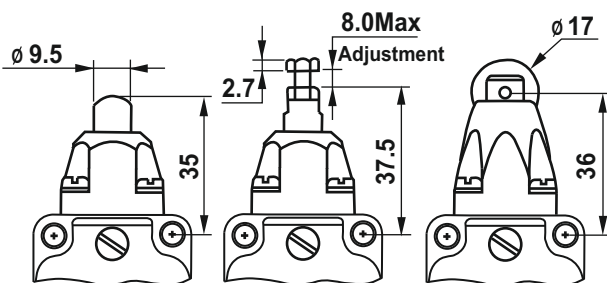


JLSCW

JLSCW (N)



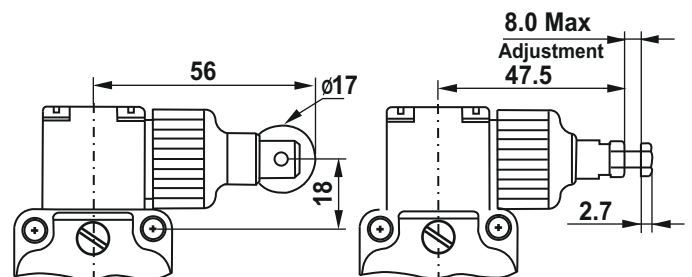
Fork Type Lever



JLSTPB

JLSTPBA

JLSTPR



JLSSPR

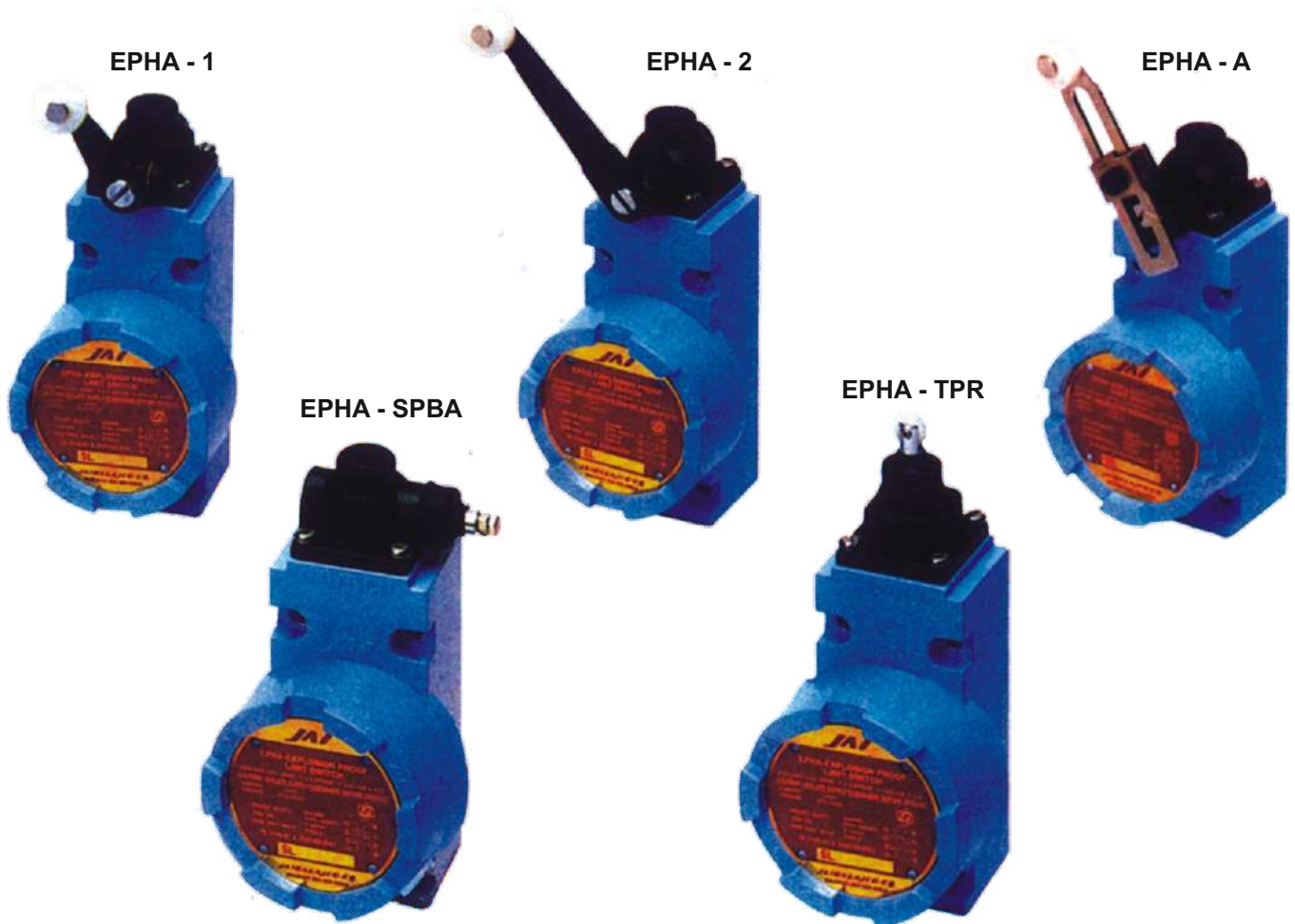
JLSSPBA



Post Box No. 27, 89 (New No. 107),SIDCO Industrial Estate,Ambattur, Chennai -600 098. India  
 Phone: +91 44 26251279 / 26257859 / 26254470 Fax: +91 44 26255038.  
 E-mail: dchandramohan@jaibalaji.firm.in Web: jaibalaji.in

# **JAI BALAJI** EPHA LIMIT SWITCHES

WITH **CIMFR** APPROVED FLAME PROOF ENCLOSURE AS PER  
CATALOGUE CUM PRICE LIST



**JAI BALAJI** offers the EPHA Limit Switches in a Flame Proof Enclosure suitable for use in hazardous atmosphere. The EPHA Type is available in 1NO + 1NC & 2NO + 2NC output

JAIEPHA Limit Switches are for use either indoor or outdoor in hazardous atmospheres, as they are completely sealed Flameproof device

Mounting holes are provided for front or rear mounting, making the switch interchangeable with other Flameproof Switches.

Various types of heads to suit in any type of cam and application.

Flameproof Enclosure confirms to  
IS/IEC : 60079-1  
Zone 1 & 2 Group IIA , IIB , & IIC

Test Report No.KLPL / EX / R / 17-001 25.4.2017  
CCE No. : A/P / HQ / TN / 104 / 5554 (P407854) For IIA & IIB  
CIMFR / TC / P / H 13 Dt:18.4.2016

Test Report No.KLPL / EX R / JCPL-17/002 25.4.2017  
CCE No. : A/P / HQ / TN / 104 / 5554 (P407854) For IIC  
CIMFR / TC / P / H 16 Dt:19.4.2016

- \* Non Sparking Actuators
- \* Six Types of Operating Heads
- \* Rotatable Operating Heads
- \* Operates up to 121° C
- \* Ample Wiring Space
- \* Multiple Contacts
- \* Compact Machine Tool Type
- \* Flexibility of Motion

## GENERAL INFORMATION

JAIEPHA switches feature the smallest housing available in India for use in hazardous locations. Flame paths within the housing cool exploding gases below the kindling temperature before they reach to explosive gases surrounding the housing.

## SEALS

Application proven heavy duty limit switch head seals are retained to seal the top of the JAIEPHA. The circular cover on the front is easily unscrewed to expose the switching elements for wiring or replacement. A screw driver or bar used on the wrenching lugs extending from the front of the cover allows easy removal or tightening. An 'O' ring seal is located between the housing and cover, flame paths are provided by the cover housing threads and an extended plunger between the switch cavity and head.

## INTERCHANGEABILITY

JAIEPHA Flameproof limit switches are interchangeable with any standard heavy duty limit switch with a adapter plate. JAIEPHA has a recessed back into which the adapter plate fits and mounts using two screws.

## JAIEPHA MODELS

JAIEPHA type limit switches are available with a variety of operating heads to meet diverse applications.

## PRICE LIST

DESCRIPTION	TYPE	ORDERING CODE	GROUP IIA & IIB		GROUP IIA,IIB & IIC	
			1NO+1NC	2NO+2NC	1NO+1NC	2NO+2NC
			MRP Rs.	MRP Rs.	MRP Rs.	MRP Rs.
Roller Lever	38 mm length	EPHA - 1*	4473	5760	7020	7830
	76 mm length	EPHA - 2*	4473	5760	7020	7830
	50 mm length	EPHA - 3*	4473	5760	7020	7830
	64 mm length	EPHA - 4*	4473	5760	7020	7830
	50 mm (Offset)	EPHA - O*	4473	5760	7020	7830
Adjustable Roller Lever	47 to 75 mm	EPHA - A*	4473	5760	7020	7830
Antenna Type Lever	134 mm length	EPHA - JW*	4473	5760	7020	7830
Fork Lever	Roller in line	EPHA - F*	4473	5760	7020	7830
	With Offset Roller	EPHA - FO*	4473	5760	7020	7830
Top Push	Roller type	EPHA - TPR	4473	5760	7020	7830
	Button type	EPHA - TPBA	4473	5760	7020	7830
Side Push	Roller type	EPHA - SPR	4473	5760	7020	7830
	Button type	EPHA - SPBA	4473	5760	7020	7830
*Maintained Contact for Lever Type Only (Add M as suffix to code while ordering)			4650	5913	7218	8028

## ROTARY LEVER OPERATING HEADS

They are available in spring return and maintained type. The rotary shaft can be readily changed to operate clockwise, counter clockwise or both. The operating levers may be rotated and locked in any position through 360°. The operating head can be positioned in any of the four sides. The lever rollers are 19mm diameter and 8mm width. The levers are available in fixed and adjustable lengths.

## FORK LEVER OPERATING HEADS

Each of the two arms of the length 38mm has a roller either inline or offset. Available in spring return or maintained type.

