

SP. No.

Yamatake Corporation

製品仕様書 SPECIFICATIONS

1. STANDARDS

- ・Conform to, JIS C 4508
- ・Approved by, ~

2. STRUCTURE

- ・Type of Contact,
SPDT Double break
- ・Protective Structure, IP67 (IEC529)
- ・Shape of Terminal,
Screw (M3 pan head screw with toothed lock washer)


3. ELECTRICAL CHARACTERISTICS

- ・Insulation Resistance and Dielectric Strength,

Portions to be measured	Insulation Resistance 500VDC megger	Dielectric Strength (50~60Hz, for 1 minute)
Between unconnected terminals	100 MΩ	1000 VAC
Between each terminal and non-live metal part	100 MΩ	1500 VAC
Between each terminal and ground	100 MΩ	1500 VAC

- ・Shape of Contact
Silver Contacts; Rivet
Gold Plated Contacts; Cross Point
- ・Contact Resistance
Silver Contacts,
50 mΩ MAX. (initial) Measured by the voltage drop method at 6 to 8 VDC 1A.
Gold Plated Contacts;
100 mΩ MAX. (initial) Measured by the voltage drop method at 6 to 8 VDC 0.1A.
- ・Minimum Contact Operating Current
Silver Contacts; 24V-10mA, 12V-20mA
Gold Plated Contacts; 5V-10mA

6 04
5 04
4 04
3 04
2 04
頁 改番

	作成DR. SHIMIZU 9, 3, '96		尺度 SCALE UN	記入のない公差 TOL. UNLESS NOTED ~
5 04	検図CHK. ARAI 10,7,'96	形 番 MODEL	LDV-5*****	
4 04	認可APPD. S.ANDO 10,9,'96	名 称 NAME	MLUTIPLE LIMIT SWITCH	
3 04	04 JE099-1373 9,30,'99 TATSUHARA UEDA	日付DATE 10,9,'96	図 番 NO.	改番REV. 1/6
2 04	03 JE096-1411 9, 3,'96 SHIMIZU ARAI	来歴 RECORD	日付 DATE	担当 BY
頁	改番	来歴 RECORD	日付 DATE	担当 BY

SP. No.

Yamatake Corporation

製品仕様書 SPECIFICATIONS

4. MECHANICAL CHARACTERISTICS (In application with 30 degrees angle dog)

- Actuator Strength; 75N (for 1 minute in direction of actuation) $\triangle\triangle$
- Terminal Strength; Screw Terminal
Withstand 0.4N·m tightening torque applied for 1 minute. $\triangle\triangle$
- Shock; 300 m/s² $\triangle\triangle$
Misoperation of the contact shall be 1 ms max. in the free position and the total travel position.
- Vibration; Peak-to-peak amplitude 1.5 mm Vibration frequency 10 to 55 Hz for continuous 2 hours.
Misoperation of the contact shall be 1 ms max. in the free position and the total travel position.
- Allowable Operating Speed; 0.07 mm/s ~ 0.5 m/s
The lowest speed; Unstable condition of the contact shall be 0.1s max.
The highest speed; The actuator shall not damage.
- Mechanical Operating Frequency; 120 cycles/minute max.

5. LIFE (In application with 30 degrees angle dog)

- Mechanical Life; 2000K cycles min. at "OT" of 70 to 100% of the rating
- Electrical Life;

Contact material	Condition	Operation cycle
Silver	10A-250 VAC 0.5A-125 VDC ; 0.25A-250 VDC	100K cycles min.
Gold plated	0.1A-125 VAC 0.1A- 30 VDC	2000K cycles min.

6. ENVIRONMENTAL CHARACTERISTICS

- Operating Temperature; -10 °C to 70 °C (at no freezing or dewing)
- Operating Humidit; 98%

7. MOUNTING

- Recommended Tightening Torque
For mounting the switch to panel ; 6 to 8 N·m $\triangle\triangle$
(When M6 hex. socket head cap screw is used for mounting)
- For mounting the cover to housing ; 1.3 to 1.7 N·m $\triangle\triangle$ (M4)
- For mounting the terminal to switch ; 0.3 to 0.4 N·m $\triangle\triangle$ (M3)

