

CATALOG LISTING LDVS-5 [1] [2] [3] [4] [5]

1 NUMBER OF PLUNGER

CODE	NUMBER OF PLUNGER
2	2
3	3
4	4

2 TYPE OF ACTUATOR

CODE	TYPE OF PLUNGER
0	BEVEL
1	ROLLER

3 LOCATION OF CONDUIT HOLES, FURNISHED

CODE	LOCATION OF CONDUIT HOLES	CONDUIT PARTS
2	SIDE SURFACE OF HOUSING (2)	ATTACHED: 1 PLUG
4	MOUNTING SURFACE (2) AND SIDE SURFACE OF HOUSING (2)	ASSEMBLED: 2 O-RINGS (IG30) 2 EACH PLUGS AND SEALS IN MOUNTING SURFACE 2 PLUGS IN SIDE SURFACE OF HOUSING

4 SCRAPER MATERIAL

CODE	MATERIAL
S	NITRILE RUBBER
V	FLUORINE RUBBER

5 CONTACT MATERIAL AND ELECTRICAL RATINGS
(STANDARD AND IEC ELECTRICAL RATINGS ARE BOTH INDICATED ON THE SWITCH BODY)

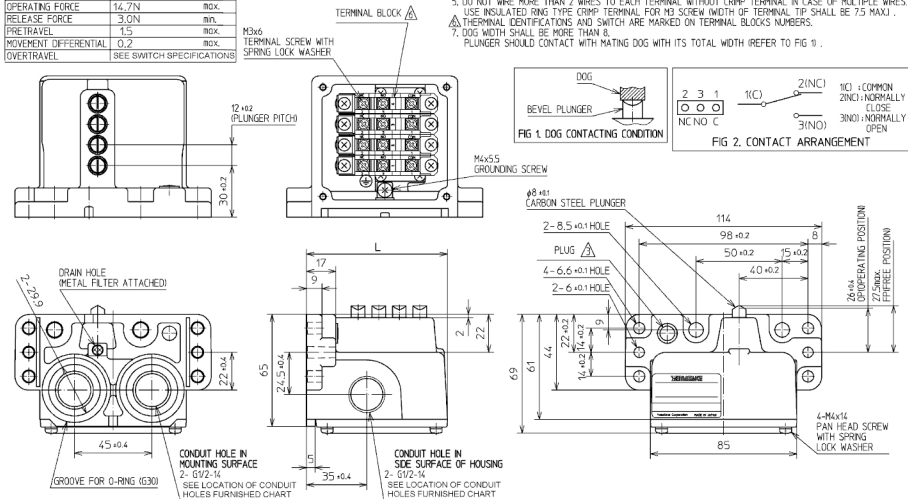
CODE	CONTACT MATERIAL	ELECTRICAL RATING	EN60947-5-1, IEC 60947-5-1
~	SILVER	Y15 5A-AC250V	Y226 15A-AC250V AC-15 0.5A-DC 30V DC-12
K	GOLD ALLOY	Y93 0.1A-AC125V 0.1A-DC 30V	Y93 0.1A-AC125 V AC-12 0.1A-DC 30 V DC-12

LDVS-5* [0] ***
(BEVEL PLUNGER)

CHARACTERISTICS	
OPERATING FORCE	14.7N max.
RELEASE FORCE	3.0N min.
PRETRAVEL	1.5 max.
MOVEMENT DIFFERENTIAL	0.2 max.
OVERTRAVEL	(SEE SWITCH SPECIFICATIONS)

NUMBER OF PLUNGER	L
2	58
3	70
4	82

- NOTES
- HOUSING AND COVER ARE MADE OF ALUMINUM ALLOY FINISHED WITH GRAY HAMMER TONE PAINT.
 - WHEN PIPING REMOVE SEALING PLUG ASSEMBLED IN CONDUIT.
 - WHEN USING WITH MOUNTING SURFACE UPWARD, REMOVE SEALING PLUG TO PREVENT COOLANT FROM STAYING IN CONDUITY.
 - USE LEAD WIRES HAVING 0.5 TO 2.5mm² CROSS SECTIONAL AREA WITH RING OR SPADE TYPE INSULATED CRIMP TERMINAL FOR M3 SCREW. THE WIDTH OF TERMINAL SHALL BE LESS THAN 7.5.
 - DO NOT WIRE MORE THAN 2 WIRES TO EACH TERMINAL WITHOUT CRIMP TERMINAL IN CASE OF MULTIPLE WIRES. USE INSULATED RING TYPE CRIMP TERMINAL FOR M3 SCREW (WIDTH OF TERMINAL TIP SHALL BE 7.5 MAX.).
 - TERMINAL IDENTIFICATIONS AND SWITCH ARE MARKED ON TERMINAL BLOCKS NUMBERS.
 - DOG WIDTH SHALL BE MORE THAN 8.
 - PLUNGER SHOULD CONTACT WITH MATING DOG WITH ITS TOTAL WIDTH (REFER TO FIG. 1).