## TOP PUSH OPERATING HEADS

They are available in two designs. One has an adjustable push button, the length of which can be adjusted up to 8 mm. (Adjustment is accomplished by turning the threaded hexagon head of operating plunger and securing it with a lock nut). The second type has a roller 11.1 mm dia. The top push roller is easier to apply because the direction of operating and repeat accuracy is less critical.

## SIDE PUSH OPERATING HEADS

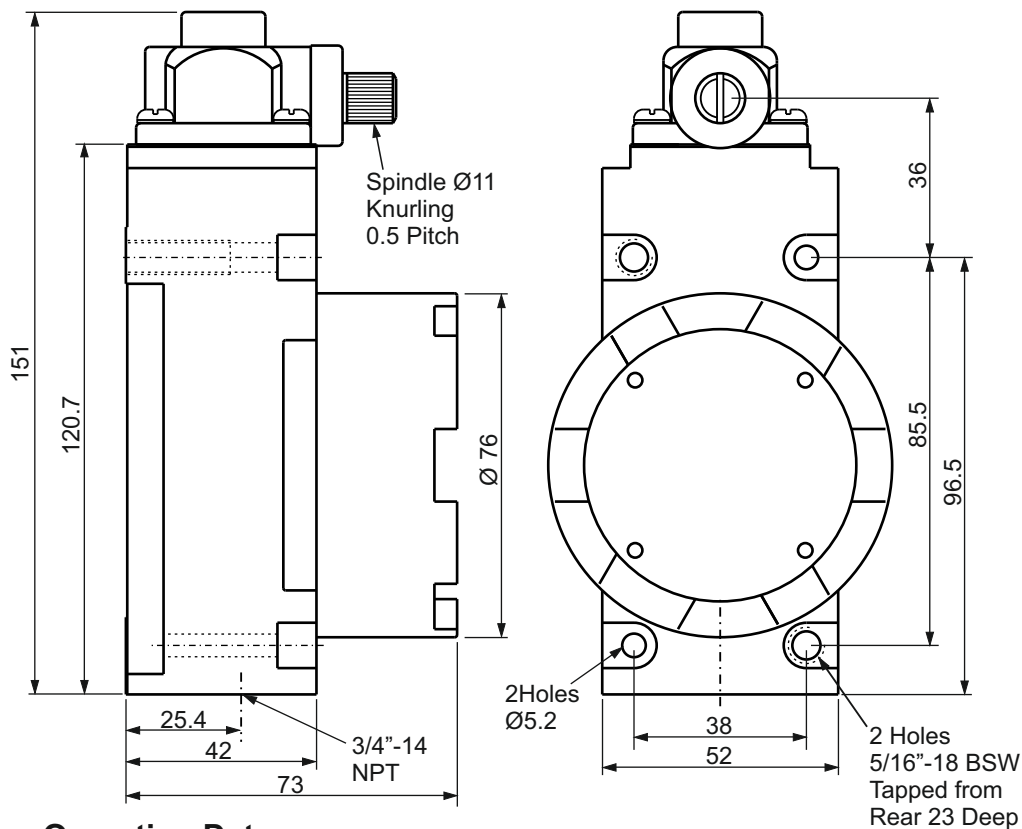
These heads are also available with an adjustable push button alternatively a roller of 11.1 mm dia. These are designed for small space and lower travel application where the actuator travel is perpendicular to the switch.

## CABLE ENTRY

Cable entry available either in 1/2" NPT or 3/4" NPT or 1/2"BSPT

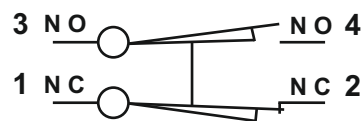
Dimensions (mm)

Lever Type Limit Switch



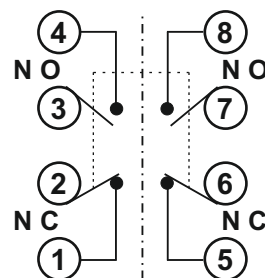
Wiring Diagram

1 NO + 1 NC



Wiring Diagram

2 NO + 2 NC



Operating Data

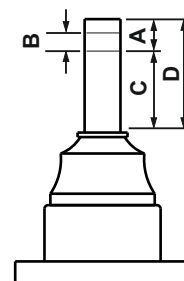
MODELS	EPHA 1 EPHA 2 EPHA 3 EPHA 4 EPHA O EPHA F EPHA FO EPHA A EPHA JW	EPHA 1M EPHA 2M EPHA 3M EPHA 4M EPHA OM EPHA FM EPHA FOM EPHA AM EPHA JWM	EPHA TPR EPHA TPBA (mm)	EPHA SPR EPHA SPBA (mm)
Travel to Trip A	10°	50°+	1.3+	2.0+
Travel to reset from trip point B	6°	50°+	1.1	1.7
Over travel C	60°	40°*	5.7	5.0
Total travel D	70°	90°+	7.0	7.0
Force to trip (max) kg	-	-	2.0	2.0
Operating Torque (max) kgfm	0.046	0.02	-	-

Characteristics

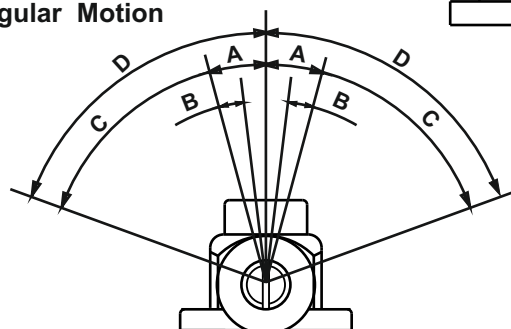
+ Maximum \* Minimum

- Contact Material : Silver
- Electrical Data (Maximum available) : 10A - 120, 240, 480 or 600 V AC
- Performance : As per IS/IEC 60079 -1
- Temperature Range : -12° C to 121° C
- Sealing : IS: 12063 -1987
- Housing Material : Aluminium
- Frequency of Operation : 2500 operations per hour
- Mechanical Life : 10 X 10<sup>6</sup> operations
- Terminal capacity : 1.5 Sq. mm
- Weight : 700 gms approx.

