

S.P. No.

Yamatake Corporation

製品仕様書 SPECIFICATIONS

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

[1] OPERATION TYPE, CIRCUIT DIAGRAM, CHARACTERISTICS AND APPROVAL NUMBER

CODE	OPERATION TYPE	CIRCUIT DIAGRAM			CHARACTERISTICS (PRETRAVEL)	APPROVAL NUMBER (REFER TO) (NOTE 2)
		C. C. W.	FREE POSITION	C. W.		
0	CENTER NEUTRAL				10' MAX.	58037 △
1	SIMULTANEOUS OPERATION TYPE				12' MAX. (REFER TO) (NOTE 1)	58038 △

NOTE 1. TWO BASIC SWITCHES OPERATE SIMULTANEOUSLY WITHIN 3 DEGREES DIFFERENCE
2. RESEARCH INSTITUTE OF INDUSTRIAL SAFRTY, THE MINISTRY OF LABOR, JAPAN.

[2] TYPE OF LEVER

CODE	TYPE OF LEVER
01	STANDARD LEVER
02	NO LEVER
03	ADJ LEVER

[3] CONDUIT

CODE	CONDUIT
~	PRESSURE RESISTANCE THREAD JOINT STEEL CONDUIT TYPE
R	PRESSURE RESISTANCE PACKING TYPE

[4] CONTACT MATERIAL AND ELECTRICAL RATING

CODE	CONTACT MATERIAL	ELECTRICAL RATING
~	SILVER	Y78 5A-250 VAC 0.4A-125VDC ; 0.2A-250VDC
K	GOLD ALLOY	Y93 0.1A-125 VAC 0.1A- 30 VDC

[5] ENVIRONMENT

CODE	SEAL MATERIAL	ROLLER			REMARKS
		MATERIAL	DIA.	WIDE	
~	NITRILE RUBBER	NYLON	17.4	6.4	~
H	SILICONE RUBBER	BRASS	17.4	7.1	FOR TROPICS
L	SILICONE RUBBER	NYLON	17.4	6.4	FOR COLD DISTRICT

4 07
3 07
2 07
PAGE REV. 改番 REV. 改番

07	JE003-1270	3,31,'03	TATSUHARA	ARAI
06	JE099-1323	7,30,'99	TATSUHARA	ARAI
05	JE098-1247	3, 4,'98	TATSUHARA	ARAI
04	JE096-1322	11,29,'96	TATSUHARA	ARAI
来歴 RECORD	日付 DATE	担当 BY	検閲 APPD.	

作成DR. TATSUHARA 11, 29, '96		尺度 SCALE	記入のない公差 TOL. UNLESS NOTED ~
検図CHK. ARAI 11, 29, '96	形番 MODEL	VCX-5***-***	
認可APPD. ANDO 11, 29, '96	名称 NAME	EXPLOSION PROOF SWITCH	
日付DATE 11, 29, '96	図番 NO.	AD50273E	改番REV. 07 / 1 / 4

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1. STANDARDS

- ・Conform to; JIS C 4508
- ・Approved by; Explosion-protected electrical apparatus
Explosion-proof structure; d2G4
 Approved No. Refer to sheet 1/4
(The Technology Institution of Industrial Safety)
NIPPON KAIJI KYOKAI 82T605

2. STRUCTURE

- ・Type of Contact; 2xSPDT
- ・Protective Structure; IP67 (IEC 60529)
- ・Shape of Contact; Silver Contacts; Rivet
Gold Alloy Contacts; Cross Point
- ・Shape of Terminal; Screw (M3 binding head screw with 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 min.	600 VAC
Between terminals of different polarities	100 MΩ min.	2000 VAC
Between each terminal and non-live metal part	100 MΩ min.	2000 VAC
Between each terminal and earth	100 MΩ min.	2000 VAC

- ・Contact Resistance

Silver Contacts;

50 mΩ max. (initial) Measured by the voltage drop method at 6 to 8 VDC 1A.