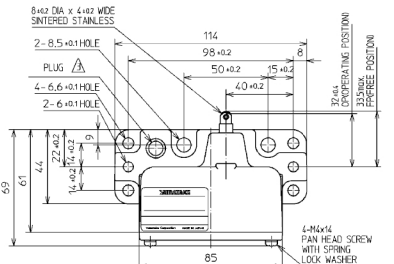
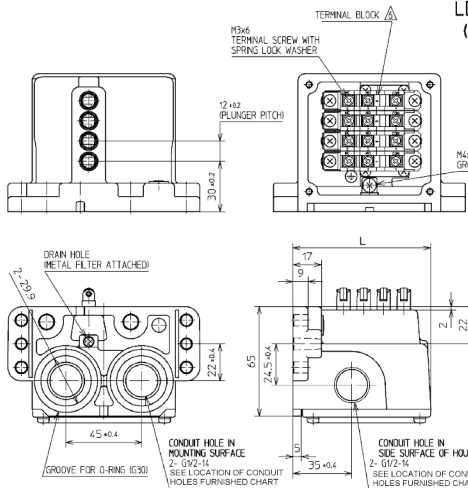


PRECAUTIONS

- 1) MOUNTING
- TIGHTEN EACH PORTION OF LIMIT SWITCH AT REASONABLE TORQUE SPECIFIED IN THIS SPECIFICATION.
 - OVER-TIGHTENING MAY DAMAGE THE SCREW THREADS OR OTHER PARTS.
 - LOOSE TIGHTENING MAY CAUSE POOR SEALING OF SWITCH AND DECREASE IN VARIOUS PERFORMANCE.
 - DO NOT LEAVE OR USE THE SWITCH WITH COVER AND CONDUIT LEFT OPEN.
 - INGRESS OF WATER OR DUST MAY CAUSE OPERATION FAILURE.
 - DO NOT USE SILICONE RUBBER INSULATED CABLE, SILICONE ADHESIVES OR SILICONE-CONTAINED GREASE. THEY MAY CAUSE ELECTRICAL CONTACT FAILURE.
- 2) WIRING
- DO NOT PERFORM WIRING WHILE POWER IS ON. IT MAY CAUSE ELECTRICAL SHOCK OR SUDDEN MACHINE START.
 - USE INSULATED CRIMP TERMINALS FOR WIRING AND TAKE CARE THAT THE TERMINAL AND WIRE SHALL NOT TOUCH CONTACT TERMINALS TO DO SO MAY CAUSE DIFFICULTY IN COVER MOUNTING OR CAUSE EARLYING TROUBLE.
 - USE SEAL CONNECTOR (SEPARATE ORDER: PA1 SERIES) OR FLEXIBLE PIPE (PA3 SERIES) FOR CONDUIT TO GET SEALING PERFORMANCE NOT LESS THAN PA7 OR EQUIVALENT.
 - BE SURE TO MOUNT THE COVER AND CONDUIT TIGHTLY.
 - POOR MOUNTING MAY CAUSE INSULATION FAILURE DUE TO DECREASE IN SEALING PERFORMANCE. AS A RESULT, THE SWITCH WOULD NOT SATISFY ITS OPERATION PERFORMANCE.
- 3) ADJUSTMENT
- DO NOT APPLY EXCESSIVE FORCE (MORE THAN 5 TIMES OF OPERATING FORCE) TO THE ACTUATOR BEYOND THE LIMIT OF ITS TRAVEL. IT MAY BREAK THE SWITCH.
 - OVERTRAVEL MUST BE 70 TO 100% OF THE RATED VALUE.
 - SMALL OVERTRAVEL MAY CAUSE CHATTERING OF CONTACT OR CONTACT FAILURE BY VIBRATION OR SHOCK.

TOLERANCE UNLESS NOTED: +/- 0.4

LDVS-5* [1] ***
(ROLLER PLUNGER)



- NOTES
- HOUSING AND COVER ARE MADE OF ALUMINUM ALLOY FINISHED WITH GRAY HAMMER TONE PAINT.
 - WHEN PIPING REMOVE SEALING PLUG ASSEMBLED IN CONDUIT.
 - WHEN USING WITH MOUNTING SURFACE UPWARD, REMOVE SEALING PLUG TO PREVENT COOLANT FROM STAYING IN CONDUITY.
 - USE LEAD WIRES HAVING 0.5 TO 2.5mm² CROSS SECTIONAL AREA WITH RING OR SPADE TYPE INSULATED CRIMP TERMINAL FOR M3 SCREW. THE WIDTH OF TERMINAL SHALL BE LESS THAN 7.5.
 - DO NOT WIRE MORE THAN 2 WIRES TO EACH TERMINAL WITHOUT CRIMP TERMINAL IN CASE OF MULTIPLE WIRES. USE INSULATED RING TYPE CRIMP TERMINAL FOR M3 SCREW (WIDTH OF TERMINAL TIP SHALL BE 7.5 MAX.).
 - TERMINAL IDENTIFICATIONS AND SWITCH ARE MARKED ON TERMINAL BLOCKS NUMBERS.