作成DR. SHIMIZU 9, 3, '96		尺度 SCALE UN	記入のない公差 TOL. UNLESS NOTED ~
検図CHK. ARAI 10,7,'96	形 番 MODEL	LDV-5*****	
認可APPD S.ANDO 10,9,'96	名 称 NAME	MLUTIPLE LIMIT SWITCH	
日付DATE 10,9,'96	図 番 NO.	AD50361E	改番REV. 2/6

04	SI (MKS) → SI	9,30,'99	TATSUHARA	UEDA
03	NEWLY DRAWN	9, 3, '96	SHIMIZU	ARAI
改番 REV.	来歴 RECORD	: 日付 DATE	担当 BY	検閲 APPD.

SP. No.

Yamatake Corporation

製品仕様書 SPECIFICATIONS

CATALOG LISTING

LDV - 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
2	BALL

3 LOCATION OF CONDUIT HOLES, FURNISHED

CODE	LOCATION OF CONDUIT HOLES	CONDUIT PARTS
0	MOUNTING WALL (2)	ATTACHED : 2 O-RING (G30)
2	WALL OF HOUSING (2)	ATTACHED : 1 PLUG
4	MOUNTING WALL (2) AND WALL OF HOUSING (2)	ATTACHED : 2 O-RING (G30) ASSEMBLED : 2 EACH PLUGS AND SEALS IN MOUNTING WALL 2 PLUG IN WALL OF HOUSING

4 SCRAPER MATERIAL, OVERTRAVEL

CODE	MATERIAL	OVERTRAVEL (MIN)
~	NONE	3.5
S	NITRILE RUBBER	3
V	FLUORINE RUBBER	

5 CONTACT MATERIAL, ENCLOSED SWITCH, ELECTRICAL RATING

CODE	CONTACT MATERIAL	SWITCH	ELECTRICAL RATING
~	SILVER	AS-J215	Y11 10A-125 OR 250 VAC 1/2A-125 VDC 1/4A-250 VDC
K	GOLD ALLOY CROSS POINT	AS-J215K	Y93 0.1A-125 VAC 0.1A- 30 VDC

CATALOG LISTING

LDV - 5 1 2 3 4 5
 2 0 0 ~ ~
 3 1 2 S K
 4 2 4 V

CODE 2 TYPE OF ACTUATOR CAN NOT BE COMBINED WITH SCRAPER MATERIAL CODE S AND V.

(BALL PLUNGER SWITCH WITH SCRAPER IS NOT AVAILABLE.)

作成DR. SHIMIZU 6.12.'92		尺度SCALE C/D	記入のない公差 TOL. UNLESS NOTED ~
検図CHK. ARAI 6.13.'92	形番 MODEL	LDV-5*****	
認可APPD TSUKAKOSHI 6.13.'92	名称 NAME	MULTIPLE LIMIT SWITCH	
日付DATE 6.15.'92	図番 NO.	AD50361E	改番REV. 4/6

