

FF7X SERIES (FFX1□□□C) EXPLOSION TYPE SIDE MOUNTING FLOAT SWITCH OPERATION MANUAL

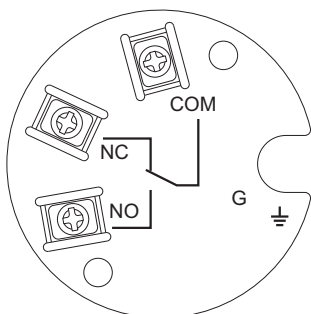
PRINCIPLE

Employ theory of liquid buoyancy for the main principle of "FF" series. With change of liquid level the float travels up and down. The reed switch inside the enclosure acts by the affect of magnet on pivot. The same theory applies to micro switch . Utilize the interaction between magnets of pivot and micro switch to activate micro switch.

SPECIFICATION

1. Contact Rating : 3A/250Vac
2. Contact Form : SPDT

WIRING DIAGRAM



TROUBLE-SHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
The float doesn't work	The pivot is blocked by granules.	Clean out the bitty or granules.
	The outer linking pipe is too long to make pivot function The float is blocked and. Inundated.	Shorten the length of outer linking pipe. Replace the float.
No signal output	Cable connection problem	Check the cable connection
	Reed Switch is damaged	Replace the reed or micro switch

*Shall the trouble not to be rooted-out, please contact us.



NEPSI Ex d IIC T3~T6 Gb
 IECEx Ex d IIB T4 or T5 or T6 Gb
 Ex tb IIIC T135°C or T100°C or T85°C Db
 ATEX Ex II 2G Ex d IIB T4 or T5 or T6 Gb
 Ex II 2D Ex tb IIIC T135°C or T100°C or T80°C Db

INSTALLATION INSTRUCTIONS FOR EX-PROOF PRODUCTS

1. Only the explosion proof type specifications can be used in explosive hazardous environments.
2. The product manufacturer must be contacted to handle the repairs involving explosion proof joints.
3. There should be no harmful gases which can corrode the housing of the product on the installation site.
4. The product shall be installed in the explosion proof zone. The conduit must be equipped with cable connector or plug-in cap approved by qualified certification agency for explosion proof standards; Ex d IIC Gb the screw of conduit should be 1/2" NPT, and the number of meshing buckles must be more than 5 buckles before it can be used in the explosive hazardous environments.
5. In the explosion proof mark of the product, the relation between the temperature group & measured medium temperature & permissible maximum surface temperature are as follows:

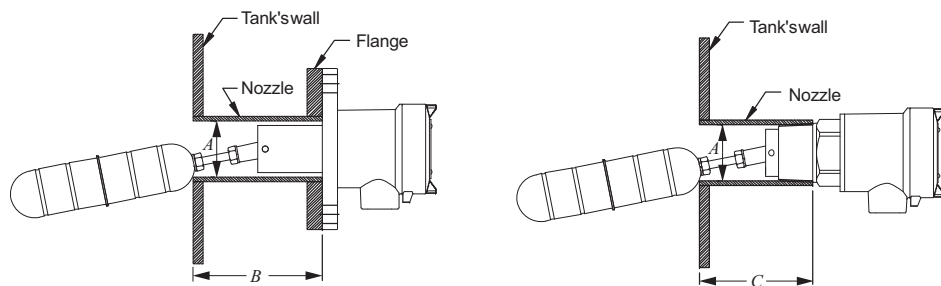
Temperature group	T3	T4	T5	T6
Medium temp.	≤ 200°C	≤ 135°C	≤ 100°C	≤ 85°C
Permissible maximum surface temp.	≤ 195°C	≤ 130°C	≤ 95°C	≤ 80°C

※ The product's tolerable temperature shall be based on the latest product catalog issued by the Company and managed in accordance with the explosion proof certification mark.

6. The product equipped with a grounding terminal and reliable grounding shall be connected in installation for use.
7. The warning of "Open the Cover Only after Power off" must be strictly complied with when using and maintaining in the field.
8. The users are not allowed to replace the parts and components of the product by themselves. They shall work together with the product manufacturer to resolve the problems that occur during operations to prevent damage.
9. The installation, use and maintenance of the product must strictly comply with the product instructions and the following relevant standards:
 IEC 60079-19 "Explosive atmospheres - Part 19: Equipment repair, overhaul and reclamation".
 IEC 60079-14 "Explosive atmospheres - Part 14: Electrical installations design, selection and erection" (other than mines).
 IEC 60079-17 "Explosive atmospheres - Part 17: Electrical installations inspection and maintenance" (other than mines).

INSTALLATION

1. The cable duct must face downward.
2. The float and extension rod must be inserted into a bin completely.
3. Check the liquid object's S.G. before installation.
4. The mounting hole must be larger than that of float.
5. Don't to mount the devices near the bin's inlet or outlet.
6. When the float move to horizontal position, the switch will be turned on or off.
7. The length of the nozzle has to comply with the pipe diameter. If the length of nozzle is too long it will affect the switching movement. The suggested maximum length of the nozzle is listed as below table:



(Unit:mm)

Pipe inner diameter (A)	Float Ø41X150L		Float Ø50X150L		Float Ø75X120L	
	Flange connection max.(B)	Screw connection (C) max.	Flange connection (B) max.	Screw connection (C) max.	Flange connection (B) max.	Screw connection (C) max.
45	102	91	⊕	⊕	⊕	⊕
50	103	92	102	91	⊕	⊕
55	105	94	103	92	⊕	⊕
60	108	97	106	95	⊕	⊕
65	112	101	107	96	⊕	⊕
70	122	111	110	99	⊕	⊕
75	135	124	114	103	106	95
80	148	137	124	113	107	96
85	161	150	137	126	109	98
90	170	159	150	139	112	101
95	186	175	163	152	115	104
100	199	188	169	158	119	108
105	212	201	188	177	125	114
110	225	214	201	190	136	125
115	⊙	⊙	214	203	149	138
120	⊙	⊙	⊙	⊙	162	151
125	⊙	⊙	⊙	⊙	174	163
130	⊙	⊙	⊙	⊙	⊙	⊙

⊕: Float dia is larger than the nozzle dia so sensor cannot be insert.

⊙: Nozzle length is not limited.

8. Tolerance of the total product length is $\pm 5\text{mm}$

MAINTAIN

- 1) Clean out the bitty or granule from float & pivot regularly.
- 2) Please check & fix all components into correct position.

BEFORE USE / OPEN CHECK

- 1) Please check the packing situation.
- 2) Please contact us while find the damage.
- 3) Please check carton content :
 - a)One set of Complete Product.
 - b)One set of Operation Manual.
 - c)One set of QA certificate.



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