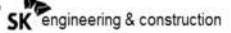



Vendor's name : Mitsui Engineering & Shipbuilding Co., Ltd.
 Company's name : Nghi Son Refinery and Petrochemical LLC.
 Purchaser : JGCS Consortium
 Responsible OC : SK Engineering & Construction Co., Ltd. 
 Plant Location : Nghi Son, Vietnam
 Project name : NSRP Complex Project
 P / Order No. : 0-6495-PS2158-412-A100
 Equipment/Material name : Steam Turbine Generator
 Item number : 113-A-001~005
 Document title : Vacuum Breaker Valve

AS BUILT	
BY: Mech. / SJ/DS	DATE: 22 / Jul. / 15

PROJECT (JOB No.: 0-6495-20)			
DOCUMENT CLASS:	X		
ISSUE PURPOSE:	AB		
RESULT CODE: A, B, R, F	(A)
NEXT STATUS: FA, FR, FI, FC, AB	(-)
RESUBMISSION DATE:	(-)
RESPONSIBLE DEPT./PERSON:	(Mech. / SJ/DS)
Review Date:	(22 / Jul. / 15)
A: Approved without Comment; B: Approved with Minor Comment R: Not Approved; F: Not Subject to Review			
Approval or review hereunder shall not be construed to relieve Vendor/ Subcontractor of his responsibilities and liability under the Contract			
Purchaser DOC. No.	ORIG. V	PURCHASE ORDER NO. S2158-412-A	SERIAL 089
			REV. 3

Rev.	Date	Description	Prep'd	Chk'd	App'd	SCO	MGR
4							
3	Jul.10 '15	Issue as AB	T.Hikida	<i>Morioka</i>	<i>K.Yamana</i>	<i>T.Kudo</i>	<i>K.Y</i>
2	Jun.30 '15	Issue for Construction	T.Hikida	Morioka	K.Yamana	T.Kudo	K.Y
1	Mar.31 '15	2'nd Issue	T.Hikida	Morioka	M.M	T.Kudo	For Morioka
0	Oct.20 '14	1'st Issue	T.Hikida	Morioka	K.Yamana	T.Kudo	K.Y

 MES	MITSUI ENGINEERING & SHIPBUILDING CO.,LTD.	■ A-001	■ A-003	DESIGN GROUP Steam Turbine Group Process Equipment & Rotating Machinery Design Dept.	
		■ A-002	■ A-004		
		■ A-005			
MES JOB NO.: TM2156	Total	A1x ___	A2x ___	Ref.No.	MES DWG. No.
CODE WORD: Nghison-13	72	A3x ___	A4x 72	B13	4ST14929

3

INDRA
 23-JUL-2015
 AS BUILT

CONTENTS

		Equipment & Instrument No.	Page No.	Rev.
1	for 113-A-003 (TM2156A)	113-UV-7331	2	
2	for 113-A-004 (TM2156B)	113-UV-7431	16	
3	for 113-A-001 (TM2156C)	113-UV-7131	30	
4	for 113-A-002 (TM2156D)	113-UV-7231	44	
5	for 113-A-005 (TM2156E)	113-UV-7531	58	

Note ; 1) Equipment and Instrument described "O" mark is including revised specification.

DELIVERY DRAWING

MESSRS.
 MITSUI ENGINEERING & SHIPBUILDING CO.,LTD.
 TAMANO WORKS

NAME (品名) **CYLINDER VALVE**

ORDER No. (注文番号) **XL0534G**

WORKS No. (工事番号) **TM2156A**



△	JUN.20.2015	CHANGE OF S.V.TYPE	S.Hashimoto	T.Okunishi	R.Hirasawa
△	MAR.23.2015	BY RETURN DRAWING	S.Hashimoto	T.Okunishi	R.Hirasawa
△	FEB.13.2015	BY RETURN DRAWING	S.Hashimoto	T.Okunishi	R.Hirasawa
△	NOV.20.2014	BY RETURN DRAWING	S.Hashimoto	T.Okunishi	R.Hirasawa
	AUG.29.2014	ORIGINAL	S.Hashimoto	T.Okunishi	R.Hirasawa
	DATE	HISTORY	APPROVED	CHECKED	CHARGE