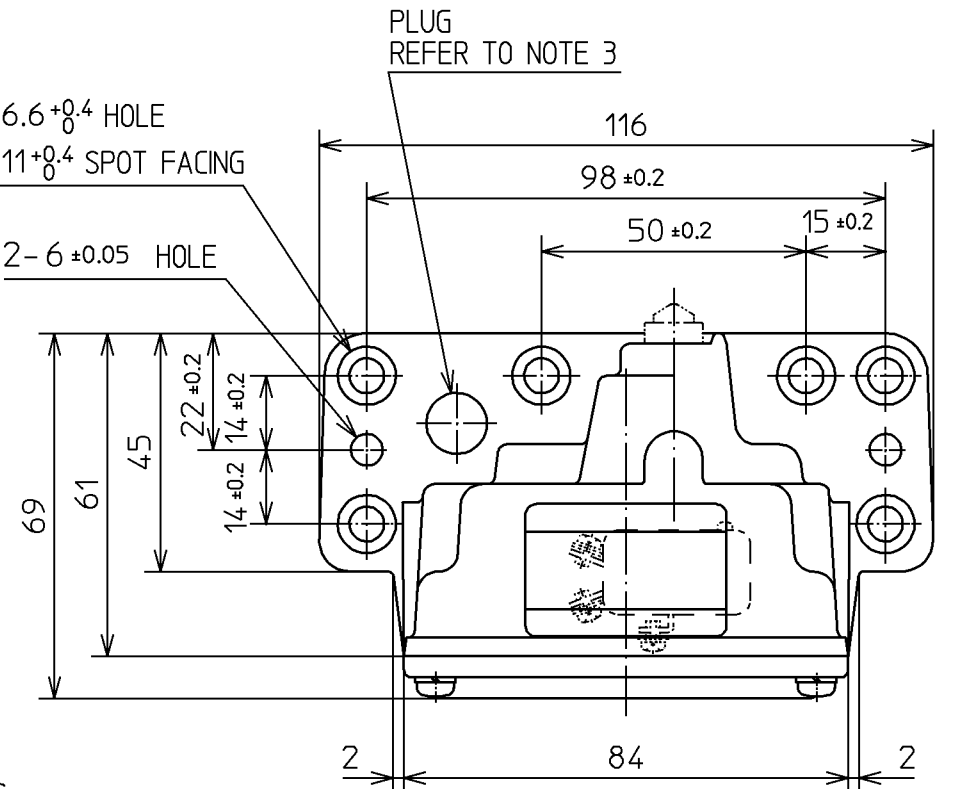
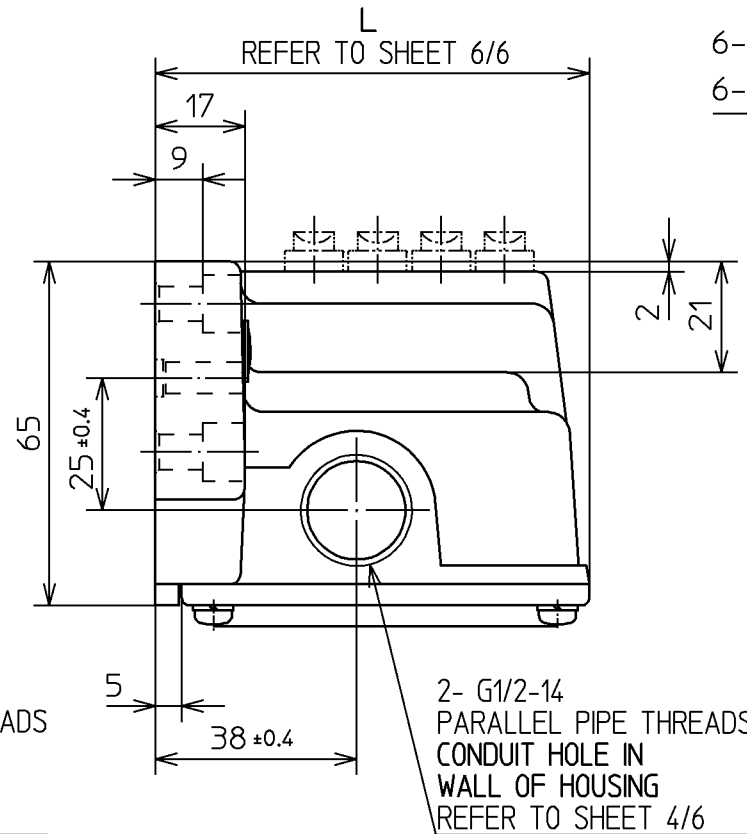
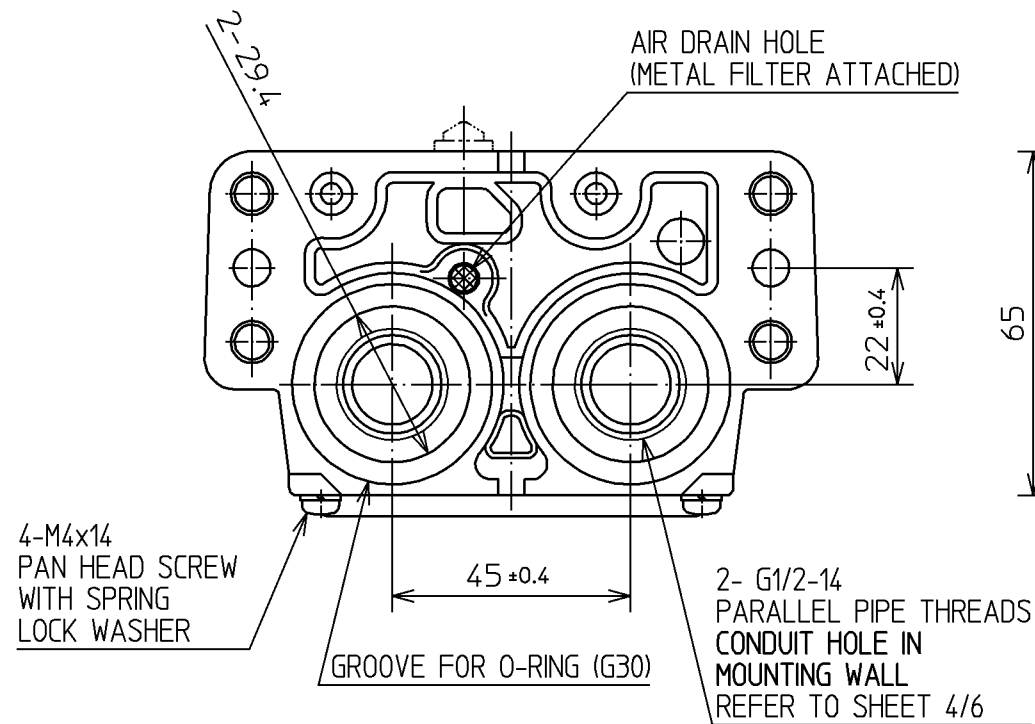
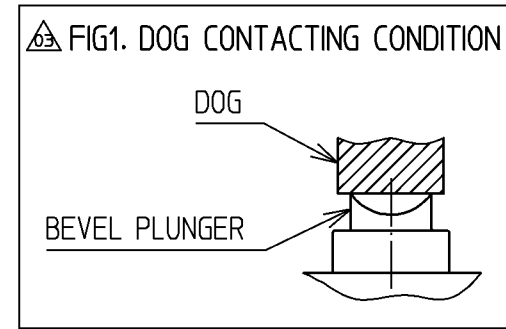
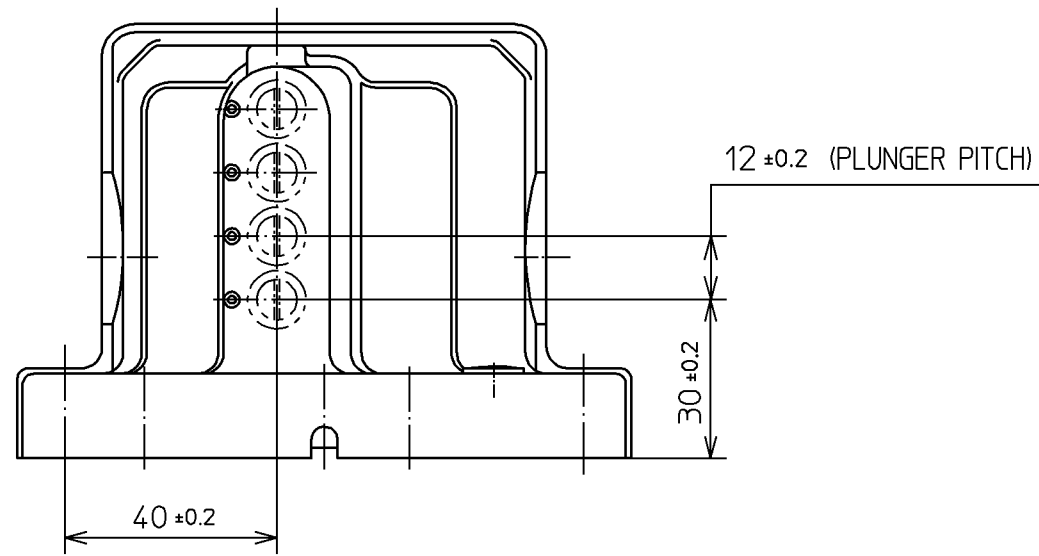
04	~	9,30,'99	TATSUHARA	UEDA
03	SHEET 1/3+4/6	9, 3, '96	SHIMIZU	ARAI
02	JE092-1220	92-12-28	TATSUHARA	ARAI
01	JE092-1209	92-12-16	TATSUHARA	ARAI
改番 REV.	来歴 RECORD	: 日付 DATE	担当 BY	検閲 APPD.