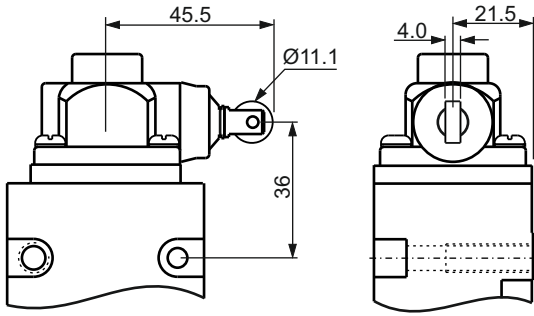
Linear Motion



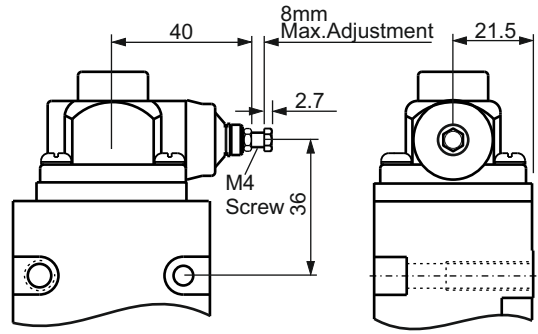
Angular Motion



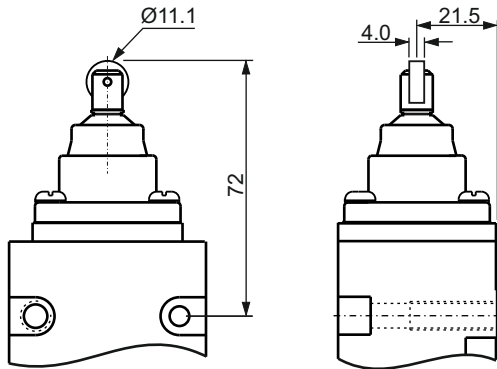
**Side Push Roller**



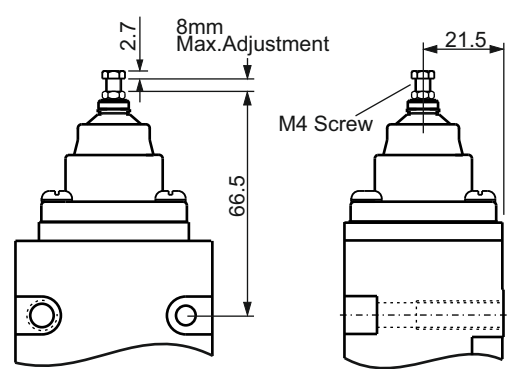
**Side Push Button Adjustable**



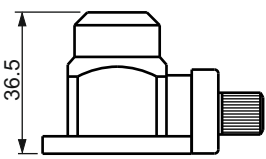
**Top Push Roller**



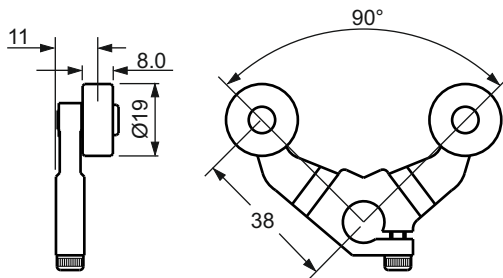
**Top Push Button Adjustable**



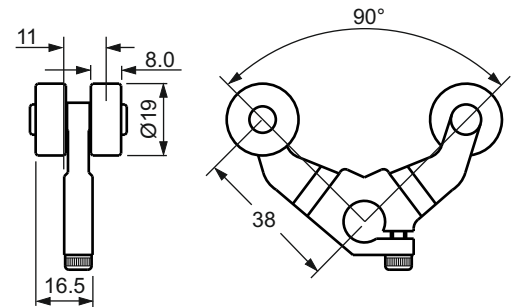
**Head for Maintained Contact**



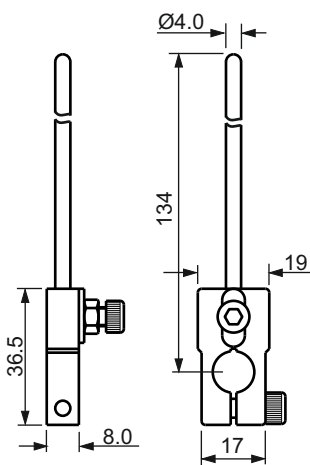
**Fork Type Inline Rollers**



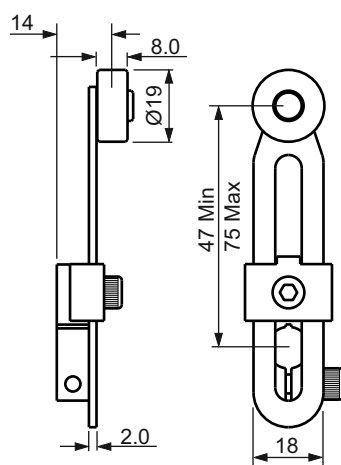
**Fork Type Offset Rollers**



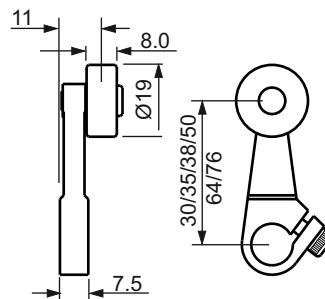
**Antenna Type Lever**



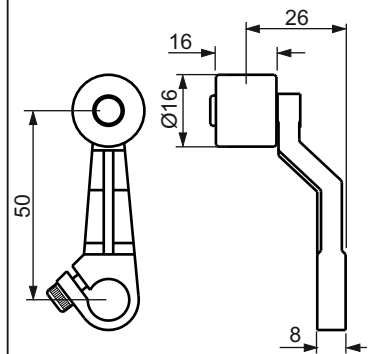
**Adjustable Lever**



**Roller Lever**



**Offset Lever**



Manufactured by:

**JAIBALAJI**  
CONTROL GEARS PVT. LTD

Post Box No. 27, 89 (New No. 107), SIDCO Industrial Estate, Ambattur, Chennai -600 098. India

Phone: +91 44 26251279 / 26257859 / 26254470 Fax: +91 44 26255038.

E-mail: dchandramohan@jaibalaji.firm.in Website: jaibalaji.in

# JAIBALAJI

LIMIT SWITCHES WITH   MARKS

CATALOGUE CUM PRICE LIST



## JC - 1125 HEAVY DUTY LIMIT SWITCHES

CONFORMS TO IS/IEC:60947 Pt.5 Sec 1

- **TWENTY-FIVE CIRCUIT OPTIONS**
- **25 A 600 V A.C. OR D.C.**
- **70° OVERTRAVEL IN BOTH DIRECTIONS**
- **IP 67 PROTECTION**
- **OPERATES UP TO 107° C**
- **IDEAL FOR APPLICATION REQUIRING EXTRA HEAVY INDUSTRIAL DUTY CONTACT RATINGS**
- **HIGHER OPERATING AND RESET FORCES**
- **RUGGED MECHANICAL CONSTRUCTION**
- **WILL WITHSTAND HOT FALLING SAND UPTO 300° F**
- **FOR ROUGH FOUNDRY APPLICATIONS AND HEAVY MACHINE TOOL, CONVEYOR, MILLS, FOUNDRIES, HEAVY BOILERS.**
- **ACTUATION MODE CONVERSION FACILITY FOR LEFT-HEND, RIGHT-HAND OR MAINTAINED CONTACT ACTION. PLUS A COMPREHENSIVE SELECTION OF OPERATING LEVERS.**

Model JC-1125 Heavy Industrial duty Limit switch **providing twenty five switching arrangements** from eleven standard types. Actuation mode conversion facility for left-hand, right-hand or maintained contact action. **Rating up to 25A lth 600V AC or DC** plus a comprehensive selection of operating levers.

Eleven standard switch types can be converted on site to provide for a total of twentyfive contact or circuit arrangements (as shown below).

Ordering reference model	contact arrangement (arrow indicated direction of lever movement)	Standard model conversion required	Operating data (refer to table, above)	Switch description (viewed from the front of switch).	MRP Rs
JC - 1125 BMK 9	(A)	As supplied	Data A	Snap action, Spring return Contacts: 1 n.c., 1 n.o. CW operation to 1 n.o. 1 n.c.	5040
	(B)	Revers return spring	Data A	Snap action, Spring return Contacts: 1 n.o., 1 n.c. CCW operation to 1 n.c. 1 n.o.	5040
	(C)	Remove return spring	Data A and Note 2 above	Stay-put action Contacts: CCW position 1 n.c. 1 n.o. or CW operation to 1 n.o. 1 n.c.	5040
JC - 1125 BMK 18	(A)	As supplied	Data A	Snap action, Spring return Contacts: 2 n.o. CW operation to 2 n.c.	5292
	(B)	Revers return spring	Data A	Snap action, Spring return Contacts: 2 n.c. CCW operation to 2 n.o.	5292
	(C)	Remove return spring	Data A and Note 2 above	Stay-put action Contacts: CCW position 2 n.o. or CW operation to 2 n.c.	5292
JC 1125 BMK 27	(A)	As supplied	Data A	Snap action, Spring return Contacts 2 n.o. CCW operation to 2 n.c.	5490
	(B)	Revers return spring	Data A	Snap action, Spring return Contacts 2 n.c. CW operation to 2 n.o.	5490
	(C)	Remove return spring	Data A and Note 2 above	Stay-put action Contacts: CCW position 2 n.c. or CW position 2 n.o.	5490
JC - 1125 BMK 36	(A)	As supplied	Data A	Snap action, Spring return Contacts 1 n.c. and 2 n.o. CW operation to 1 n.o., 2 n.c.	5400
	(B)	Revers return spring	Data A	Snap action, Spring return Contacts 2 n.c. and 1 n.o. CCW operation to 2 n.o., 1 n.c.	5400
	(C)	Remove return spring	Data A and Note 2 above	Stay-put action Contacts: CCW position 1 n.c. 2 n.o. CW operation to 1 n.o. 2 n.c.	5400
JC 1125 BMK 45	(A)	As supplied	Data A	Snap action, Spring return Contacts 2 n.o. and 1 n.c. CW operation to 2 n.c., 1 n.o.	5490
	(B)	Revers return spring	Data A	Snap action, Spring return Contacts 2 n.c. and 1 n.o. CCW operation to 2 n.o., 1 n.c.	5490
	(C)	Remove return spring	Data A and Note 2 above	Stay-put action Contacts: CCW position 2 n.c. 1 n.o. or CW position to 2 n.o., 1 n.c.	5490
JC 1125 BMK 54	(A)	As supplied	Data B and Note 2 above	Slow-make and break spring return Contacts : 2 n.o. CW operation to 1 n.o. 1 n.c. or CCW operation to 1 n.c., 1 n.c.	5292
	(B)	Add two jumper wires	Data B and Note 2 above	Slow-make and break spring return Contacts: 1 n.o. CW or CCW operation to 1 n.c.	5292
JC 1125 BMK 63	(A)	As supplied	Data B and Note 2 above	Slow-make and break spring return Contacts : 2 n.c. CW operation to 1 n.o. 1 n.c. or CCW operation to 1 n.c., n.o.	5292
	(B)	Add two jumper wires	Data B and Note 2 above	Slow-make and break spring return Contacts: 1 n.c. CW or CCW operation to 1 n.o.	5292
JC 1125 BMK 72	(A)	As supplied	Data C and Note 2 above	Snap-action spring return Contacts : 2 n.o. CW operation to 1 n.o. 1 n.c. or CCW operation to 1 n.c., 1 n.o.	5490
	(B)	Add two jumper wires	Data C and Note 2 above	Snap-action, spring return Contacts: 1 n.o. CW or CCW 1 n.c.	5490
JC 1125 BMK 81	(A)	As supplied	Data C and Note 2 above	Stay-put action Contacts : 2 n.o. CW operation to 1 n.o. 1 n.c. or CCW operation to 1 n.c., 1 n.o.	5490
	(B)	Add two jumper wires	Data C and Note 2 above	Stay-put action Contacts: 1 n.o. CW or CCW operation to 1 n.c.	5490
JC 1125 BMK 90	(A)	As supplied	Data B and Note 2 above	Slow-make and break, spring return Contact : 2 n.o. 1 n.c. CW operation to 1 n.o. 2 n.c. or CCW operation to 1 n.c., 2 n.o.	5490
JC 1125 BMK 99	(A)	As supplied	Data B and Note 2 above	Slow-make and break, spring return Contact : 1 n.c., 2 n.o. CW operation to 2 n.o. 1 n.c. or CCW operation to 2 n.c., 1 n.o.	5490

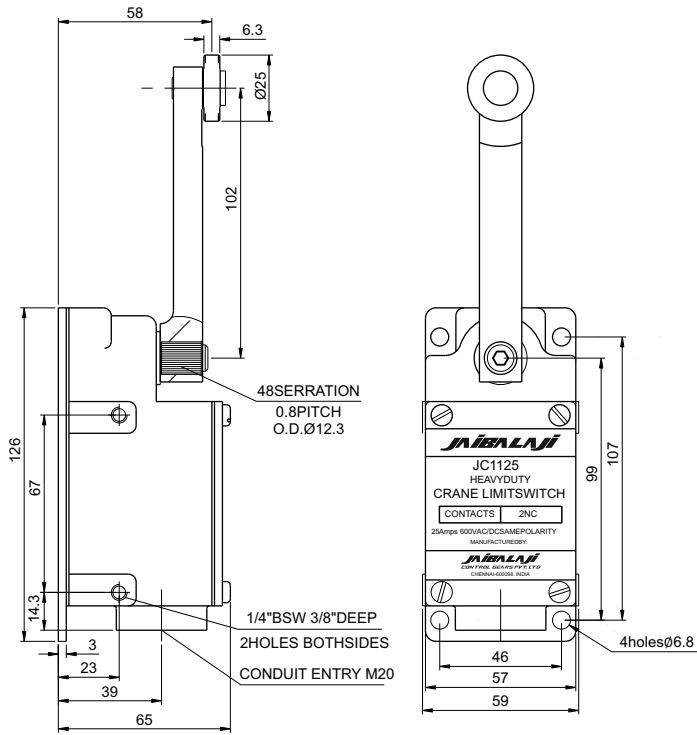
### How to order your limit switch

When ordering, quote the following :  
**Switch order reference. Lever reference.**  
**Back mounting plate style number.**