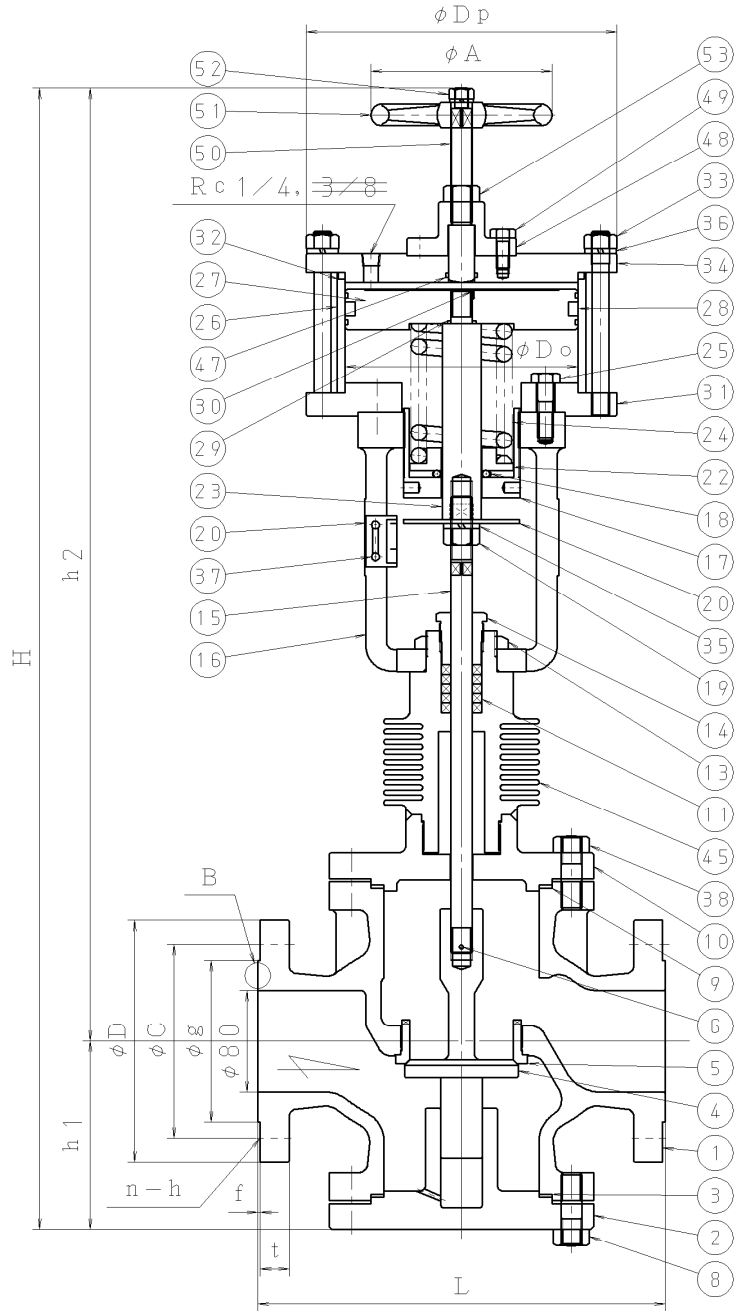
SANKYO SEISAKUSHO CO., LTD.



SPECIFICATIONS (仕様)

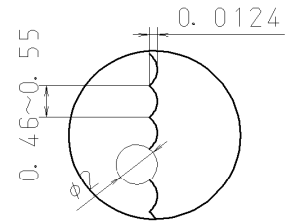
USE	(用途)	VACUUM BREAKER VALVE		
TAG No.	(弁 No.)	113-UV-7331		△1
TYPE	(型式)	S-K800S-DXM-HF		△2
QUANTITY	(数量)	1		
SIZE	(口径)	80A (3B)		△3
CONNECTION	(接続)	ASME 150-RF SPIRAL SERRATED		
FLUID	(流体名)	AIR		
TEMP.	(温度)	DESIGN 425 °C		△3
PRESSURE (圧力)	INLET (一次側)	-0.1~0	MPa DESIGN 0.5 MPa & F. V.	△3
	OUTLET (二次側)		MPa	△3
FLOW RATE	(流量)	1800	m ³ /h(Normal)	△3
MATERIAL (材質)	BODY (本体)	SCPH2		
	TRIM (要部)	SUS304		
WATER TEST PRESS.	(耐圧試験圧力)	1	MPa	
OPERATING PRESS.	(操作圧力)	0.588~0.909 MPa		
ACTION	(作動)	AIR TO OPEN		△2
ALLOWABLE LEAKAGE	(許容弁漏れ量)	JIS B 2005-4 CLASSIV-S1(ANSI/FCI70-2)		△3
ACCESSORIES	(附属品)	SOLENOID VALVE NFET8327B201, DC24V		△4
		SV TagNo.113-UY-7331		
		LIMIT SWITCH VCX7103		
		LS TagNo. CLOSED:113-USL-7331		
PAINTING COLOR	(塗装色)	AQUA GAMMA AG-600 PRIMER		
SPARE	(予備品)	GASKET, GLAND PACKING, O-RING		
DRAWING No.	(図面番号)	800S-DXM-HF-SAF80A-AJS		△2

113-UV-7331



RATING	MARK	D	C	n-h	g	f	t	L
ASME 150		190	152.4	4-19	127.0	2	22.3	315
ASME 300		210	168.3	8-22	127.0	2	27.0	322
JPI 150		190	152.4	4-19	127.0	2	22.3	315
JPI 300		210	168.3	8-22	127.0	2	27.0	322

CYL. SIZE	MARK	h 1	h 2	H	D o	D p	A
130		145	645	790	130	180	100
150		145	680	825	150	200	100
180		145	750	895	180	240	140
200		145	775	920	200	270	160
250		145	815	960	250	330	200
280		145	920	1065	280	360	250



(B) FLANGE FACE: SPIRAL SERRATED

No.	ARTICLE NAME	MATERIAL
4 5	FIN	STAINLESS SUS304
1 0	BONNET	STEEL S25C
2	BOTTOM COVER	STAINLESS SCS13
		STEEL S25C
16	YOKE	STEEL SS400
		CAST IRON FC200
11	GLAND PACKING	NONASBESTOS T-2200 T-2930
7	VALVE GUIDE	STAINLESS SUS420J2
9 3	GASKET	BOLTEX T-1804GR