SP. No.

Yamatake Corporation

製品仕様書
SPECIFICATIONS

- NOTES
1. HOUSING AND COVER ARE MADE OF ALUMINUM ALLOY FINISHED WITH GRAY PAINT.
 2. WHEN PIPING, REMOVE SEALING PLUG ASSEMBLED IN CONDUIT.
 3. WHEN USING WITH MOUNTING SURFACE UP, REMOVE SEALING PLUG TO PREVENT CUTTING OIL FROM STAYING IN COUCAVITY.
 4. USE DOG WHOSE WIDTH IS MORE THAN 8mm FOR THE BEVEL PLUNGER TYPE. ALL THE SURFACE OF PLUNGER MUST CONTACT THE DOG. (REFER TO FIG1.)



CHARACTERISTICS

OPERATING FORCE	14.7N	MAX	△
RELEASE FORCE	2.9N	MIN	△
PRETRAVEL	1.5	MAX	
MOVEMENT DIFFERENTIAL	0.1~0.32		
OVERTRAVEL	REFER TO SHEET 4/6		
FREE POSITION	REFER TO SHEET 6/6		
OPERATING POSITION	REFER TO SHEET 6/6		

CATALOG LISTING

LDV-5 ① ② ③ ④ ⑤
2 0 0 ~ ~
3 1 2 S K
4 2 4 V

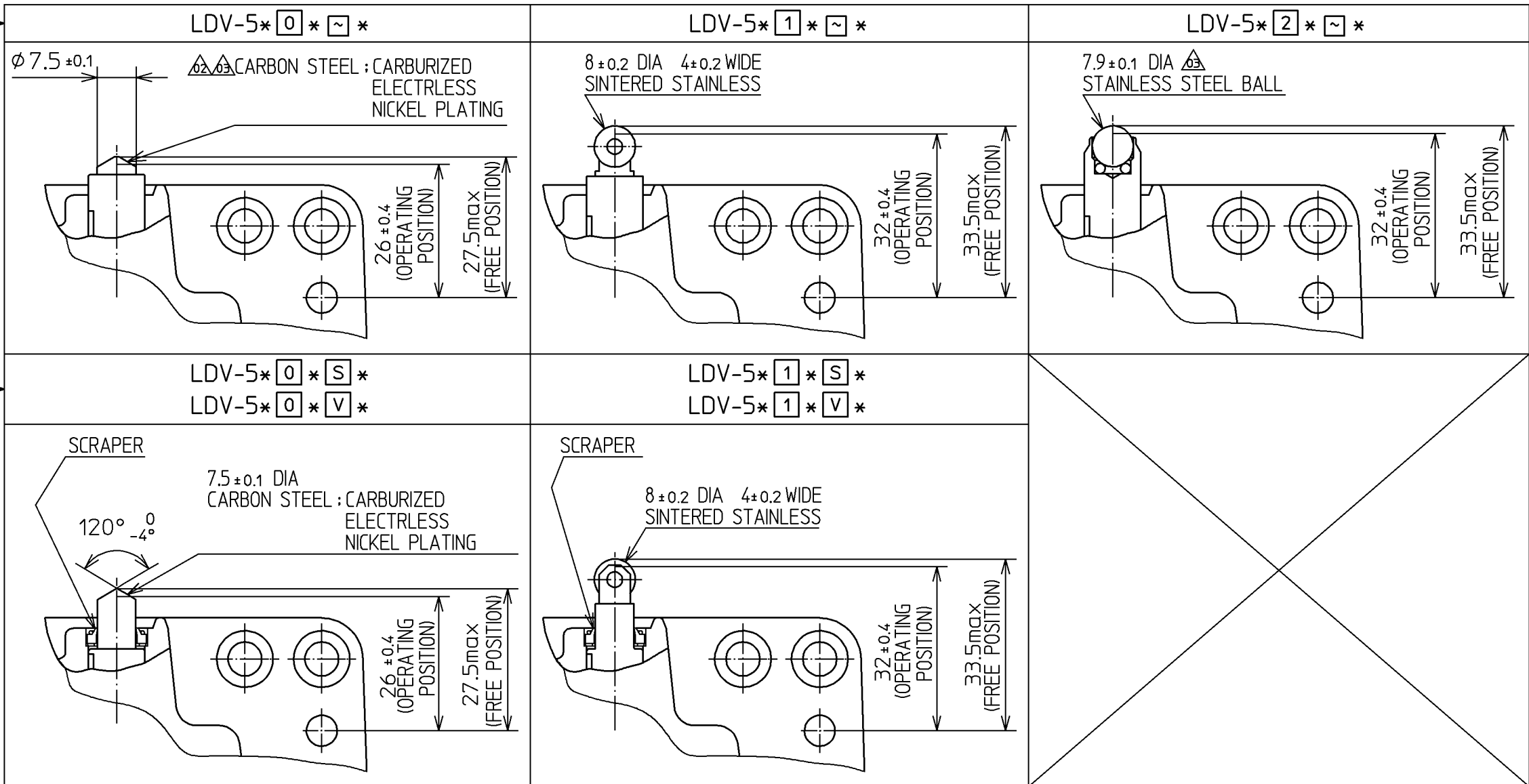
04	SI (MKS) → SI	9,30,'99	TATSUHARA	UEDA
03	PLUNGER CHANGED	9, 3, '96	SHIMIZU	ARAI
改番 REV.	来歴 RECORD	: 日付 DATE	担当 BY	検閲 APPD.