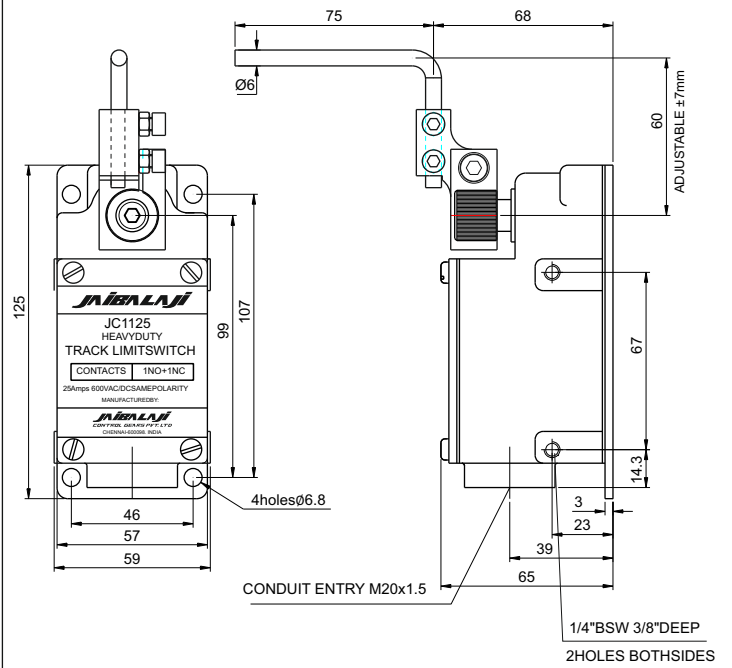
The Above Rates are with  
**Style 'A' Operating lever**

(Other than Style 'A' Operating Lever,  
 lever cost will be extra)

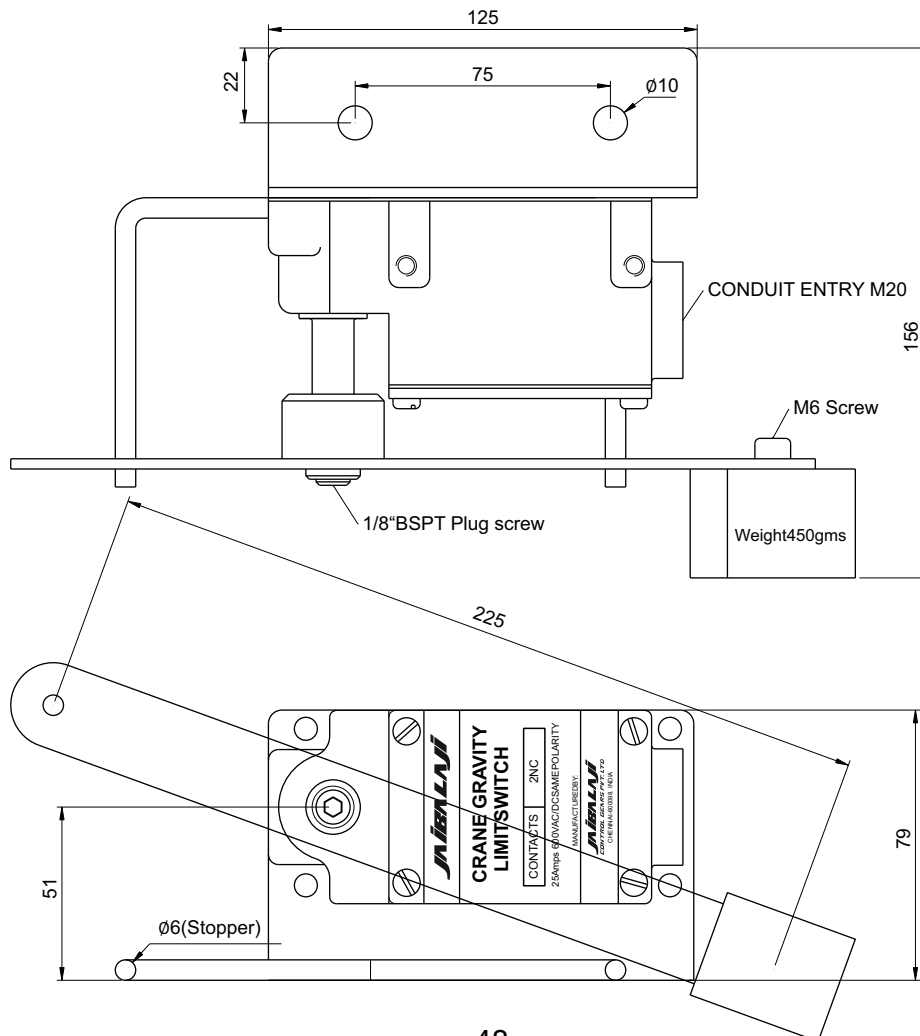
## CRANE LIMIT SWITCH



## TRACK LIMIT SWITCH



## GRAVITY CRANE LIMIT SWITCH



## Operating levers

Lever	Length (mm)	MRP Rs.
<b>Style A</b>		
AA	38	1062
AAI 2.5,4 mm roller)	38	1026
AB	76	1161
AC	32	918
AD	45	1062
AH	51	1098
AL	89	1206
AM	102	1233
AO	64	1143



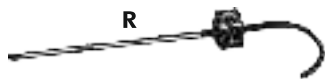
<b>Style F</b>		
FG	64	1629
F1	76	1746



<b>Style LA</b>		
LAA 1	38	1638
LAH 1	51	1746
LAO 1	64	1854



<b>Style R</b>		
R (hub)		1683
R9 (rod)		1683



<b>Style V</b>		
VA		1854



**Adjustable Lever**  
(Adj from 50mm to 160mm) MRP Rs. 2025

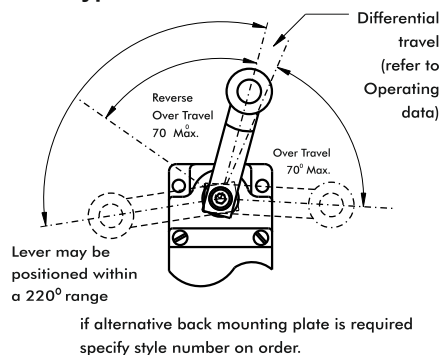
**Antenna Lever** MRP Rs. 2043

**Beltsway Lever** MRP Rs. 2061

**Knife type Lever** MRP Rs. 2097

**Fork type Lever** MRP Rs. 2151

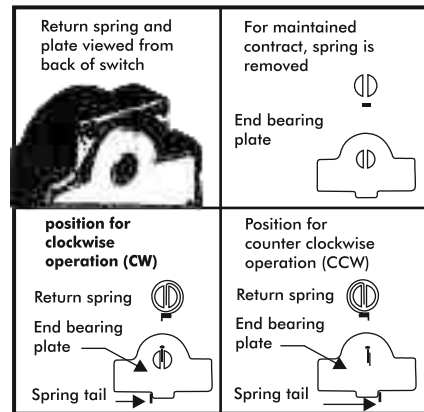
**"L" type Lever** MRP Rs. 2151



## Actuation mode conversion

Conversion is accomplished by reversal of lever return spring located below the back cover and shaft end bearing plate.

For maintained contact the spring is removed always replace bearing plate.



## General data

Contact material	silver
Mechanical life	10X10 <sup>6</sup>
Terminal type	Screw clamp
Cable capacity (mm <sup>2</sup> )	1X2.5 mm <sup>2</sup>
Ambient temperature range	0°C To 107°C
Minimum storage temperature	-35°C
Maximum relative humidity	90% RH

## Contact ratings

### Make and break

Voltage (V)	Break (A)				make (A) Inductive
	a.c.	d.c.	a.c.	d.c.	
115	6	2	30	5	60
250	3	1	15	2	30
440	1.5	0.48	7.5	1	15
600	1.2	0.4	6	0.8	12

Continuous : 25 A 600V a/c. / d.c. (two circuit switches)

Note : Three circuit Switches rated to 300 V

## Operating data

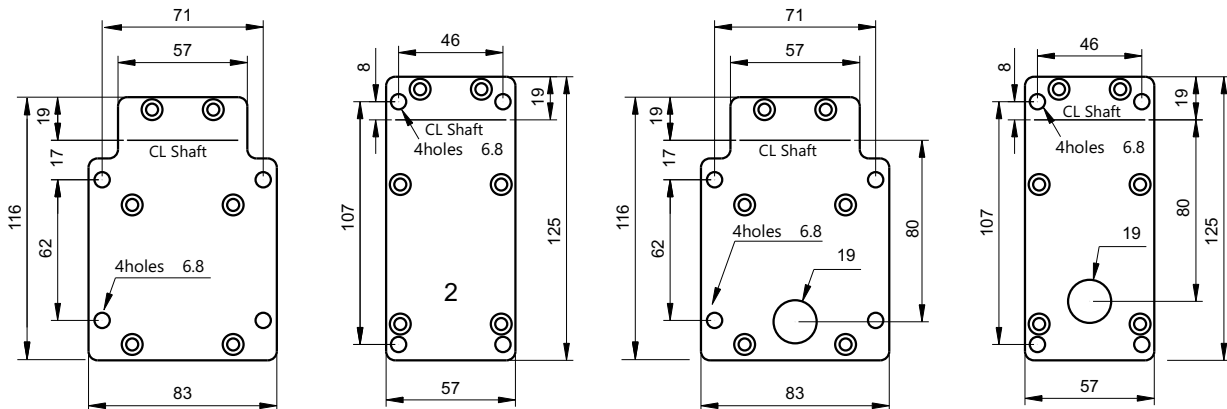
Contact arrangement	A	B	C
Differential travel (deg)	11±2	4max	4max
Total travel both directions (deg)	75	75	75
Recommended operational travel (deg)	20-35	10-25	10-25
Repetitive accuracy each switch (deg)	±0.03	-	±0.03
Actuating torque maximum (kgf m)	0.108	0.068	0.094
With maintained contact (kgf m)	0.032	-	0.032

Note 1 : All order references are for switches with metric threads.

