Range-finder Type Close Crane Warning Device

KAD-200/300

Easy to set optional distance

This equipment is composed of the amplifier unit and the reflector. It detects when crane or AGV etc. is close.

It measures the distance between the unit and the reflector with phase and executes output. Trouble output(FAULT) executes when light-emitting amount or light-receiving amount is getting lower or troubled.

- Speed-down and stop of crane etc. can be controlled by 2-step output. (3-step for KAD-300)
- It is easy to set optional detecting distance by pushing the button for distance setting.
- It always makes a self-diagnosis with inner circuit and it prevent the troubles beforehand.
- It outputs the distance data(I mode) with analog value(0 to 10V) and it outputs light-receiving amount(I mode) with analog value.
- It is easy to make an optical axis with 5-point level meter.*





Specifications

Туре	Retro-reflection type				
Model No.	KAD-200	KAD-300			
Power source	100 to 240VAC (15%, -10% 50/60Hz)				
Power consumption	10VA or less when 100VAC, 15VA or less when 100V	/AC			
Detecting distance	0.4 to 20m	1 to 30m			
Detectable objects	Reflector RRP-KAD01				
Directional angle	±2.5°				
Absolute precision	土400mm	±800mm			
Repeatability	±200mm	±400mm			
Hysteresis	500mm				
Resolution	80mm	160mm			
Response time	50msec*3				
Control output (OUT1, 2*1)	Contact output: 1C relay (250VAC 3A $\cos \phi = 1$), Relay isn't excited, lamp lights up when within setting distance				
Trouble output (FAULT)	1C relay(250VAC 3A $\cos \phi = 1$) Relay isn't excited, lamp lights up or flickers when light-emitting/receiving amout is getting lower				
Distance/light-receiving amout analog output	It output distance data/light-receiving amout*2 with analog value. (Don't use it except for adjustment)				
Connection	M4 screw terminal (15 pins)				
Ambient illuminance	10,000lux or less (Halogen and mercury light), 6,000lux (incandescent lamp: Max.illuminance)				
Ambient temperature	-10 to +55°C				
Ambient humidity	85%RH (not icing, not condensing)				
Insulation resistance	$100M\Omega$ or more (between power/output contact and case)				
Withstand voltage	AC1,500V, 1min. (between power/output contact and case)				
Vibration resistance	Double amplitude 1.5mm, 10 to 55Hz, each 2 hour in X, Y and Z directions				
Impact resistance	490m/s ² , each 10 times in X, Y and Z directions				
Case materials	Steel plate (SPCC)				
Weight	Sensor: Approx. 3kg, reflector: Approx. 4.5kg				

*1. KAD-300 is OUT1, 2, 3

*2. Changed by mode setting switch(I side: light-receiving amount analog output, I side: distance analog output)

*3. It doesn't operate for 2 sec. after putting power source in.

Installing example

In case that, 2 pcs or more of KAD are installed closely



Connection



• Control output (OUT1, OUT2)

Terminal No.		1-2	2-3	4-5	5-6
Power-off state		OPEN	CLOSE	OPEN	CLOSE
Power- on state	Within setting distance	OPEN	CLOSE	OPEN	CLOSE
	Without detecting distance	CLOSE	OPEN	CLOSE	OPEN

• Trouble output (FAULT)

Terminal No.		9-10	10-11	
Power-c	off state	OPEN	CLOSE	
Power-	When normal	CLOSE	OPEN	
on state	When troubled	OPEN	CLOSE	

KAD-300



• Control output (OUT1, OUT2, OUT3)

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Termina	al No.	1-2	2-3	4-5	5-6	7-8	8-15
Power-	off state	OPEN	CLOSE	OPEN	CLOSE	OPEN	CLOSE
Power- on state	Within setting distance	OPEN	CLOSE	OPEN	CLOSE	OPEN	CLOSE
	Without detecting distance	CLOSE	OPEN	CLOSE	OPEN	CLOSE	OPEN

Trouble output (FAULT)

Terminal No.		9-10	10-11	
Power-o	off state	OPEN	CLOSE	
Power-	When normal	CLOSE	OPEN	
on state	When troubled	OPEN	CLOSE	

External dimensions



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