

MODEL KRE, KRD, KSD

**INTRINSIC SAFETY CAPACITANCE
LEVEL SENSOR**



Features

- Usable in hazardous location
- Up to 200 meters separation distance
- Adjustable at remote safe location

Approvals

Intrinsically safe as i3aG5 for KRE and KRD system
Intrinsically safe as i3nG5 for KSD system

Technical Notes:

1. Since these systems are approved as the complete assembly, place your order for the sensor and the amplifier together.
2. Return these systems to NOHKEN for repair and/or replacement, when modification, disassembly, or replacement of parts is needed.

General Description

For application in hazardous area, the KRE, KRD, and KSD series are recommended. Model KRE and KRD system are approved as intrinsically safe of i3aG5 and Model KSD system is approved as intrinsically safe of i3nG5 by Technical Institute of Industrial Safety (TIIS), Japanese Ministry of Labor.

The remote amplifier of these systems can be mounted up to 200 meters away from sensor. All field adjustments are made at remote safe location. KRE6000 is outdoor use, and KRE6200, KRI and KSI is indoor use.

Recommended cable for KRE is RG62A/U which can not be shorten or extended at site. Therefore, separation distance has to be informed, when you order. The 3-core shielded cable of CVVS-3C is recommended for KRD and KSD. This cable can be shorten or extended at site. Therefore, it is convenience for you when you do not know the separation distance.

Ordering Information

1. Sensor

KRE65	Intrinsically safe for outdoor and indoor use	
KRD	Intrinsically safe for indoor use	
KSD	Intrinsically safe for indoor use	
	2	Standard
	3	Heavy duty
	5	Flat probe
	6	Wire extension
	9	High sensitivity
	N	Plug mounting
	F	Flange mounting
	T	with heat radiation fin
	P	FEP tubing (for 2F only)
	PT	FEP tubing with heat radiation fin (for 2F only)
	A	Foam detection
	H	New Housing for KRD & KSD
	0	Flat-face flange
	1	Raised-face flange
	4	Plug mounting
	J	JIS flange
	A	ANSI flange
	D	DIN flange
	G	G plug
	R	R plug
	T	NPT plug
	S	304 stainless steel
	S6	316 stainless steel
	F	Insulator, PTFE for 2, 3, 9, and PE for 5, 6.
	C	Ceramic insulator for high temp.
	0	Viton shield
	1	Thermiculite shield
	2	Kalrez shield
	3	Perfluore shield
	□□□□	Specify the probe length

KRE65	2	N		4	R	S	F	0	250	= KRE65-2N-4RSF0-250
KRD	2	N	H	4	R	S	F	0	250	= KRD-2NH-4RSF0-250

- * The mounting size should be specified when you order.
- * The length of electrode and insulator should be specified in mm if required.
- * The separation distance and medium must be informed when you order for sensitivity setting.
- * The operating temp, and pressure should be informed for correct model selection.

2. Amplifier

KRE6000	Connect with KRE65 for mounting at site	
KRE6200	Connect with KRE65 for mounting indoor	
KRI	Connect with KRD	
KSI	Connect with KSD	
	1	100/200V AC
	2	110/220V AC
	3	120/240V AC for KRI and KSI

KRE6000	1	=KRE6000-1
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Specifications

Sensor

Model	2N	2F	3N	3F
Description	Standard		Heavy duty	
Drawing				
Mounting	R3/4	JIS5K25A	R1	JIS5K25A
Operating Temperature	-10°C to 40°C (Recognized by TIIS for using in hazardous location)			
	-20°C to 60°C (180°C Max. for Heat proof type)			
Maximum Pressure	1MPa / 10bar		3MPa / 30bar	
Maximum Humidity	85% RH			
Material	ADC12			
	304SS*			
	PTFE*			
	Viton*			
Cable Entry	G1/2			
Protection	IP65			
Length of Electrode	Standard 250mm		Option 50 to 4000mm	
			100 to 1000mm	

*Other materials are available.

*The specification of products shall be changed by the application and operational condition.

Amplifier

Model	KRE6000	KRE6200
Drawing		
Supply Power	100/200, 110/220V AC, 50/60Hz	
Power Consumption	Approx. 2.5VA Max.	
Relay Output	1 SPDT, 250V 2A AC/30V 2A DC (Resistive) C-A: Normally Open contact C-B: Normally Closed contact	
Operating Temperature	-10°C to 40°C	
Maximum Humidity	85% RH	
Sensitivity	0.5 to 4000pF	
Material	AC	Steel structure and Acryl
Cable Entries	3-G1/2	φ10 and φ16 holes
Protection	IP54	IP10
Recommended Cable	RG 62 A/U	

*Other materials are available.

5F	6F	9N	9F
Flat probe		High sensitivity	
KRE	KRD/KSD	KRE	KRD/KSD
JIS5K50A	JIS5K50A	R1	JIS5K50A
-10°C to 40°C (Recognized by TIIS for using in hazardous location)			
-20°C to 60°C (180°CMax. for Heat proof type)			
1MPa / 10bar	500kPa / 5bar	1MPa / 10bar	
85% RH			
ADC12			
304SS*			
PE*		PTFE*	
Viton*			
G1/2			
IP65			
65mm	1000mm	250mm	
5 to 500mm	500 to 10000mm	50 to 4000mm	

KRI/KSI
100/200, 110/220, 120/240V AC 50/60Hz
Approx. 4VA Max.
1 SPDT, 250V 2A AC/30V 2A DC (Resistive)
C-A: Normally Open contact
C-B: Normally Closed contact
-10°C to 40°C
85% RH
More than 5pF or 90pF
Steel structure
φ 8 and φ 12 holes
IP10
3-core shielded cable