作成DR. SHIMIZU 6.12,'92	検図CHK. ARAI 6.13,'92	認可APPD. TSUKAKOSHI 6.15,'92	日付DATE 6.15,'92	形番 MODEL LDV-5*****	名称 NAME MULTIPLE LIMIT SWITCH	図番 NO. AD50361E	改番REV. 04	5/6
尺度SCALE 1:1			記入のない公差 TOL. UNLESS NOTED ±0.4 ANGLES ±3°					

SP. No.

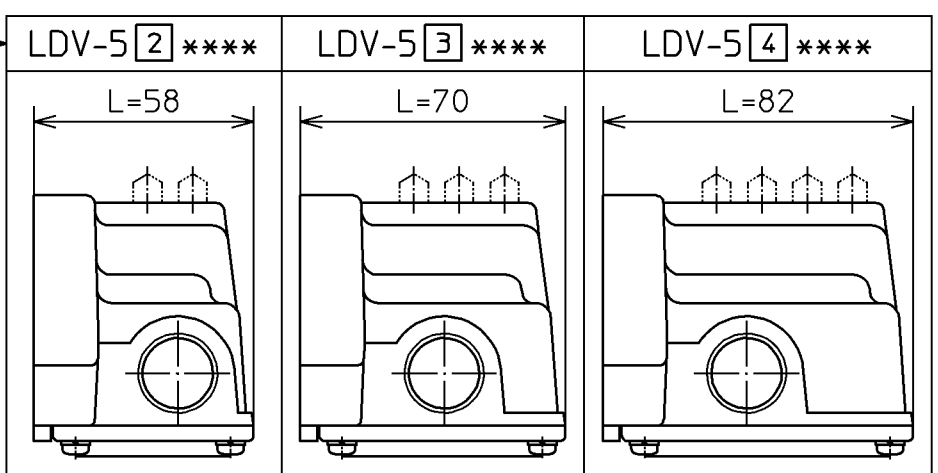
Yamatake Corporation

製品仕様書
SPECIFICATIONS



LDV-5

4
N
1
0
4
N
0
S
V
X



04	~	9,30,'99	TATSUHARA	UEDA
03	HARDENED STAINLESS STEEL	9, 3,'96	SHIMIZU	ARAI
02	CARBON STEEL CARBURIZED ELECTRLESS NICKEL PLATING	12,28,'92	TATSUHARA	
改番 REV.	来歴 RECORD	: 日付 DATE	担当 BY	検閲 APPD.

作成DR. SHIMIZU 6,12,'92		尺度SCALE 1/10	記入のない公差 TOL. UNLESS NOTED ± 0.8
検図CHK. ARAI 6,12,'92	形番 MODEL	LDV-5*****	
認可APPD. TSUKAKOSHI 6,15,'92	名称 NAME	MULTIPLE LIMIT SWITCH	
日付DATE 6,15,'92	図番 NO.	改番REV. 04	6/6

SP.NO.