TOLERANCE UNLESS NOTED: +/- 0.4

SWITCH SPECIFICATIONS

1. STANDARDS
- Complies to: JIS C 4508 IEC 60947-5-1A
 - Approved by: EN60947-5-1A
2. STRUCTURE
- Type of Contact: SPDT
 - Shape of Terminal: Silver
 - Shape of Contact: Silver
 - Protective Structure: Gold Alloy Cross point
 - Environment pollution degree: IP67 (IEC 60529)
 - Degree 3 (EN60947-5-1)
3. ELECTRICAL CHARACTERISTICS
- III GENERAL PERFORMANCE
- Insulation Resistance and Dielectric Strength
- | Portions to be measured | Insulation Resistance (500VDC, 1min) | Dielectric Strength (50-60Hz, 1min) |
|---|--------------------------------------|-------------------------------------|
| Between unconnected terminals | 100 MΩ min. Δ | 600 VAC |
| Between each terminal and common metal part | 100 MΩ min. Δ | 1500 VAC |
| Between each terminal and ground | 100 MΩ min. Δ | 1500 VAC |
- IV CONTACT RESISTANCE
- Silver Contacts: 50 mΩ max. Initial (Measured by the voltage drop method at 6 to 8 V DC, 1 Gold Alloy Contacts: 100 mΩ max. Initial (Measured by the voltage drop method at 6 to 8 V DC, 0)
 - Minimum Contact Operating Current: Silver Contacts: 24V-10mA, 12V-20mA Gold Alloy Contacts: 5V-10mA
- IV PERFORMANCE PER EN60947-5-1 AND IEC 60947-5-1A
- Rated operating voltages: Silver Contacts: 250VAC, 30VDC Gold Alloy Contacts: 250VAC, 30VDC
 - The value of rated frequency: 45-65Hz and 100Hz
 - Rated insulation voltage U_{ik}: 250 VAC
 - Rated noise without voltage drop: 4000V
 - Capacitance (free of internal current flow): Silver Contacts: 5 pF Gold Alloy Contacts: 0.5 pF
 - Post sealing fuse I_{oa}: 60 seconds (R10) or 10 seconds (R10)
 - Short circuit protective device: 100 A (at resistive load) Category II (IEC 60204-1)
 - Conditioning overvoltage
4. MECHANICAL CHARACTERISTICS (Value at 25° dog angle)
- Actuator Strength: Withstand: 5 times U_{ik} in the operating direction for 1 minute.
 - Shock: Silver Contacts: 400 m/s² Gold Alloy Contacts: 400 m/s²
 - Vibration Peak-to-peak amplitude 15 mm. Max. frequency 10 to 55 Hz for continuous 2 hours.
 - Manipulation of the contact shall be 1 mm max. in the free position and the total travel position.
 - Allowable Operating Speed: 0.07 m/s to 0.5 m/s
 - The lowest speed (without condition of the contact shall be 0.2 m/s.
 - The highest speed (without condition of the contact shall be 0.5 m/s.
 - Mechanical Operating Frequency: 120 cycles/minute max.
5. LIFE
- Mechanical Life: 5000k cycles min. or "0.1" of 70 to 100% of the rating Electrical Life: The conditions of operation frequency of 20 cycles a minute are satisfied.
- | Contact material | Condition | Operation cycle min. |
|------------------|---------------------------|----------------------|
| Silver | 5A-250 VAC | 50K cycles min. |
| | 0.5A-125 VDC/0.2A-250 VDC | 50K cycles min. |
| | 0.2A-30 VDC | 100K cycles min. |
| Gold Alloy | 0.1A-125 VDC/0.1A-250 VDC | 200K cycles min. |
6. ENVIRONMENTAL CHARACTERISTICS
- Operating Temperature: -10 to +70 °C (at full freeloading)
 - Operating Humidity: 90% RH max.
7. MOUNTING
- Recommended Tightening Torque: For mounting the switch to panel: 6 to 8 N·m (this cap screw)
 - For mounting the terminal to switch: 0.4 to 0.6 N·m (this cap screw)
 - For mounting the cover to housing: 0.3 to 0.7 N·m (this cap screw)
 - THIS DRAWING IS NOT TO BE COPIED OR USED WITHOUT THE PERMISSION OF HONEYWELL.

DESIGN UNITS: MM	DRAWN: VKR	24FEB05	
TOLERANCE UNLESS NOTED:	CHECK: AK	24MAR05	
NO PLUG: 0.009	THIS DRAWING COVERS A PROPRIETARY ITEM AND THE PROPERTY OF HONEYWELL.		<p>MULTIPLE LIMIT SWITCH</p>
ONE PLUG: 0.012	THIS DRAWING IS NOT TO BE COPIED OR USED WITHOUT THE PERMISSION OF HONEYWELL.		
TWO PLUG: 0.015	INTERPRET PER ASME Y14.5M 1994		<p>SIZE: D I</p> <p>SCALE: NTS</p>
THREE PLUG: 0.018	OTHER HONEYWELL ENGINEERING STANDARDS MAY APPLY.		
FOUR PLUG: 0.025	THIRD ANGLE PROJECTION		<p>DRAWING NAME: LDVS-5 SERIES CHART 1</p> <p>REV: A</p>
SHANKS: X			<p>SHEET: 1 OF 1</p>