No.	ARTICLE NAME	Q	MATERIAL
5 3	LOCK NUT	1	STEEL SS400
5 2	LOCK NUT	1	STEEL SS400
5 1	HANDLE	1	CAST IRON FC200
5 0	ADJUST BOLT	1	BRASS BAR C3604
4 9	BOLT	1	STEEL SS400
4 8	COVER	1	STEEL SS400
4 7	O RING	1	N. B. R.
4 3	FIN	1	*
4 2			
4 1			
4 0			
3 9			
3 8	STUD BOLT	8	STAINLESS SUS304
3 7	SCREW	2	BRASS BAR C3604
3 6	WASHER	1	STEEL SWRH
3 5	WASHER	1	STEEL SWRH
3 4	CYLINDER COVER	1	STEEL SS400
3 3	BOLT NUT	1	STEEL SS400
3 2	O RING	1	N. B. R.
3 1	CYLINDER SEAT	1	STEEL SS400
3 0	SCREW	1	STEEL SS400
2 9	O RING	1	N. B. R.
2 8	O RING	1	N. B. R.
2 7	PISTON	1	STEEL SS400
2 6	CYLINDER	1	STEEL STKM13C

No.	ARTICLE NAME	Q	MATERIAL
2 5	BOLT	1	STEEL SS400
2 4	SPRING	1	SPRING STEEL SWOM
2 3	ROD	1	STEEL SS400
2 2	SPRING SEAT	1	STEEL SS400
2 1	INDICATOR	1	STAINLESS SUS304
2 0	INDEX	1	BRASS PLATE C2600
1 9	LOCK NUT	1	STEEL SS400
1 8	BEARING	1	STEEL
1 7	ADJUST HANDLE	1	STEEL SS400
1 6	YOKE	1	*
1 5	STEM	1	STAINLESS SUS304
1 4	GLAND	1	BRASS BAR C3604
1 3	LOCK NUT	1	STEEL SS400
1 2			
1 1	GLAND PACKING	1	*
1 0	BONNET	1	*
9	GASKET	1	*
8	STUD BOLT	8	STAINLESS SUS304
7	VALVE GUIDE	1	*
6	PIN	1	STAINLESS SUS304
5	VALVE SEAT	1	STAINLESS SUS304
4	VALVE	1	STAINLESS SUS304
3	GASKET	1	*
2	BOTTOM COVER	1	*
1	BODY	1	CAST STEEL SCPH2

STLLITING (ステライト製)

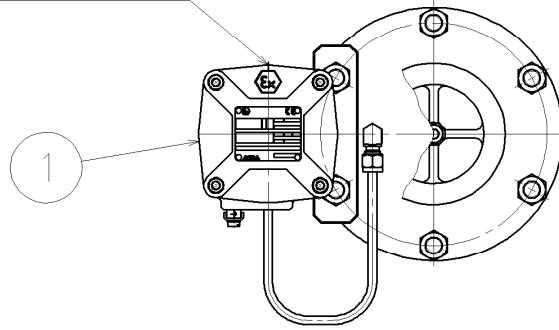
5	VALVE SEAT	バルブシート	YES	#
4	VALVE	バルブ	YES	#

CAREER	NOTE

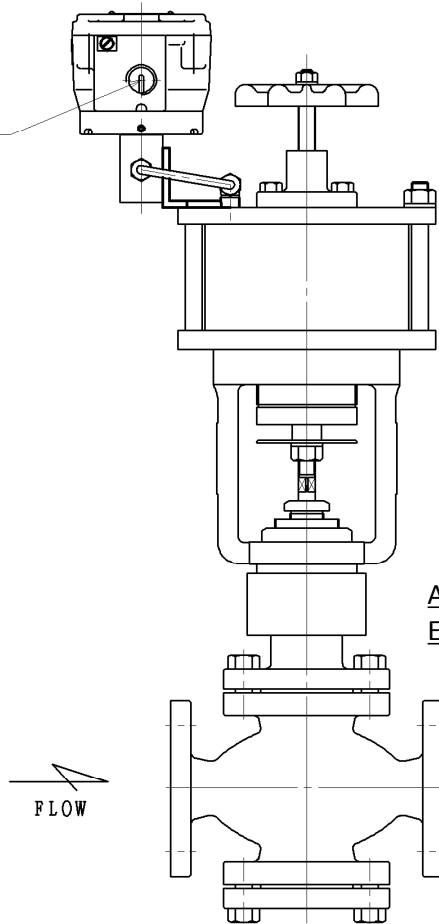
SANKYO SEISAKUSHO CO., LTD.	
SIZE	80A
NAME	CYLINDER VALVE
TYPE	S K800S DXM HF
APPROVED	CHECKED
DESIGN	
S. Hashimoto T. Okumishi R. Hirazawa	
DATE	AUG. 8. 2014
SCALE	FREE
SHEET NUMBER	
800S-DXM-HF-SAF80A-AJS	

INDRA
23-JUL-2015
AS BUILT

SUP. NPT 1/4



ISO M20 P1.5



Air supply connection : NPT1/4
 Electrical connection : ISO M20 P1.5

CAREER	NOTE

SANKYO SEISAKUSHO CO., LTD.