Note 2 : Lever must not be allowed to snap back freely any over-travelled position with this contact arrangement.

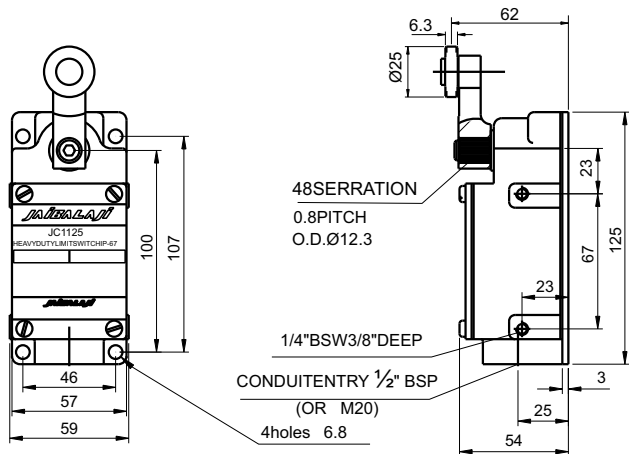
APPROXIMATE DIMENSIONS NOT FOR CONSTRUCTION (DIMENSIONS IN M.M.)

## Back mounting plates



## Switch

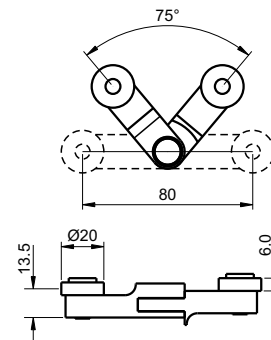
Switch shown fitted with standard style 2 mounting plate



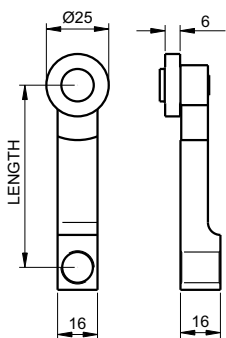
## Levers

### STYLE V

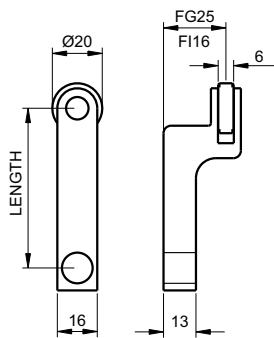
Adjustable from 75° to 180° in increments of 7 1/2°



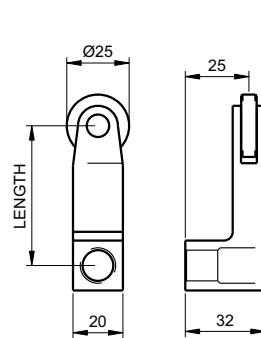
### STYLE A



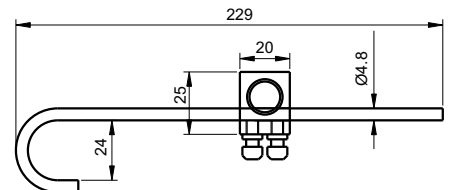
### STYLE F



### STYLE LA



### STYLE R



MANUFACTURED BY :

**JAIBALAJI**  
CONTROL GEARS PVT. LTD

POST BOX NO. 27

89, (NEW NO:107), SIDCO INDUSTRIAL ESTATE  
AMBATTUR, CHENNAI - 600 098.

PHONE : 26251279, 26257859, 26254469

FAX : 044-26255038.

E-MAIL : dchandramohan@jaibalaji.firm.in



# JAI BALAJI

## JB 2700

# HEAVY DUTY LIMIT SWITCHES

### CATALOGUE CUM PRICE LIST

With 2NO+2NC Contacts with Style 'A' Operating lever

**M.R.P. Rs.9900**

(Other than Style A Operating Lever cost will be extra)

- MULTIPLE CONTACTS - DPDT (2 NO-2 NC),.
- GENEROUS OVERTRAVEL
- HEAVY DUTY CAM OPERATED
- FLEXIBILITY OF MOTION, CW AND CCW
- AMPLE WIRING SPACE

#### Description

**WIDE RANGE OF OPERATION... MODULAR CONSTRUCTION... PRACTICAL FLEXIBILITY**

In every aspect these Limit Switches are the "ultimate" of the industry. The scope of Models are tailored to meet today's rugged requirements... there is a model of size and type of meet virtually all demands.

Besides covering all functional requirements this line is designed to meet practically every condition of installation. These Switches provide reliable "machine-life" service and have the stamina to operate under the unusual conditions... at the same time giving millions of consistently fast, accurate contacts.

Here are a few of the outstanding feature built into the switch for maximum performance.

- Generous overtravel and by-pass. Flexibility of motion, clockwise and counter-clockwise.
- Simplicity and interchangeability of cams.
- Light operating torque.
- Fast contact action.

51 • Form Z contact arrangement

MANUFACTURED BY :

# JAI BALAJI

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E-MAIL : dchandramohan@jaibalaji.firm.in

**Maintained Switches**  
**M CAM - MAINTAINED CONTACTS & LEVER POSITION**

**SPECIFICATIONS :**

1. Enclosure is water, oil and dust tight.
2. Enclosure meets as per IP-67
3. Contacts made of silver alloy. Contact shifting mechanism is locked in position by the latches until switch lever is actuated.
4. Standard Temperature Range : 20°C to + 110°C
5. Operating lever is adjustable to any required position.
6. Operating lever Angles (travel either clockwise or counter-clockwise) maximum degrees of trip travel, reset travel, as well as total lever travel, are determined by the cam selected.
7. Operating Torques - Trip Torque varies from 6.804 (to) 14.968 KLS depending on switch size and cam selected.

Voltage		For Neutral Position Only	
125V-A.C.	20.0 Amps*	10.0 Amps*	
250V-A.C.	15.0 Amps*	7.5 Amps*	
480V-A.C.	10.0Amps*	5.0 Amps*	
600V-A.C.	5.0 Amps*	2.5 Amps*	
125V-D.C.	5.0 Amps*	2.5 Amps*	
250V-D.C.	1.5 Amps*	.75 Amps*	

\* 75-100% Power Factor.

**Operational Data**

**POSITION 1**  
CCW

Initial Position

**POSITION 2**  
CW

Initial Position

Position	1 (CCW)	2 (CW)
A Trip Travel	25°	55°
B Reset Travel	25°	22°
C Min Travel to Maintain	54°	55°
D Recommended Travel	60°	60°
E Total Travel	124°	116°
F Overall Travel	56°	64°
Torque (Kilos)		
M CAM	2 N.O. .... CW	2.721
	2 N.C. .... CCW	5.443

To change Switch Operation from Cam Position 1 to Position 2. Operate Switch thru' Angle C. Remove Lever and Reset at Initial Position.

**Standard Switches**

**CW OPERATION ONLY (Combination B-1/B-2 Cam)**

Contacts transfer when lever is operated CW. Lever can be operated CCW but contacts will not transfer

Contacts	Circuits	Mounting			Operational Data
		Standard	"W"	"L"	
2N.O. 2N.C.		JB2700-1512	JB2700-2124	JB2700-5121	<p>A Trip Travel 18°                      B Reset Travel 14°                      C Recommended Travel 30°                      D Total Travel Available 90°                      Torque (Kilos) 2N.O. - 2N.C. .... 12.246</p>

**CCW OPERATION ONLY (Combination B-1/B-2 Cam)**

Contacts transfer when lever is operated CCW. Lever can be operated CW but contacts will not transfer

2N.O. 2N.C.		JB2700-1044	JB2700-4500	JB2700-5400	<p>A Trip Travel 18°                      B Reset Travel 14°                      C Recommended Travel 30°                      D Total Travel Available 90°                      Torque (Kilos) 2N.O. - 2N.C. .... 12.246</p>
----------------	--	-------------	-------------	-------------	--

**CW & CCW OPERATION (Combination B-1/B-2 Cam)**

Contacts transfer when lever is operated CW or CCW.

2N.O. 2N.C.		JB2700-2502	JB2700-4050	JB2700-5040	<p>A Trip Travel 18°                      B Reset Travel 14°                      C Recommended Travel 30°                      D Total Travel Available 90°                      Torque (Kilos) 2N.O. - 2N.C. .... 12.246</p>
----------------	--	-------------	-------------	-------------	--

**Maintained Switches**

**M CAM - MAINTAINED CONTACTS & LEVER POSITION**

Lever and contacts are maintained in tripped position. When lever is moved CCW the N.C. contacts open and the N.O. contacts close. Starting at this position rotating the lever CW the N.O. contacts open and the N.C. close.

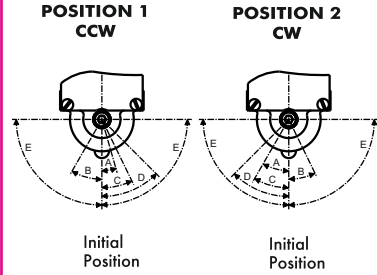
Contacts	Circuits		Mounting		
	Position 1	Position 2	Standard	"W"	"L"
2N.O. 2N.C.	CW INITIAL CCW 	CW INITIAL CCW 	JB2700-1125	JB2700-2115	JB2700-5112

**M7 CAM - MAINTAINED CONTACTS - LEVER RETURNED**

Contacts are maintained in tripped position, torsion spring will return lever to initial position when released. When lever is moved CCW the N.C. contacts open and the N.O. contacts close. The lever must then be returned to the initial position and be operated in the CW direction to reset the contacts.