Gold Alloy 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 Alloy Contacts;

5V-10mA

					作成DR. TATSUHARA 11, 29, '96		尺度SCALE UN	記入のない公差 TOL. UNLESS NOTED ~	
	07	UNIFIED	3,31,'03	TATSUHARA	ARAI	検図CHK. ARAI 11, 29, '96	形番 MODEL	VCX-5***-***	
	06	~	7,30,'99	TATSUHARA	ARAI	認可APPD ANDO 11, 29, '96	名称 NAME	EXPLOSION PROOF SWITCH	
	05	80T605	3, 4,'98	TATSUHARA	ARAI	日付DATE 11, 29, '96	図番 NO.	AD50273E	改番REV. 07 / 4
	04	~	11,29,'96	TATSUHARA	ARAI				
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4. MECHANICAL CHARACTERISTICS (Value at 30mm long lever)

- Actuator Strength; **5** times OF (for 1 minute in direction of actuation)
- Terminal Strength; Withstand **0.6N·m** tightening torque applied for 1 minute. \triangle
- Shock; **200 m/s²** \triangle
 Misoperation of the contact shall be 1 ms max. in the free position and the total travel position or in the total travel position.
- Vibration; Peak-to-peak amplitude 1.5 mm Vibration frequency 10 to 55 Hz for continuous 2 hours \triangle
 Misoperation of the contact shall be 1 ms max. in the free position and the total travel position or in the total travel position.
- Allowable Operating Speed; **0.3 mm/s** to **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

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


Contact material	Condition	Operation cycle
Silver	5A-250 VAC 0.4A-125VDC : 0.2A-250VDC	30k cycles min.
	3A-250 VAC 0.4A- 30VDC 0.2A-125VDC : 0.1A-250VDC	100k cycles min.
Gold Alloy	0.1A-125 VAC 0.1A- 30 VDC	2000k cycles min.

6. ENVIRONMENTAL CHARACTERISTICS

- Operating Temperature; **-10** to **+60** °C (at no freezing) \triangle
- Environmental Requirement Level ; Listed by the Ministry of Labor for use in hazardous atmospheres of d2G4. (watertight)

7. MOUNTING

- For mounting the switch to panel : 5 to 6 N·m \triangle (M5 cap screw)
- For mounting the cover to housing : 5 to 6 N·m \triangle (M5 cap screw)
- For mounting the head to housing : 13 to 17 N·m \triangle (M4)
- For mounting the terminal to switch : 0.4 to 0.6 N·m \triangle (M3)
- For mounting the lever to switch : 4 to 5.2 N·m \triangle (M5 cap screw)