NAME	ACCE. FITTING DEVICE	
TYPE	S-K800S-D□□-HF	
APPROVED	CHECKED	DESIGN

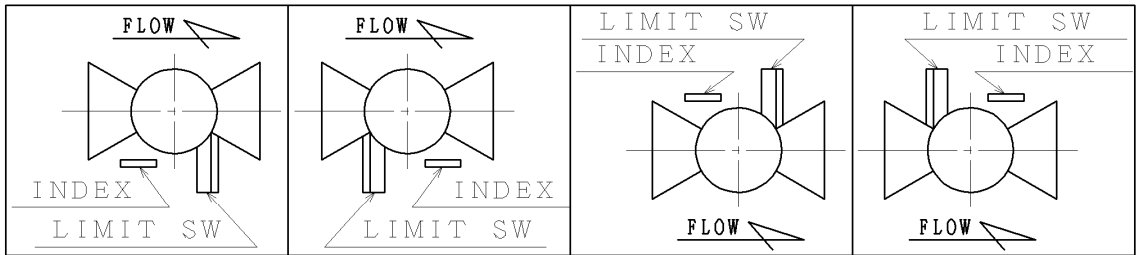
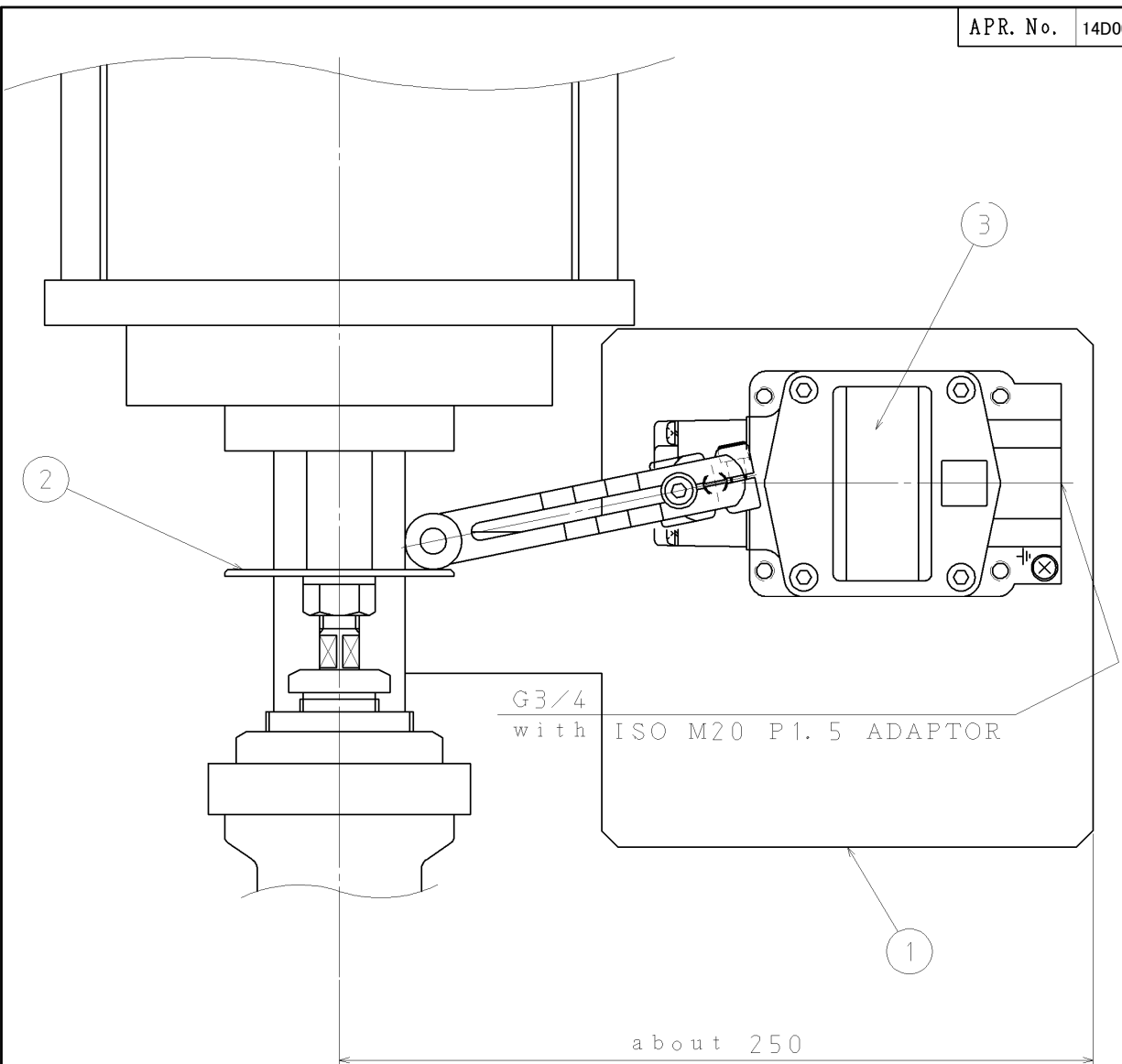
S. Hashimoto T. Okunishi R. Hirazawa

DATE	JUN. 20. 2015	SCALE	FREE
------	---------------	-------	------

SHEET NUMBER
 U800SDHF-NFET8327B201

1	SOLENOID VALVE	電磁弁	1	NFET8327B201
No.	ARTICLE NAME	Q		TYPE

INDRA
 23-JUL-2015
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LS TagNo. CLOSED : 113-USL-7331

SANKYO SEISAKUSHO CO., LTD.			
NAME	ACCE. FITTING DEVICE		
TYPE	S-K800S S-K800A		
APPROVED	CHCKED	DESIGN	
S. Hashimoto	T. Okunishi	R. Hirazawa	
DATE	AUG. 8. 2014	SCALE	FRBE
SHEET NUMBER			
U800S-VCX7103-U			