Yamatake Corporation

製品仕様書
SPECIFICATIONS**Terms and Conditions**

We would like to express our appreciation for your purchase and use of Yamatake products.

You are required to acknowledge and agree upon the following terms and conditions for your purchase of Yamatake products (field instruments, control valves, and control products), unless otherwise stated in any separate document, including, without limitation, estimation sheets, written agreements, catalogs, specifications and instruction manuals.

1 Warranty period and warranty scope**1.1 Warranty period**

Yamatake products shall be warranted for one (1) year from the date of your purchase of the said products or the delivery of the said products to a place designated by you.

1.2 Warranty scope

In the event that Yamatake product has any failure attributable to Yamatake during the aforementioned warranty period, Yamatake shall, without charge, deliver a replacement for the said product to the place where you purchased, or repair the said product and deliver it to the aforementioned place.

Notwithstanding the foregoing, any failure falling under one of the following shall not be covered under this warranty:

- (1) Failure caused by your improper use of Yamatake product
(noncompliance with conditions, environment of use, precautions, etc. set forth in catalogs, specifications, instruction manuals, etc.);
- (2) Failure caused for other reasons than Yamatake product;
- (3) Failure caused by any modification or repair made by any person other than Yamatake or Yamatake's subcontractors;
- (4) Failure caused by your use of Yamatake product in a manner not conforming to the intended usage of that product;
- (5) Failure that the state-of-the-art at the time of Yamatake's shipment did not allow Yamatake to predict; or
- (6) Failure that arose from any reason not attributable to Yamatake, including, without limitation, acts of God, disasters, and actions taken by a third party.

Please note that the term "warranty" as used herein refers to equipment-only-warranty, and Yamatake shall not be liable for any damages, including direct, indirect, special, incidental or consequential damages in connection with or arising out of Yamatake products.

2 Ascertainment of suitability

You are required to ascertain the suitability of Yamatake product in case of your use of the same with your machinery, equipment, etc. (hereinafter referred to as "Equipment") on your own responsibility, taking the following matters into consideration:

- (1) Regulations and standards or laws that your Equipment is to comply with.
- (2) Examples of application described in any documents provided by Yamatake are for your reference purpose only, and you are required to check the functions and safety of your Equipment prior to your use.
- (3) Measures to be taken to secure the required level of the reliability and safety of your Equipment in your use

Although Yamatake is constantly making efforts to improve the quality and reliability of Yamatake products, there exists a possibility that parts and machinery may break down.

You are required to provide your Equipment with fool-proof design, fail-safe design, anti-flame propagation design, safety design, or the like so that the said Equipment may satisfy the level of the reliability and safety required in your use, whereby preventing any occurrence of physical injuries, fires, significant damage, and so forth.

3 Precautions and restrictions on application

Yamatake products other than those explicitly specified as applicable (e.g. Yamatake Limit Switch For Nuclear Energy) shall not be used in a nuclear energy controlled area (radiation controlled area).

Any Yamatake products shall not be used for/with medical equipment.

In addition,

you are required to conduct a consultation with our sales representative and understand detail specifications, cautions for operation, and so forth by reference to catalogs, specifications, instruction manual, etc. in case that you intend to use Yamatake product for any purposes specified in (1) through (6) below.

Moreover, you are required to provide your Equipment with fool-proof design, fail-safe design, anti-flame propagation design and other designs of protection/safety circuit on your own responsibility to ensure the reliability and safety, whereby preventing problems caused by failure or nonconformity.

- (1) For use under such conditions or in such environments as not stated in technical documents, including catalogs, specification, and instruction manuals
- (2) For use of specific purposes, such as:
 - * Nuclear energy/radiation related facilities
[For use outside nuclear energy controlled areas]
[For use of Yamatake Limit Switch For Nuclear Energy]
 - * Machinery or equipment for space/sea bottom
 - * Transportation equipment
[Railway, aircraft, vessels, vehicle equipment, etc.]
 - * Antidisaster/crime-prevention equipment
 - * Burning appliances
 - * Electrothermal equipment
 - * Amusement facilities

頁 改番

改番
REV.来歴
RECORD日付
DATE担当
BY検閲
APPD.

