

# The RF Admittance Level Switch

—CRF312 series



## Features

- High / Low fail safe modes.
- Simulation alarm function.
- DPDT, output 5A/250Vac.
- Adjustable delay output 0-30S.
- Unaffected by buildup.
- Available in rod & rope type.
- Available in Integral & remote models.
- Suitable for high-temperature (up to 550°C).
- Easy installation.

## Measuring principle

The electrode rod of RF admittance level switch consists of measuring electrode, shielding electrode and grounding electrode. These three kinds of electrodes are isolated by insulating material. When the media touches the measuring electrode the admittance between the measuring electrode and the grounding electrode will increase and the media level changes can be judged by the change of admittance. The shielding electrode which is placed between the measuring electrode and the grounding electrode has a signal waveform exactly the same as the measuring electrode but the shielding electrode and the measuring electrode are completely isolated and independent. Therefore, the admittance change between the measuring electrode and the grounding electrode can be suppressed when there is buildup on the electrode. Thus, it can avoid false alarm when buildup happens.

## Applications

The RF admittance level switch is suitable for detection of liquid, slurry, solid, particle and interface, such as, asphalt factory, brewery, cement plant, coking coal plant, food plant, flour plant, glass plant, paint plant, plastic plant, coal mine plant, power plant, paper mill, pharmaceutical plant, water treatment plant, beverage plant, etc.



## Specifications



Standard version



Standard L version



High-temperature version

Process temperature	-40°C...150°C	-40°C...150°C	-40°C...232°C
Ambient temperature	-40°C...70°C		
Housing/Protection	Aluminium/IP65		
Material of electrode rod	SUS304/316		
Insulating material	PTFE	PTFE	PEEK
Process connection	G1" or 1"NPT		
Sensitivity	0.3PF		
Power supply	24VDC or 220VAC		
Power	Max.2W		
Fail safe modes	High/Low level		
Cable entry	1/2"NPT×2 holes		
Output	5A/250VAC, DPDT or NPN/PNP		
Delay	0...30S, adjustable		
Process pressure	Vacuum...20bar		
Simulation alarm function	Optional		



Ultra-high temperature version



Steel rope version



Mini version

Process temperature	-40°C...550°C	-40°C...150°C	-40°C...150°C
Ambient temperature	-40°C...70°C		
Housing/Protection	Aluminium/IP65		
Material of electrode rod	SUS304/316/316L	SUS304/316	SUS304/316
Insulating material	Ceramics	PTFE	PTFE
Process connection	G1" or 1"NPT		
Sensitivity	0.3PF		
Power supply	24VDC or 220VAC		
Power	Max.2W		
Fail safe modes	High/low		
Cable entry	1/2"NPT×2 holes		
Output	5A/250VAC, DPDT or NPN/PNP		
Delay	0...30S, adjustable		
Process pressure	ATM	Vacuum...20bar	Vacuum...20bar
Simulation alarm function	Optional		

## Ordering Code

CRF312-											
	1	2	3	4	5	6	7	8	9	10	11

<b>1:Approval</b>	
XX	Standard version
FX	Ex d IIC T6 Gb
GX	Ex tD A21 IP66 T80°C
<b>2:Type of sensor</b>	
S	Standard version (process temperature: -40°C...150°C/process pressure: vacuum...20bar)
L	Standard L version (process temperature: -40°C...150°C/process pressure: vacuum...20bar)
H	High-temperature version (process temperature: -40°C...232°C/process pressure: vacuum...20bar)
U	Ultra-high temperature (process temperature: -40°C...550°C/ATM) Anti-explode version: up to 450°C
R	Steel rope version (process temperature: -40°C...150°C/process pressure: vacuum...20bar)
M	Mini version (process temperature: -40°C...150°C/process pressure: vacuum...20bar)
T	Customized
<b>3:Material of sensor</b>	
0	SUS304
6	SUS316
8	SUS316L
T	Customized
<b>4:Insulating material</b>	
N	PTFE
O	PEEK
P	Ceramics
T	customized

<b>5:Process connection</b>	
C	Thread G½"
A	Thread G¾"
E	Thread G1"
G	Thread G1½"
F	Thread 1"NPT
L	φ50.5 tri-clamp
W	Movable sleeve
T	Customized
<b>6:Output</b>	
A	Relay 0/P
B	NPN/PNP(Max.50mA)
T	Customized
<b>7:Power supply</b>	
0	24VDC (Anti-explode version can only choose this item)
1	220VAC
2	24VDC with simulation alarm function
3	220VAC with simulation alarm function
<b>8:Cable entry</b>	
M	M20*1.5
N	½NPT
<b>9:Installation</b>	
I	Integral
R	Separate
<b>10:Probe length (mm)</b>	
0500	
1000	
1500	
..... Probe length: 0500...9999	
<b>11:Industry code</b>	
XX	Industry code