3	LIMIT SWITCH	リミットスイッチ	1	VCX7103
2	INDICATOR	インジケータ	1	-
1	BRACKET	ブラケット	1	-
No.	ARTICLE NAME	Q	TYPE	



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SOLENOID ENCLOSURE (360° ROTATEABLE)
SCREW TERMINAL JUNCTIONBOX

FIG. I

FIG. II

FIG. III

SOLENOID ENCLOSURE (360° ROTATEABLE)
SPRUE PLUG CONNECTOR

FIG. IV

FIG. I

FIG. II

FIG. I

FIG. II

FIG. III

FIG. IV

FIG. V

FIG. VI

FIG. VII

FIG. VIII

FIG. IX

FIG. X

FIG. XI

FIG. XII

FIG. XIII

FIG. XIV

FIG. XV

FIG. XVI

FIG. XVII

FIG. XVIII

FIG. XIX

FIG. XX

FIG. XXI

FIG. XXII

FIG. XXIII

FIG. XXIV

FIG. XXV

FIG. XXVI

FIG. XXVII

FIG. XXVIII

FIG. XXIX

FIG. XXX

FIG. XXXI

FIG. XXXII

FIG. XXXIII

FIG. XXXIV

FIG. XXXV

FIG. XXXVI

FIG. XXXVII

FIG. XXXVIII

FIG. XXXIX

FIG. XL

FIG. XLI

FIG. XLII

FIG. XLIII

FIG. XLIV

FIG. XLV

FIG. XLVI

FIG. XLVII

FIG. XLVIII

FIG. XLIX

FIG. L

FIG. LI

FIG. LII

FIG. LIII

FIG. LIV

FIG. LV

FIG. LVI

FIG. LVII

FIG. LVIII

FIG. LIX

FIG. LX

FIG. LXI

FIG. LXII

FIG. LXIII

FIG. LXIV

FIG. LXV

FIG. LXVI

FIG. LXVII

FIG. LXVIII

FIG. LXIX

FIG. LXX

FIG. LXXI

FIG. LXXII

FIG. LXXIII

FIG. LXXIV

FIG. LXXV

FIG. LXXVI

FIG. LXXVII

FIG. LXXVIII

FIG. LXXIX

FIG. LXXX

FIG. LXXXI

FIG. LXXXII

FIG. LXXXIII

FIG. LXXXIV

FIG. LXXXV

FIG. LXXXVI

FIG. LXXXVII

FIG. LXXXVIII

FIG. LXXXIX

FIG. LXXXX

FIG. LXXXXI

FIG. LXXXXII

FIG. LXXXXIII

FIG. LXXXXIV

FIG. LXXXXV

FIG. LXXXXVI

FIG. LXXXXVII

FIG. LXXXXVIII

FIG. LXXXXIX

FIG. LXXXXX

FIG. LXXXXXI

FIG. LXXXXXII

FIG. LXXXXXIII

FIG. LXXXXXIV

FIG. LXXXXXV

FIG. LXXXXXVI

FIG. LXXXXXVII

FIG. LXXXXXVIII

Azbil Corporation
製品仕様書
SPECIFICATIONS

CATALOG LISTING

V C X - 7 1 0 2 - 3 4

1 OPERATION TYPE, CIRCUIT DIAGRAM

Code	Operation type	Circuit diagram		
		C. C. W.	Free position	C. W.
0	Center neutral	C21 — NC22 — NO24	NC22 — NO24	C21 — NC22 — NO24
		C11 — NC12 — NO14	NC12 — NO14	C11 — NC12 — NO14
1	Simultaneous operation type	C21 — NC22 — NO24	NC22 — NO24	C21 — NC22 — NO24
		C11 — NC12 — NO14	NC12 — NO14	C11 — NC12 — NO14

2 ACTUATOR TYPE

Code	Actuator type
1	Standard roller lever
2	Without lever
3	Adjustable, roller lever

3 CONDUIT

Code	Conduit
~	G3/4 screw
C	M25x15 screw


4 CONTACT MATERIAL AND ELECTRICAL RATING

Code	Contact material	Electrical rating
~	Silver	AC-12 5A-250V DC-12 0.4A-125V DC-12 0.2A-250V
K	Gold alloy	AC-12 0.1A-125V DC-12 0.1A-30V

10	ECOP12-1435	6. 7.'12	HSASAKI
09	ECOP10-0262	2. 4.'10	HSASAKI SATO
08	ECOP09-2298	12.16.09	KURAKI SATO
07	ECOP09-1805	10. 1.09	SATO HSASAKI
06	ECOP09-0199	4.13.09	SAKIYAMA SATO
05	ECOP08-1675	1. 5.09	SAKIYAMA SATO
04	ECOP08-0738	9.24.08	SAKIYAMA SATO
03	ECO08-0533	3. 6.08	SAKIYAMA SATO
02	ECO08-0007	1. 8.08	SAKIYAMA SATO
01	ECO07-3341	12.17.07	SAKIYAMA SATO
改善 REV.	来歴 RECORD	日付 DATE	検閲 BY
		担当 APPD.	