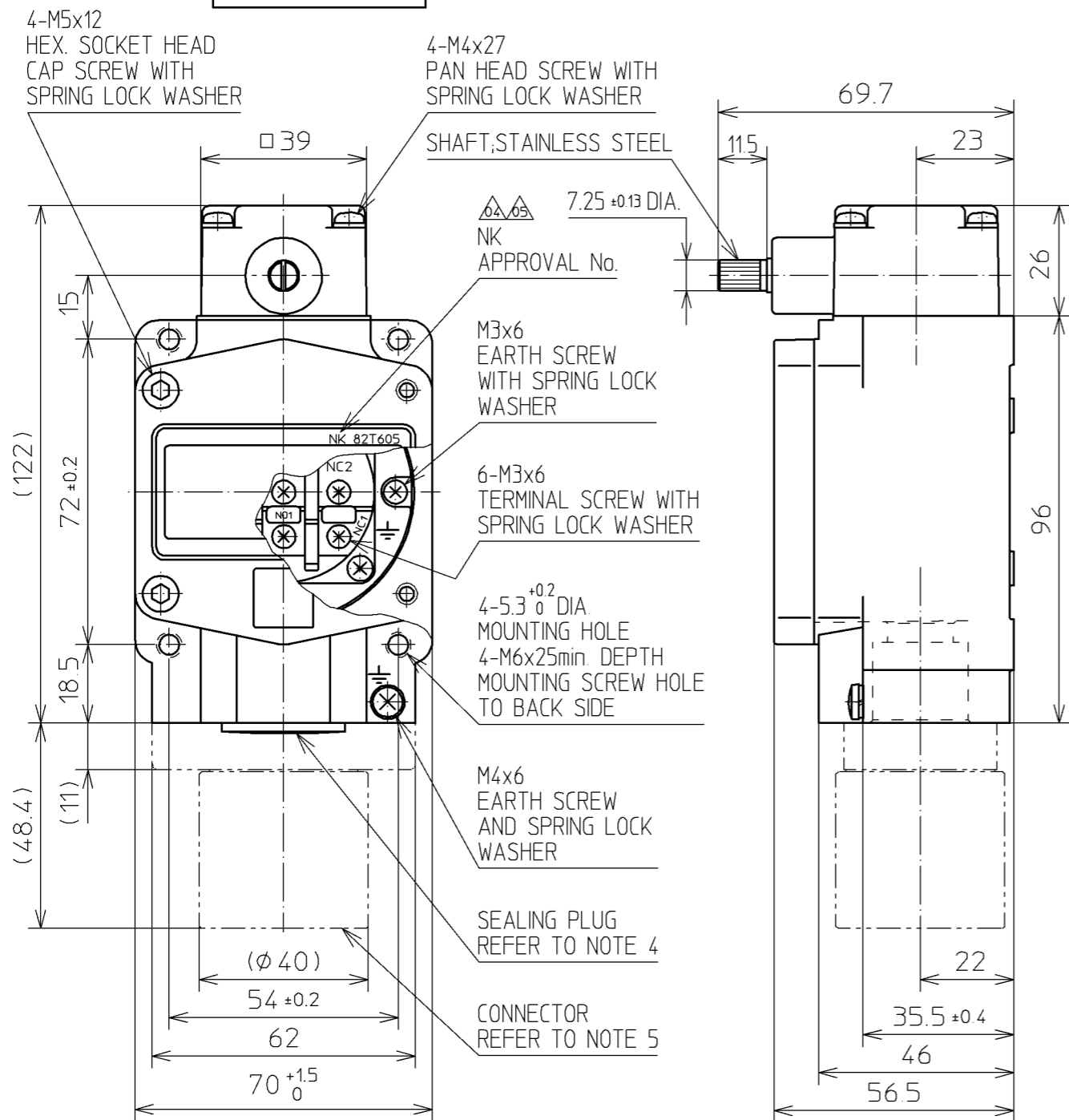
作成DR. TATSUHARA 11, 29, '96		尺度 SCALE UN	記入のない公差 TOL. UNLESS NOTED ~
07 +70℃ etc. 3,31,'03 TATSUHARA ARAI	検図CHK. ARAI 11, 29, '96	形番 MODEL	VCX-5***-***
06 SI (MKS) → SI 7,30,'99 TATSUHARA ARAI	認可APPD ANDO 11, 29, '96	名称 NAME	EXPLOSION PROOF SWITCH
05 in conformity to JIS 3, 4,'98 TATSUHARA ARAI	日付DATE 11, 29, '96	番 NO.	AD50273E
04 ~ 11,29,'96 TATSUHARA ARAI	改番REV. REV.	改番REV.	3/4
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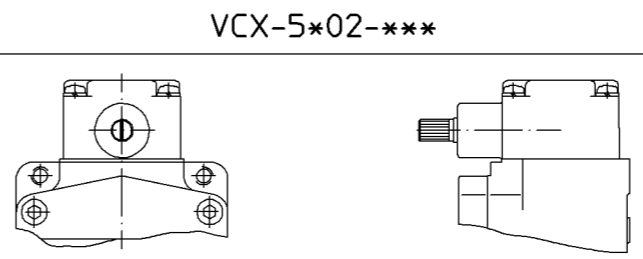
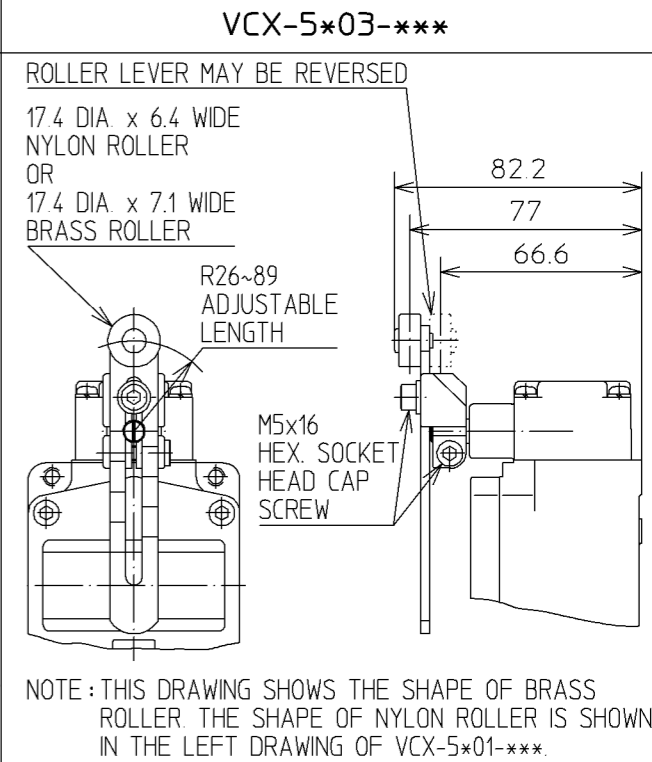
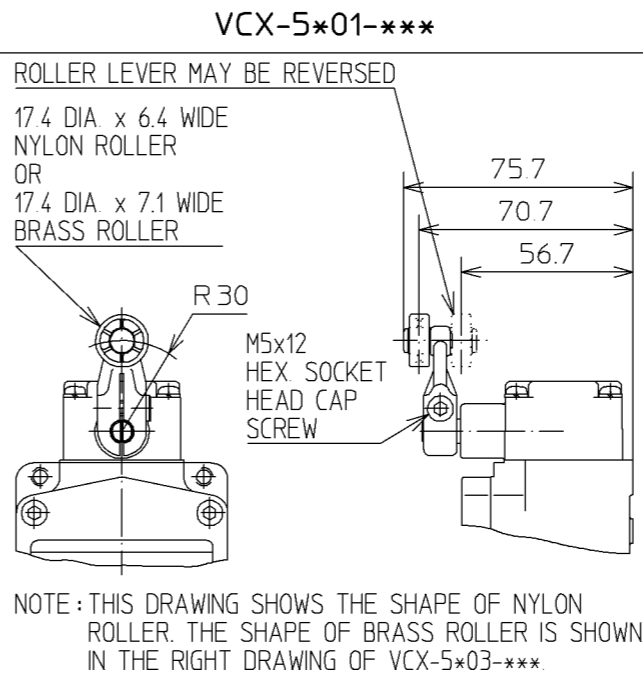
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EXTERNAL VIEW

