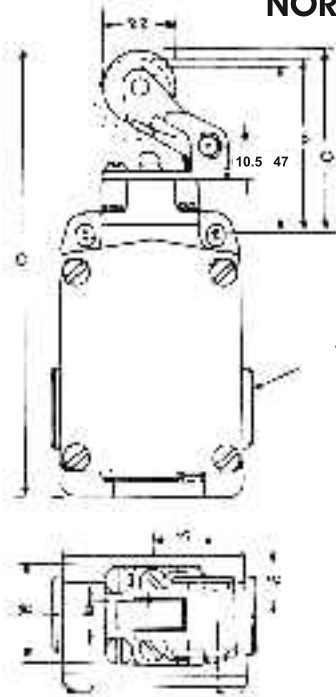


DO NOT SCALE/DIMENSIONS ARE IN MM

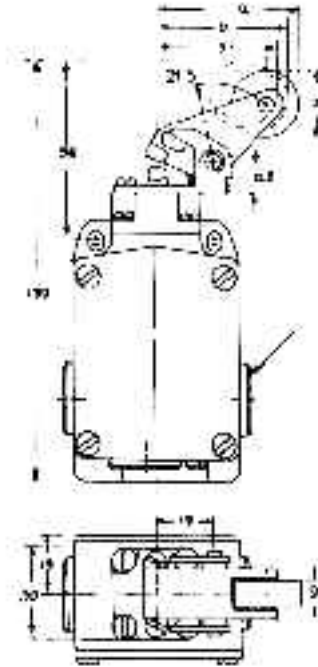
**IN OIL-TIGHT DIECAST ALLUMINIUM HOUSING
NORMAL ROLLER LEVER**



3 NOS. M20 X 1.5 CONDUIT
TAPPED HOLES
FOR CABLE ENTRY

| TYPE | a | b | c |
|-------|----|----|-----|
| 45-45 | 56 | 55 | 137 |
| 45-54 | 56 | 53 | 137 |
| 45-63 | 58 | 57 | 137 |
| 45-72 | 56 | 55 | 137 |

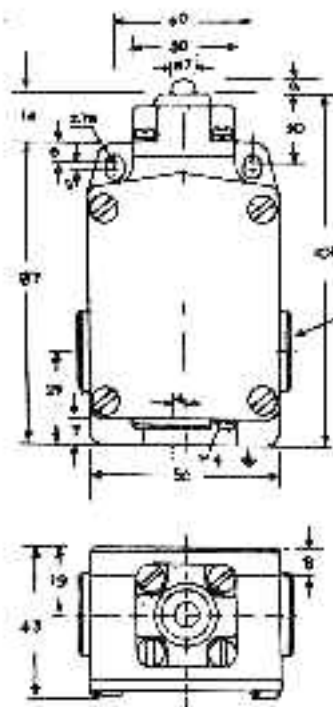
ANGULAR ROLLER LEVER



3 NOS. M20 X 1.5 CONDUIT
TAPPED HOLES
FOR CABLE ENTRY

| TYPE | a | b |
|-------|----|----|
| 45-81 | 44 | 43 |
| 45-90 | 44 | 41 |
| 45-99 | 45 | 45 |
| 45-09 | 44 | 43 |

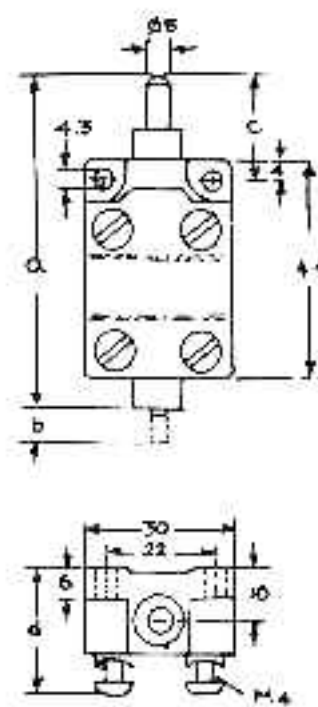
PUSH ROD ACTUATOR



3 NOS. M20 X 1.5 CONDUIT
TAPPED HOLES
FOR CABLE ENTRY

| 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



Limit Switches

TYPE CEE EM 45 SERIES

IP 67



PUSH ROD

ANGULAR ROLLER

NORMAL ROLLER

GENERAL

JAIBALAJI manufactures a wide range of Jai balaji Limit switches tested to rigid quality standards. Jai switches are ISI marked as per IS 13947/Pt 5/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 ₂) | : 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"> <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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Making and breaking capacity and operational current - 40 - 60 Hz, p.f. 0.3 to 1 | : AC 15 duty | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <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) |
| 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) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Breaking Capacity - D.C. | <table border="1"> <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) | | | | | | | | | | | |
| 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) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Electrical Contact rating 2NO + 2 NC | <table border="1"> <tr> <td>AC 15 rating</td> <td colspan="2">Double pole : 2 No + 2NC Changeover contacts</td> </tr> <tr> <td>110V</td> <td colspan="2">3.0A</td> </tr> <tr> <td>240V</td> <td colspan="2">1.5A</td> </tr> <tr> <td>440V</td> <td colspan="2">0.5A</td> </tr> <tr> <td>600V</td> <td colspan="2">0.6A</td> </tr> <tr> <td>DC 13 rating</td> <td>Single Throw</td> <td>Double throw</td> </tr> <tr> <td>115V</td> <td>1.0A</td> <td>0.2A</td> </tr> <tr> <td>230V</td> <td>0.3A</td> <td>0.1A</td> </tr> <tr> <td>400V</td> <td>0.1A</td> <td></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 | | | | | | |
| 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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 | Enclosure according to IS: 13947 pt 5 sec1 |
|---|--|-----------------|-----------------|----------|--|
| | | Arrangement | No. of contacts | | |
|  | With Push-rod | Normal | | 45-9 E | IP 00 |
| | | Snap Action | 1NO + 1NC | 45-18 E | |
| | | Extended Stroke | 1NO + 1NC | 45-27E | |
| | | Overlapping | 1NO + 1NC | 45-36E | |
| | With Push-rod and plastic protective cover | Normal | 1NO + 1NC | 45-9 PCE | IP 40 |
| | | Snap Action | 1NO + 1NC | 45-18PCE | |
| Extended Stroke | | 1NO + 1NC | 45-27PCE | | |
|  | With Push-rod | Normal | 1NO + 1NC | 45-9 | IP 67 |
| | | Snap Action | 1NO + 1NC | 45-18 | |
| | | Extended Stroke | 1NO + 1NC | 45-27 | |
| | | Overlapping | 1NO + 1NC | 45-36 | |
| | With normal roller lever | Normal | 1NO + 1NC | 45-45 | IP 67 |
| | | Snap Action | 1NO + 1NC | 45-54 | |
| | | Extended Stroke | 1NO + 1NC | 45-63 | |
| | With angular roller lever | Normal | 1NO + 1NC | 45-81 | IP 67 |
| | | Snap Action | 1NO + 1NC | 45-90 | |
| Extended Stroke | | 1NO + 1NC | 45-99 | | |
|  | With push rod | Snap Action | 2NO + 2NC | | IP 67 |
| | With normal roller lever | Snap Action | | | |
| | With angular roller lever | Snap Action | | | |