作業者 SAKIYAMA 8. 24. 07	尺貫SCALE	記入の単位は寸法 TOI. UNLESS NOTED.
検印印 SATO 8. 24. 07	形番	V C X - 7 * * * - * * *
検印印 SUJIO 8. 24. 07	名称	EXPLOSION PROOF SWITCH
日付DATE	図番NO.	改番REV.
8. 24. 07	AD14962E	10 / 6






S.P. No.	Azbil Corporation				製品仕様書 SPECIFICATIONS											
	4. MECHANICAL CHARACTERISTICS (Value at 30mm long lever)															
	· Actuator strength: Withstands 5 times as high as O.F. in the operating direction for 1 minute.															
	· Terminal strength: Withstands 0.6N · m tightening torque applied for 1 minute.															
	· Shock: At 200 m/s² , contact misoperation shall be 1ms max. in the free position and in the total travel position.															
	· Vibration: With a vibration of peak-to-peak amplitude of 1.5mm and frequency of 10 to 55Hz for 2 continuous hours, misoperation of the contact shall be 1ms max. in the free position and total travel position.															
	· Allowable operating speed: 0.3 mm/s to 0.5 m/s At the lowest speed, contact instability shall be 0.1s max. At the highest speed, the actuator shall not be damaged.															
	· Mechanical operating frequency: 120 cycles/minute max.															
	5. LIFE (Under the standard test condition specified in the NECA C 4508)															
	· Mechanical life: 2000 k cycles min. at 70 to 100% of the rated O.T.															
· Electrical life: Operating frequency of 20 cycles/minute max.																
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Contact material</th> <th style="width: 45%;">Condition</th> <th style="width: 30%;">Operation cycle</th> </tr> </thead> <tbody> <tr> <td rowspan="2" style="text-align: center;">Silver</td> <td>5A-250 Vac 0.4A-125 Vdc 0.2A-250 Vdc</td> <td style="text-align: center;">30k cycles min.</td> </tr> <tr> <td style="text-align: center;">(3A-250 Vac 0.4A-30 Vdc 0.2A-125 Vdc 0.1A-250 Vdc)</td> <td style="text-align: center;">(100k cycles min.)</td> </tr> <tr> <td style="text-align: center;">Gold Alloy</td> <td>0.1A-125 Vac 0.1A- 30 Vdc</td> <td style="text-align: center;">2000k cycles min.</td> </tr> </tbody> </table>						Contact material	Condition	Operation cycle	Silver	5A-250 Vac 0.4A-125 Vdc 0.2A-250 Vdc	30k cycles min.	(3A-250 Vac 0.4A-30 Vdc 0.2A-125 Vdc 0.1A-250 Vdc)	(100k cycles min.)	Gold Alloy	0.1A-125 Vac 0.1A- 30 Vdc	2000k cycles min.
Contact material	Condition	Operation cycle														
Silver	5A-250 Vac 0.4A-125 Vdc 0.2A-250 Vdc	30k cycles min.														
	(3A-250 Vac 0.4A-30 Vdc 0.2A-125 Vdc 0.1A-250 Vdc)	(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 (no freezing)																
· Operating humidity: 45 to 85 %RH																
· Storage temperature: -10 to +60 °C																
· Storage humidity: 98 %RH max. (stored with sealing plug)																
作成DR. SAKIYAMA 8. 24. '07		尺度 SCALE ~	記入のない公差 TOL. UNLESS NOTED ~													
10	~	6. 7. '12	KAWASHIMA	H.SASAKI	検図CHK. SATO 8. 24. '07											
07	ADDED	10. 1. '09	SATO	H.SASAKI	形番 MODEL VCX-7***-**											
06	ADDED	4.13. '09	SAKIYAMA	SATO	認可APPD SUDO 8. 24. '07											
03	DELETE	3. 6. '08	SAKIYAMA	SATO	名称 NAME EXPLOSION PROOF SWITCH											
頁 PAGE	改番 REV.	改番 REV.	来歴 RECORD	: 日付 DATE	担当 BY											
10	10	3/6	AD14962E	8. 24. '07	検閱 APPD.											