Contacts	Circuits		Standard	"W"	"L"
	CW INITIAL	CCW			
2N.O. 2N.C.			JB2700-1125	JB2700-2115	JB2700-5112

**Operational Data**



Position	1 (CCW)	2 (CW)
A Trip Travel	16°	30°
B Reset Travel	30°	26°
C Min Travel to Maintain	26°	30°
D Recommended Travel	45°	45°
E Total Travel	90°	90°
Torque		(Kilos)
M CAM		
2 N.O.	CW	6.804
2 N.C.	CCW	7.938

To change Switch Operation from Cam Position 1 to Position 2. Operate Switch thru' Angle C. Remove Lever and Reset at Initial Position.

**Neutral Position Switches**

**N CAM - NEUTRAL POSITION - ALL CONTACTS OPEN**

As lever is moved CW upper contacts close. As lever is spring returned to starting position upper contacts open. As lever is moved CCW from starting position lower contacts close. As lever is spring returned to starting position lower contacts open.

Contacts	Circuits	Mounting			Operational Data																											
		Standard	"W"	"L"																												
4N.O.	CW INITIAL CCW 	JB2700-1008	JB2700-2007	JB2700-4104	<table border="1"> <thead> <tr> <th>Direction of Rotation</th> <th>CW</th> <th>CCW</th> </tr> </thead> <tbody> <tr> <td>A Trip Travel</td> <td>11°</td> <td>35°</td> </tr> <tr> <td>B Reset Travel</td> <td>9°</td> <td>13°</td> </tr> <tr> <td>C Recommended Travel</td> <td>45°</td> <td>45°</td> </tr> <tr> <td>D Total Travel</td> <td>90°</td> <td>90°</td> </tr> <tr> <td>Torque</td> <td></td> <td>(Kilos)</td> </tr> <tr> <td>N CAM</td> <td></td> <td></td> </tr> <tr> <td>4N.O.</td> <td>CW</td> <td>6.123</td> </tr> <tr> <td>4N.O.</td> <td>CCW</td> <td>8.944</td> </tr> </tbody> </table>	Direction of Rotation	CW	CCW	A Trip Travel	11°	35°	B Reset Travel	9°	13°	C Recommended Travel	45°	45°	D Total Travel	90°	90°	Torque		(Kilos)	N CAM			4N.O.	CW	6.123	4N.O.	CCW	8.944
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<p><b>N CAM - NEUTRAL POSITION - ALL CONTACTS CLOSED</b></p> <p>As lever is moved CW lower contacts open. As lever is spring returned to starting position lower contacts close. As lever is moved CCW from starting position upper contacts open. As lever is spring returned to starting position upper contacts close.</p>																																

**N1 - NEUTRAL POSITION - ALL CONTACTS OPEN**

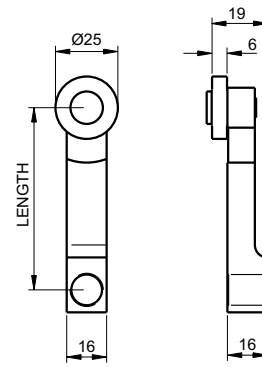
As lever is moved CW lower contacts close. As lever is spring returned to starting position lower contacts open. As lever is moved CCW from starting position upper contacts close. As lever is spring returned to starting position upper contacts open.

Contacts	Circuits	Standard	"W"	"L"	Operational Data																																				
4N.C.	CW INITIAL CCW 	JB2700-2205	JB2700-4005	JB2700-5004	<table border="1"> <thead> <tr> <th>Direction of Rotation</th> <th>CW</th> <th>CCW</th> </tr> </thead> <tbody> <tr> <td>A Trip Travel</td> <td>31°</td> <td>31°</td> </tr> <tr> <td>B Reset Travel</td> <td>22°</td> <td>12°</td> </tr> <tr> <td>C Recommended Travel</td> <td>45°</td> <td>45°</td> </tr> <tr> <td>D Total Travel</td> <td>90°</td> <td>90°</td> </tr> <tr> <td>Torque</td> <td></td> <td>(Kilos)</td> </tr> <tr> <td>N1 CAM</td> <td></td> <td></td> </tr> <tr> <td>4N.O.</td> <td>CW</td> <td>7.938</td> </tr> <tr> <td>4N.O.</td> <td>CCW</td> <td>9.298</td> </tr> <tr> <td>N1 CAM</td> <td></td> <td></td> </tr> <tr> <td>4N.C.</td> <td>CW</td> <td>7.938</td> </tr> <tr> <td>4N.C.</td> <td>CCW</td> <td>9.298</td> </tr> </tbody> </table>	Direction of Rotation	CW	CCW	A Trip Travel	31°	31°	B Reset Travel	22°	12°	C Recommended Travel	45°	45°	D Total Travel	90°	90°	Torque		(Kilos)	N1 CAM			4N.O.	CW	7.938	4N.O.	CCW	9.298	N1 CAM			4N.C.	CW	7.938	4N.C.	CCW	9.298
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4N.C.	CW INITIAL CCW 	JB2700-3600	JB2700-4221	JB2700-5022																																					

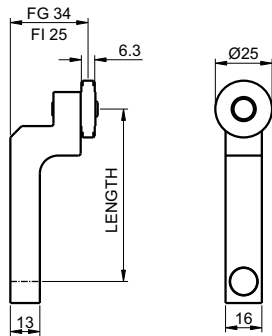
## Operating levers

Lever	Length (mm)	MRP Rs.
<b>Style A (Steel roller)</b>		
AA	38	1062
AA (25,4 mm roller)	38	1026
AB	76	1161
AC	32	918
AD	45	1062
AH	51	1098
AL	89	1206
AM	102	1233
AO	64	1143

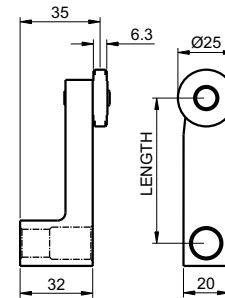
### STYLE A



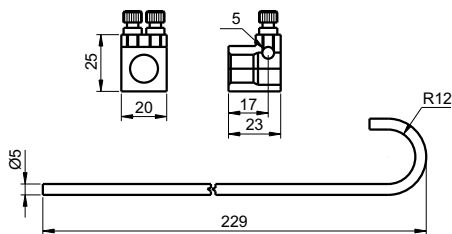
Style F (Steel roller)	MRP Rs.
FG	64 1629
FI	76 1746