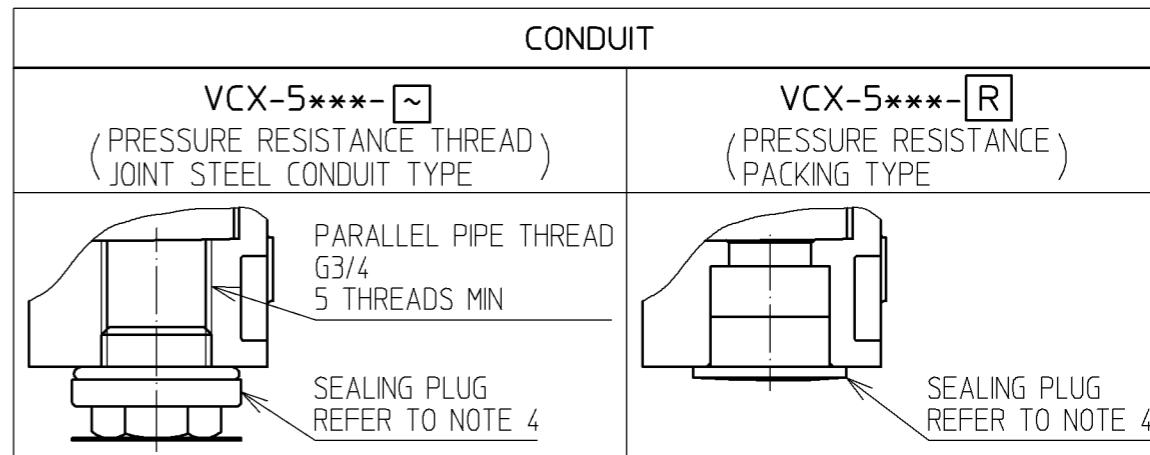
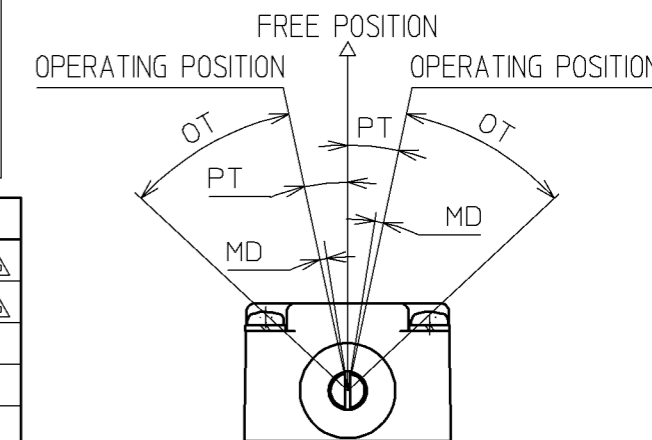