S.P. No.	Azbil Corporation				製品仕様書 SPECIFICATIONS																														
	7.RECOMMENDED TIGHTENING TORQUE																																		
	For mounting the switch on a panel:		5 to 6 N·m	(M5 hex. socket head cap screw)																															
	For mounting the lever on the switch:		4 to 5.2 N·m	(M5 hex. socket head cap screw)																															
	For mounting the terminal on the switch:		0.8 to 1.2 N·m	(M3.5 pan head screw with square washer)																															
	For mounting the cover on the housing:		5 to 6 N·m	(M5 hex. socket head cap screw with spring lock washer)																															
	For mounting the head on the housing:		1.3 to 1.7 N·m	(M4 pan head screw with spring lock washer)																															
	For tightening the inner earth terminal screw:		0.4 to 0.6 N·m	(M3 binding head screw with toothed lock washer)																															
	For tightening the outer earth terminal screw:		1.3 to 1.7 N·m	(M4 binding head screw with spring lock washer)																															
	8. APPLICABLE WIRE SIZE																																		
	· Terminal:		Stranded 0.5 to 1.5mm ² or Solid 0.5mm to 1.5mm ²																																
	· Inner earth terminal:		Use insulated crimp terminal for M3 screw.																																
	· Outer earth terminal:		Use crimp terminal for M4 screw, suitable for the wire of 4mm ² max.																																
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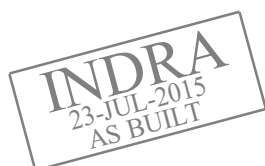
S.P. No.	Azbil Corporation				製品仕様書 SPECIFICATIONS																	
	⚠ WARNING																					
	<ul style="list-style-type: none"> ・ This switch conforms to EN / IEC explosion-proof standard. Use only within the area where the explosionproof structure is applicable. And perform cable entry and protection to meet applicable standards. ・ Don't touch inner parts while energized. You may have electrical shock. ・ Don't use this switch with cover or conduit open. Explosion may happen. ・ Terminal box of this switch has the increased safety enclosure construction. To prevent explosion, any bare live wire must not touch with enclosure. 																					
	⚠ CAUTION																					
	<ul style="list-style-type: none"> ・ When wiring, after removing cover by loosening 4 screws (M5x12 hex. socket head cap screw), perform necessary wiring to switch terminals. Uneven or loose tightening of cover screws or poor conduit connection may have an influence on the explosion proof function. ・ Do not disassemble the switch parts except cover for wiring and operation head for operation direction change. ・ Parts except lever can not be replaced. ・ When wiring the terminals, use single or stranded wire with a nominal cross-sectional area of 0.5 to 1.5mm² (AWG20 to AWG16). If there is not already a connector, use crimp-type terminals (for M3.5 screw terminals) with an insulating sleeve, such as those made by J.S.T Mfg Co. Ltd. ・ When connecting insulated crimp-type terminals to terminals 11(COM), 12(N.C.) and 14(N.O.), bend the crimp-type terminals upward to prevent contact with the cover. Otherwise the cover may not close properly. ・ Earth wiring must be provided. ・ Use an Exe compliant connector. If installation is done with a noncompliant connector, IP67 (EN60529) protection cannot be achieved. 																					
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Azbil Corporation <small>製品仕様書</small> SPECIFICATIONS	EXTERNAL VIEW 				
Terminal details 					
VCX-7*0 1 -** Roller lever may be reversed 	VCX-7*0 3 -** Roller lever may be reversed 	VCX-7*0 5 -** Roller lever may be reversed 	Sealing plug see note 5 		
Characteristics		VCX-700**		VCX-710**	
Operating force		15.7N max		15.7N max	
Release force		2.2N min		2.2N min	
Pretravel		10° max		12° max	
Movement differential		3° max		3° max	
Overtravel		35° min		35° min	
Simultaneity of two switches		~		3° max	
Notes					
1. This switch actuates in either direction. 2. In the mechanical characteristics "OF" and "RF" are the characteristics at 30mm lever length. 3. Housing cover and head are made of aluminum alloy and finished with gray paint. 4. External screws are made of stainless steel. 5. Do not remove the sealing plug until the wiring work. 6. Do not use wire insulated with silicone rubber. Doing so might result in contact failure. 7. Actuator head of VCX-700** may be rotated 180 degrees from the position shown. 8. Actuator head of VCX-710** may be mounted in any of four directions. 9. Roller lever may be locked in any position through 360 degrees. 10. Before using this switch, be sure the conduit is sealed.					
REVISION 8. 24. '07		尺貫SCALE 取入の寸法は寸法に限りなく適用される。		±0.8	
株式会社 SAKUYAMA 8. 24. '07		形番 VCX-7 ***-**-**		名称 EXPLOSION PROOF SWITCH	
6. 7. '12 KAWASUMI HISAKAMI		4. 13. '09 SAKUYAMA SATO		8. 24. '07 SAKUYAMA SATO	
06 DELETED		05 CHANGED		02 CHANGED	
10 ~		6. 7. '12 KAWASUMI HISAKAMI		4. 13. '09 SAKUYAMA SATO	
1. 5. '09 SAKUYAMA SATO		1. 8. '08 SAKUYAMA SATO		8. 24. '07 SAKUYAMA SATO	
日付DATE 8. 24. '07		氏名NAME 田中 秀一		数量NO. 10/6	
変更REV.		記録RECORD		承認APPROVAL	