Style LA	MRP Rs.
LAA1	38 1638
LAH 1	51 1746
LAO 1	64 1854

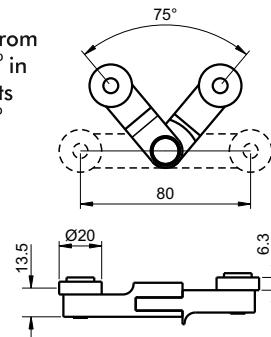


Style R	MRP Rs.
R (hub)	1683
R9 (rod)	1683



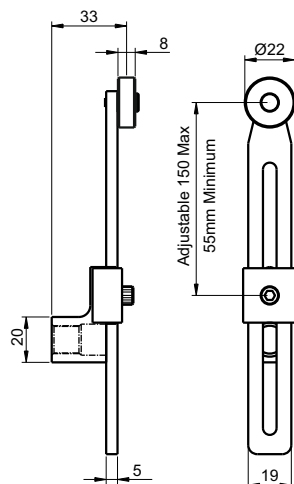
Style V	MRP Rs.
VA	38 1854

Adjustable from 75° to 180° in increments of 7 1/2°



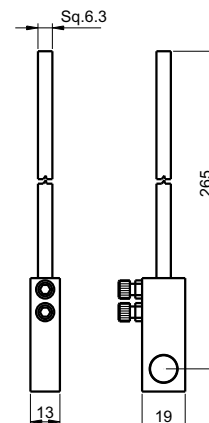
### Adjustable lever

MRP Rs. 2025



### Antenna type lever

MRP Rs. 2043



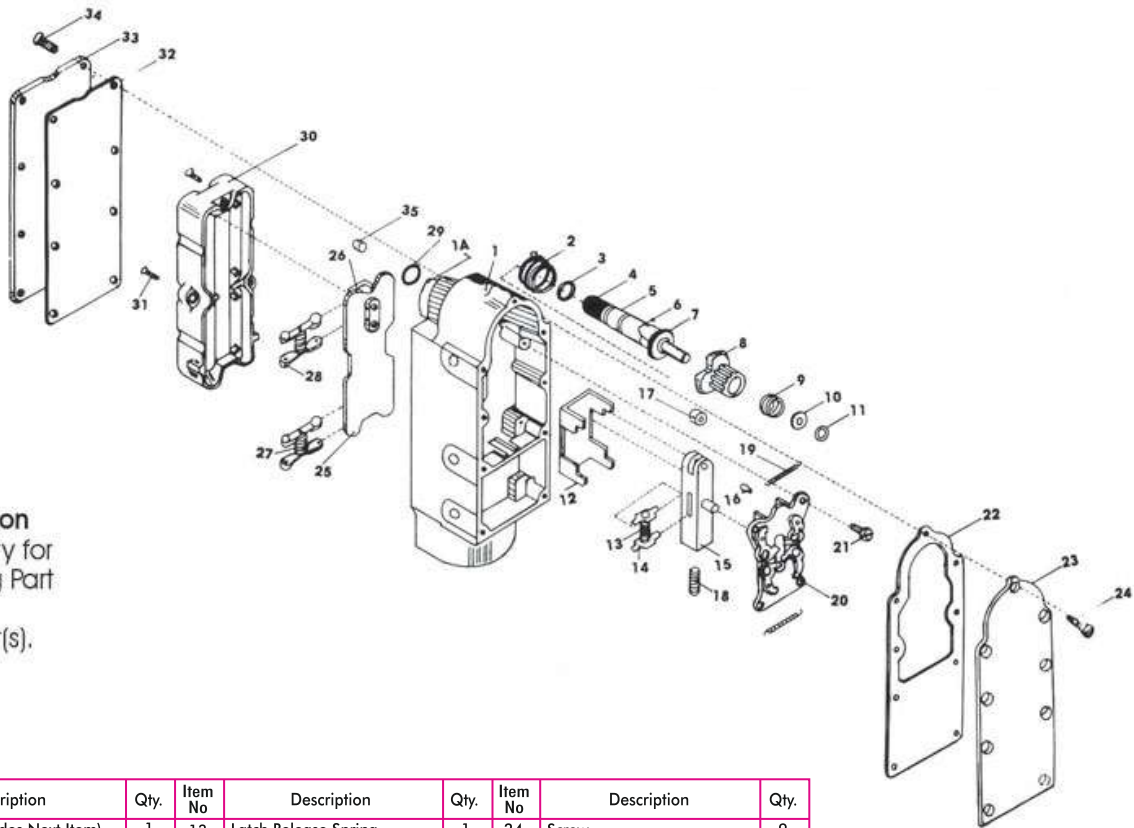
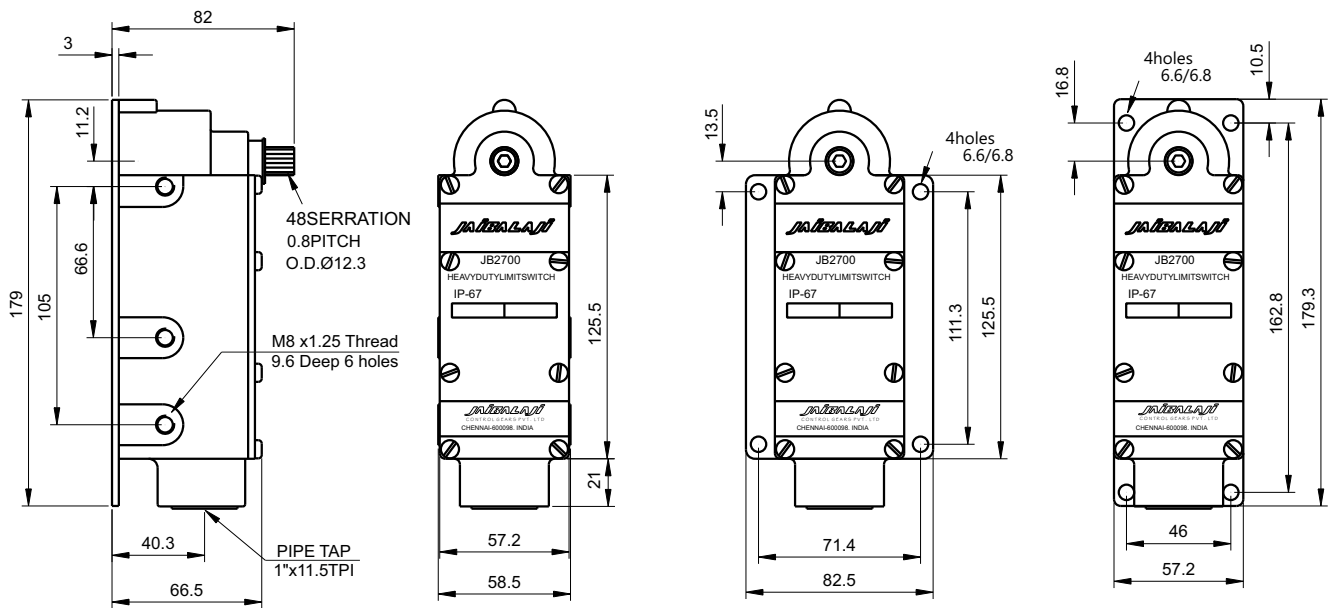
Basic design permits mounting from either side or back. Style L or W mounting plates, for back mounting, available at no extra cost.

**Dimensions**

**Standard Mounting**

**Wide Mounting**

**Long Mounting**



**Parts Description**

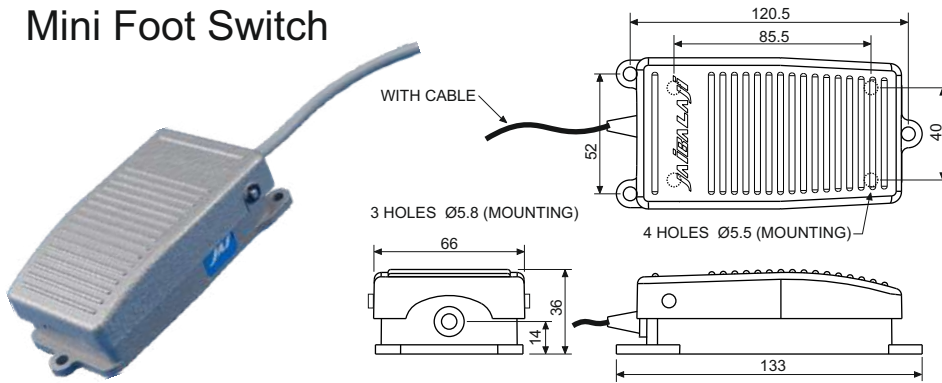
Consult Factory for corresponding Part Number and appropriate kit(s).

Item No	Description	Qty.	Item No	Description	Qty.	Item No	Description	Qty.
1	Housing (Includes Next Item)	1	13	Latch Release Spring	1	24	Screw	9
1A	Bushing	1	14	Spring Stop	2	25	Contact Carrier Assembly (Includes Next 3 items)	1
2	Torsion Spring	1	15	Slide	1	26	Contact Carrier	1
3	"O" Ring	1	16	Pin	1	27	Contact Spring	2
4	Lever Assembly (includes Next 3 items)	1	17	Roller	1	28	Contact	4
5	Lever Shaft	1	18	Return Spring	1	29	Tru-Arc Ring	1
6	Roll Pin	1	19	Latch Return Spring	2	30	Contact Block	1
7	Cam Hub	1	20	Latch Plate	1	31	Screw	3
8	Cam	1	21	Screw	4	32	Bottom Cover Gasket	1
9	Cam Spring	1	22	Bottom Cover Gasket	1	33	Bottom Cover(Std. Only)	1
10	Retaining Washer	1	23	Bottom Cover(Std. Only)	1	34	Bottom Cover(Style W Only)	1
11	Tru-Arc-Ring	1		Bottom Cover(Style L Only)	1	35	Pipe Plug	1
12	Shuttle	1						

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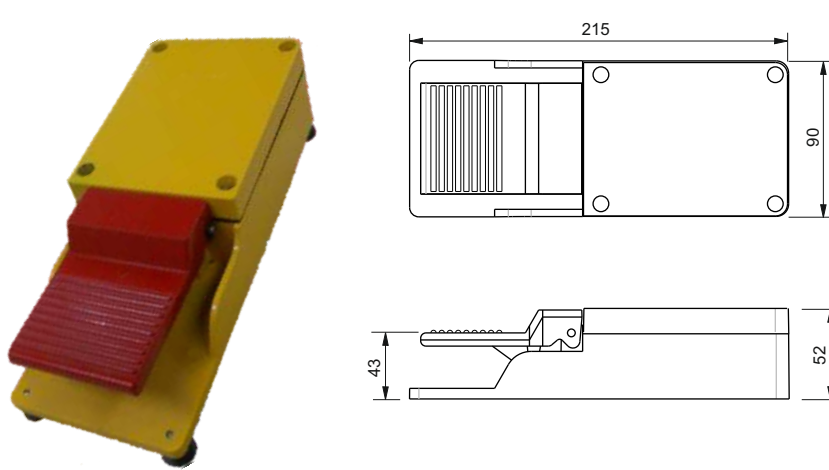
## FOOT SWITCHES CATALOGUE CUM PRICE LIST

### Mini Foot Switch



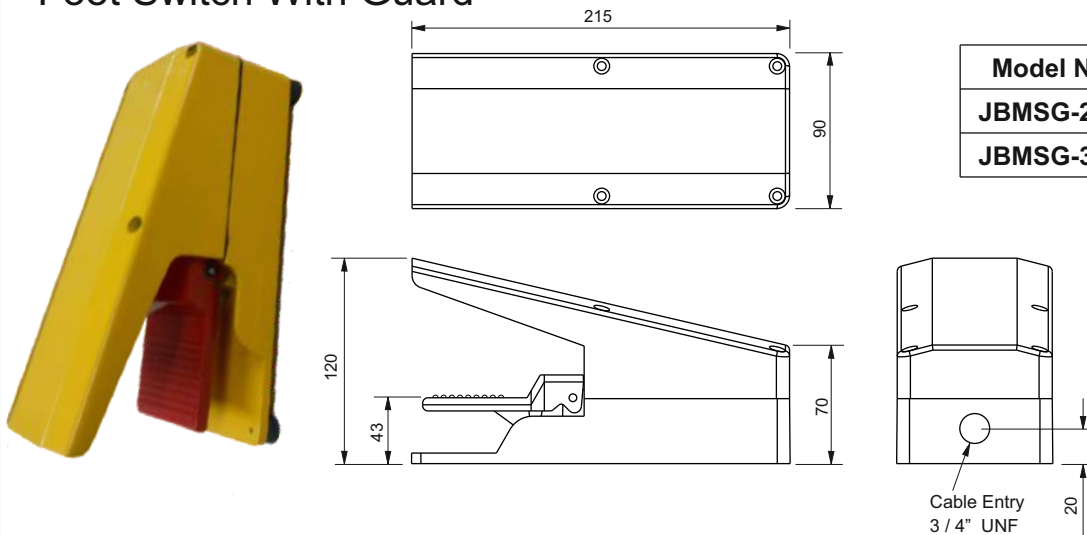
Model No.	Contacts	M.R.P.Rs
JBMS-09	1NO+1NC	756
JBMS-18	2NO+2NC	1215

### Foot Switch Without Guard



Model No.	Contacts	M.R.P.Rs
JBMS-27	1NO+1NC	2448
JBMS-36	2NO+2NC	3150

### Foot Switch With Guard



Model No.	Contacts	M.R.P.Rs
JBMSG-27	1NO+1NC	2655
JBMSG-36	2NO+2NC	3366

### Electrical and Mechanical Rating

Utilisation Category : AC 15 and DC 13 as per IS/IEC:60947 - 5 - 1  
 Thermal current (I<sub>th</sub>) : 15A  
 Insulation Voltage (UI) : 600 VAC  
 Enclosure material : Cast Aluminium