- NOTES 1. FOR WIRING TO THIS SWITCH, DISASSEMBLE FOUR M5x12 HEX. SOCKET HEAD SCREWS WITH HEX. WRENCH TO REMOVE COVER, AND WIRE TERMINALS. USE THIS SWITCH IN CONFORMITY WITH "RECOMMENDED PRACTICE FOR EXPLOSION PROTECTED ELECTRICAL INSTALLATIONS IN GENERAL INDUSTRIES" ISSUED BY MINISTRY OF LABOR SINCE UNBALANCED OR INSUFFICIENT TIGHTENING OF COVER AND INSUFFICIENT CONDUIT CONNECTION MAY RESULT IN REMARKABLE EXPLOSION PROOF PERFORMANCE DETERIORATION.
2. HOUSING, COVER AND HEAD ARE MADE OF ALUMINUM ALLOY FINISHED WITH GRAY PAINT.
3. EXTERNAL SCREWS ARE MADE OF STAINLESS STEEL.
4. DO NOT REMOVE SEALING PLUG TILL STARTING WIRING.
5. AS EXPLOSION-PROOF CONNECTOR IS NOT ATTACHED TO SWITCH, SELECT AND ORDER SEPARATELY 2PA-JEX1** SERIES (CONDUIT SIZE G1/2) OR 2PA-JEX2** SERIES (CONDUIT SIZE 3/4).
6. IN THE MECHANICAL CHARACTERISTICS OF AND RF ARE THE CHARACTERISTICS AT 30 LEVER LENGTH.



CHARACTERISTICS

OPERATING FORCE	15.7N	max.	△△
RELEASE FORCE	2.2N	min.	△△
PRETRAVEL	REFER TO SHEET 1/4		
MOVEMENT DIFFERENTIAL	3'	max.	
OVERTRAVEL	35'	min.	



作成DR. TATSUHARA 11, 29, '96	検図CHK. ARAI 11, 29, '96	認可APPD ANDO 11, 29, '96	日付DATE 11, 29, '96	改番REV. 07	4/4
07 UNIFIED 3,31,'03 TATSUHARA ARAI	06 SI (MKS) → SI 7,30,'99 TATSUHARA ARAI	05 80T605 3, 4,'98 TATSUHARA ARAI	04 TO ADD 11,29,'96 TATSUHARA ARAI	来歴 RECORD	日付 DATE
<p>作成DR. TATSUHARA 11, 29, '96</p> <p>検図CHK. ARAI 11, 29, '96</p> <p>認可APPD ANDO 11, 29, '96</p> <p>日付DATE 11, 29, '96</p>				<p>形番 MODEL VCX-5***-***</p> <p>名称 NAME EXPLOSION PROOF SWITCH</p> <p>図番 NO. AD50273E</p>	<p>尺度SCALE 記入のない公差 TOL. UNLESS NOTED ±0.8</p>

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“RESTRICTIONS ON USE”

This product has been developed, designed and manufactured in accordance with the standards of explosion-protected electrical apparatus.

When using this product in application requiring particular safety, special care should be taken to implement a fail-safe and/or redundant design concept as well as a periodic maintenance program.

The notified body and/or the applicable standards may vary by the model number. Be sure to confirm the specification for the details.

		01	JEO03-0457	6-23-03	Harada	Miura
1	01	00	First issue	12-2-02	Harada	Miura
頁	改番	改番	来歴	日付	担当	検閲
		REV.	RECORD	DATE	BY	APPD.