INDRA
 23-JUL-2015
 AS BUILT

SP.NO.	Azbil Corporation		製品仕様書 SPECIFICATIONS			
	Terms and Conditions					
	We would like to express our appreciation for your purchase and use of Azbil Corporation's products.					
	You are required to acknowledge and agree upon the following terms and conditions for your purchase of Azbil Corporation's products (system 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					
	Azbil Corporation's 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 Azbil Corporation's product has any failure attributable to azbil during the aforementioned warranty period, Azbil Corporation 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:					
<ul style="list-style-type: none"> (1) Failure caused by your improper use of azbil product (Noncompliance with conditions, environment of use, precautions, etc. set forth in catalogs, specifications, instruction manuals, etc.); (2) Failure caused for other reasons than Azbil Corporation's product; (3) Failure caused by any modification or repair made by any person other than Azbil Corporation or Azbil Corporation's subcontractors; (4) Failure caused by your use of Azbil Corporation's 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 Azbil Corporation's shipment did not allow Azbil Corporation to predict; or (6) Failure that arose from any reason not attributable to Azbil Corporation, 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 Azbil Corporation shall not be liable for any damages, including direct, indirect, special, incidental or consequential damages in connection with or arising out of Azbil Corporation's products.						
2 Ascertainment of suitability						
You are required to ascertain the suitability of Azbil Corporation's 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:						
<ul style="list-style-type: none"> (1) Regulations and standards or laws that your Equipment is to comply with. (2) Examples of application described in any documents provided by Azbil Corporation 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 azbil is constantly making efforts to improve the quality and reliability of Azbil Corporation's products, there exists a possibility that parts and machinery may break down.						
You are required to provide your Equipment with safety design such as fool-proof design, *1 and fail-safe design *2 (anti-flame propagation design, etc.), whereby preventing any occurrence of physical injuries, fires, significant damage, and so forth. Furthermore, fault avoidance, *3 fault tolerance, *4 or the like should be incorporated so that the said Equipment can satisfy the level of reliability and safety required for your use.						
*1. A design that is safe even if the user makes an error.						
*2. A design that is safe even if the device fails.						
*3. Avoidance of device failure by using highly reliable components, etc.						
*4. The use of redundancy.						
3 Precautions and restrictions on application						
Azbil Corporation's products other than those explicitly specified as applicable (e.g. azbil Limit Switch For Nuclear Energy) shall not be used in a nuclear energy controlled area (radiation controlled area).						
Any Azbil Corporation's products shall not be used for/with medical equipment.						
The products are for industrial use. Do not allow general consumers to install or use any Azbil Corporation's product. However, azbil products can be incorporated into products used by general consumers. If you intend to use a product for that purpose, please contact one of our sales representatives.						
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 azbil 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, fault avoidance, fault tolerance, and other kinds of protection/safety circuit design on your own responsibility to ensure reliability and safety, whereby preventing problems caused by failure or nonconformity.						
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	REV.		RECORD	DATE	BY	CHK.



SP. NO.	Azbil Corporation		製品仕様書 SPECIFICATIONS			
		<p>(1) For use under such conditions or in such environments as not stated in technical documents, including catalogs, specification, and instruction manuals</p> <p>(2) For use of specific purposes, such as:</p> <ul style="list-style-type: none"> * Nuclear energy/radiation related facilities [For use outside nuclear energy controlled areas] [For use of Azbil Corporation's 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 * Facilities/applications associated directly with billing <p>(3) Supply systems such as electricity/gas/water supply systems, large-scale communication systems, and traffic/air traffic control systems requiring high reliability</p> <p>(4) Facilities that are to comply with regulations of governmental/public agencies or specific industries</p> <p>(5) Machinery or equipment that may affect human lives, human bodies or properties</p> <p>(6) Other machinery or equipment equivalent to those set forth in items (1) to (5) above which require high reliability and safety</p> <p>4 Precautions against long-term use Use of Azbil Corporation's products, including switches, which contain electronic components, over a prolonged period may degrade insulation or increase contact-resistance and may result in heat generation or any other similar problem causing such product or switch to develop safety hazards such as smoking, ignition, and electrification. Although acceleration of the above situation varies depending on the conditions or environment of use of the products, you are required not to use any Azbil Corporation's products for a period exceeding ten (10) years unless otherwise stated in specifications or instruction manuals.</p> <p>5 Recommendation for renewal Mechanical components, such as relays and switches, used for Azbil Corporation's products will reach the end of their life due to wear by repetitious open/close operations. In addition, electronic components such as electrolytic capacitors will reach the end of their life due to aged deterioration based on the conditions or environment in which such electronic components are used. Although acceleration of the above situation varies depending on the conditions or environment of use, the number of open/close operations of relays, etc. as prescribed in specifications or instruction manuals, or depending on the design margin of your machine or equipment, you are required to renew any Azbil Corporation's products every 5 to 10 years unless otherwise specified in specifications or instruction manuals. System products, field instruments (sensors such as pressure/flow/level sensors, regulating valves, etc.) will reach the end of their life due to aged deterioration of parts. For those parts that will reach the end of their life due to aged deterioration, recommended replacement cycles are prescribed. You are required to replace parts based on such recommended replacement cycles.</p> <p>6 Other precautions Prior to your use of Azbil Corporation's products, you are required to understand and comply with specifications (e.g., conditions and environment of use), precautions, warnings/cautions/notices as set forth in the technical documents prepared for individual Azbil Corporation's products, such as catalogs, specifications, and instruction manuals to ensure the quality, reliability, and safety of those products.</p> <p>7 Changes to specifications Please note that the descriptions contained in any documents provided by azbil are subject to change without notice for improvement or for any other reason. For inquires or information on specifications as you may need to check, please contact our branch offices or sales offices, or your local sales agents.</p> <p>8 Discontinuance of the supply of products/parts Please note that the production of any Azbil Corporation's product may be discontinued without notice. For repairable products, we will, in principle, undertake repairs for five (5) years after the discontinuance of those products. In some cases, however, we cannot undertake such repairs for reasons, such as the absence of repair parts. For system products, field instruments, we may not be able to undertake parts replacement for similar reasons.</p> <p>9 Scope of services Prices of Azbil Corporation's products do not include any charges for services such as engineer dispatch service. Accordingly, a separate fee will be charged in any of the following cases:</p> <ul style="list-style-type: none"> (1) Installation, adjustment, guidance, and attendance at a test run (2) Maintenance, inspection, adjustment, and repair (3) Technical guidance and technical education (4) Special test or special inspection of a product under the conditions specified by you <p>Please note that we cannot provide any services as set forth above in a nuclear energy controlled area (radiation controlled area) or at a place where the level of exposure to radiation is equivalent to that in a nuclear energy controlled area.</p>				
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