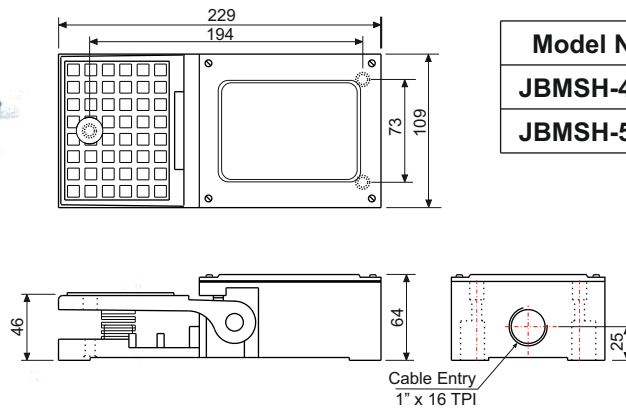
RATINGS: AC RATING INDUCTIVE-NEMA A 600

Voltage	Make		Break	
	A	VA	A	VA
120	60	7200	6	720
240	30	7200	3	720
480	15	7200	1.5	720
500	12	7200	1.2	720

RATINGS: DC RATING INDUCTIVE-NEMA P 600

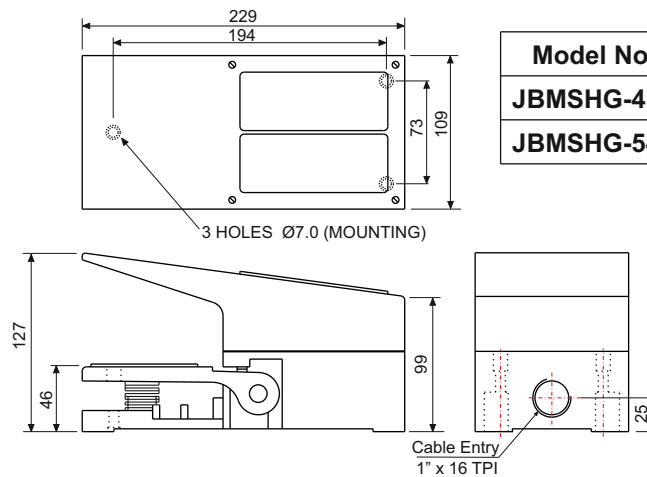
Voltage	Make		Break	
	A	VA	A	VA
125	1.1	138	1.1	138
250	0.55	138	0.55	138
600	0.2	138	0.2	138

## Heavy Duty Foot Switch (Without Guard)



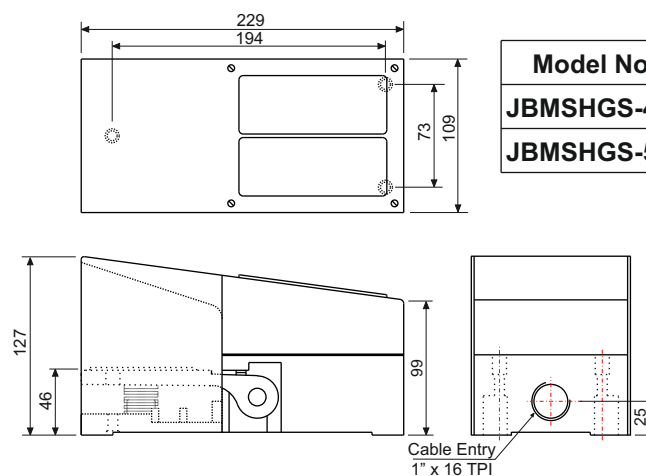
Model No.	Contacts	M.R.P.Rs
<b>JBMSH-45</b>	1NO+1NC	<b>4095</b>
<b>JBMSH-54</b>	2NO+2NC	<b>4410</b>

## Heavy Duty Foot Switch (With Guard)



Model No.	Contacts	M.R.P.Rs
<b>JBMSHG-45</b>	1NO+1NC	<b>4896</b>
<b>JBMSHG-54</b>	2NO+2NC	<b>5229</b>

## Heavy Duty Foot Switch (With Shield)



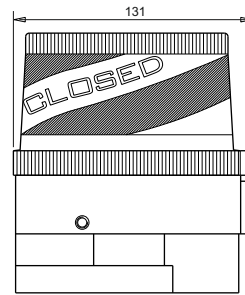
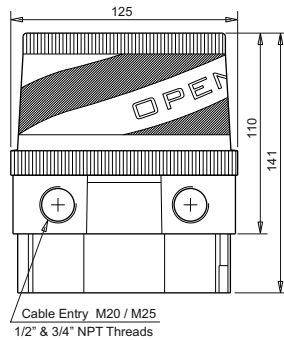
Model No.	Contacts	M.R.P.Rs
<b>JBMSHGS-45</b>	1NO+1NC	<b>5292</b>
<b>JBMSHGS-54</b>	2NO+2NC	<b>5634</b>

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CONTROL GEARS PVT. LTD

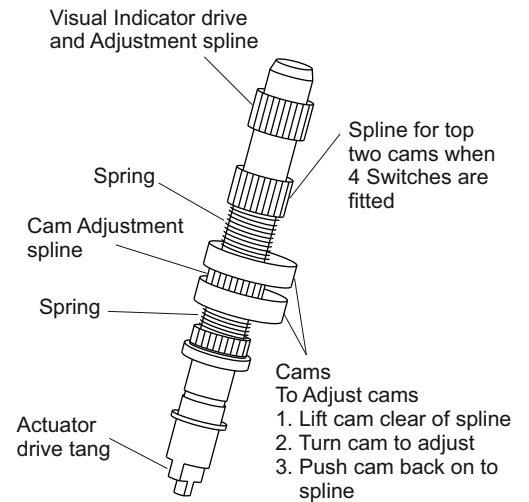
Post Box No. 27, 89 (New No. 107),SIDCO Industrial Estate,Ambattur, Chennai -600 098. India  
Phone: +91 44 26251279 / 26257859 / 26254470 Fax: +91 44 26255038.  
E-mail: dchandramohan@jaibalaji.firm.in Web: jaibalaji.in

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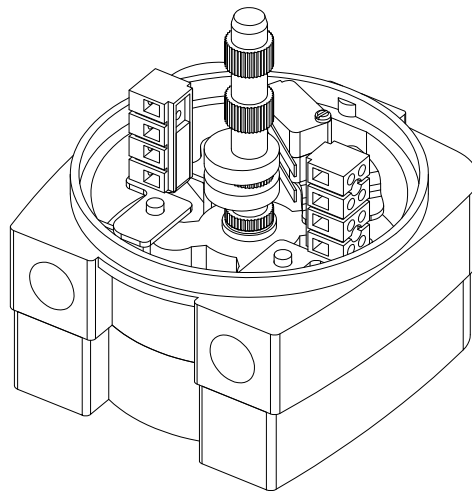
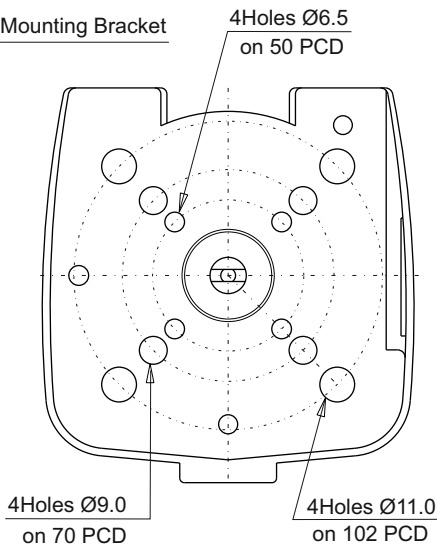
## VALVE POSITION MONITOR CATALOGUE CUM PRICE LIST



### Shaft Details



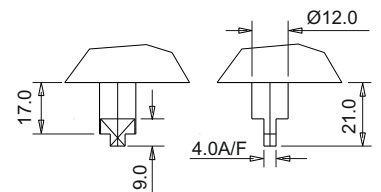
### Mounting Bracket



### Miniature Switches

Ratings: AC RATING INDUCTIVE - A600				
Voltage	Make		Break	
	A	VA	A	VA
120	60	7200	6	720
240	30	7200	3	720
480	15	7200	1.5	720
600	12	7200	1.2	720

Ratings: DC RATING INDUCTIVE - P600				
Voltage	Make		Break	
	A	VA	A	VA
125	1.1	138	1.1	138
250	0.55	138	0.55	138
600	0.2	138	0.2	138



### Specification

Housing Material : Nylon (Glass filled)  
 Indicator Material : Polycarbonate  
 Protection : IP 67  
 Terminal points : 8 Points  
 Temperature Range : -40°C to 100°C  
 Visual Indicator : 0° to 90°  
 Conduit Entry : 2 Entries  
 Basic Switch : 2 Miniature Switches

### Optional

Terminal points : 16 Points  
 Conduit Entry : 3 Entries  
 Basic Switch : 1 to 4 Miniature Switches or Proximity Sensors

### Miniature Switch



Model No.	Description	M.R.P.Rs
<b>JBVPM-54</b>	JMS / IPM / H - A Miniature Snap action Switch - 1No.	<b>4410</b>
<b>JBVPM-63</b>	JMS / IPM / H - A Miniature Snap action Switch - 2Nos.	<b>4518</b>
<b>JBVPM-72</b>	JMS / IPM / H - A Miniature Snap action Switch - 3Nos.	<b>4779</b>
<b>JBVPM-81</b>	JMS / IPM / H - A Miniature Snap action Switch - 4Nos.	<b>5049</b>

Manufactured by:

**JAIBALAJI**  
CONTROL GEARS PVT. LTD

Post Box No. 27, 89 (New No. 107), SIDCO Industrial Estate, Ambattur, Chennai -600 098, India  
 Phone: 26251279 / 26257859 / 26254470 Fax: 0095844-26255038. E-mail: dchandramohan@jaibalaji.firm.in

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