

FD-A310C series

Fiber type / HMD

Focus on basic functions for low cost



Amplifier
Model:FD-A310C
Model:FD-A310CM

Fiber optic cable
(different models available)



Optical head
Model : OHC

For Steel & Heavy Industries

FD-A310 C series are hot metal detectors (HMDs) that directly detect infrared radiation from heated glass or steel.

Glass fiber optic cables with high heat resistance and transmission factor are used for detecting heads, which transmit the detected infrared rays to amplifiers that amplifies the signals for output.

Two output types are available: mini power relay output and photo-MOS relay output for AC/DC control.

- Compact, lightweight amplifier
- Flexible heat resistant fiber optic cables

Type/Price

Type	Model	Specification overview				
Amplifier	FD-A310C	Power supply : 100-220VAC	Output	Relay output		
	FD-A310CM			Photo-MOS relay output		
Fiber	GT205AD	Fiber length	Lowest detection temperature (*)	0.5m	320°C	Heat resistance 200 °C, IP 67
	GT21AD			1m	330°C	
	GT22AD			2m	350°C	
	GT23AD			3m	370°C	
	GT25AD			5m	390°C	
	GT27AD			7m	410°C	
	GT210AD			10m	430°C	
Optical head	OHC	Heat resistance 200 °C, IP 67				

*)These temperatures are inherent performance applicable when heated material is larger than the detecting field of view. For actual usage, consider at least 50 °C above these temperatures as guidelines. Heated material smaller than the field increases the lowest detectable temperature.

• Ordering Guide

The FD-A310C series does not have set model Nos. Order by specifying the individual model Nos. of components.

Component Hood	Model	Quantity
Optical head	OHC	1
Fiber optic cable	GT205AD	1
Amplifier	FD-A310C	1

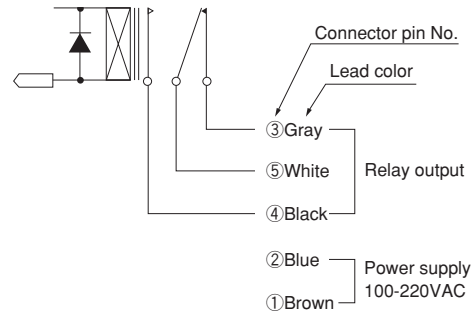
FD-A310C

Rating/Performance /Specification /Environmental Specification

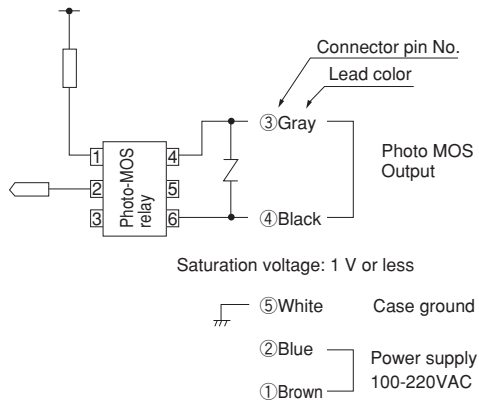
Model	FD-A310C	FD-A310CM
Output mode	Relay output	Photo MOS relay output
Control output	ON-OFF output (Light ON / Dark ON selector switch provided)	
Rating	1c 5A 250VAC or less (Resistive load)	1a 80 mA 250VAC/DC or less (Resistive load) Saturation voltage = 1 V or less
	Response time	10ms or less
Light-sensitive element	Ge photodiode	
Sensitivity wavelength	0.8-1.8 μ m	
Sensitivity adjustment	10-position digital switch without stopper	
Indication	Power indicator (P.L), operation indicator (OP.L), received light intensity indicator: 3-point	
Power Supply	100-220VAC +10% -15% 50/60Hz	
Power consumption	5W or less	
Connection	Cable with connector (outer diameter: ϕ 10.5 mm) 0.75mm ² x 5 cores, length 2m)	
Ambient temperature	Optical head, Fiber: -25°C to 200°C Amplifier: -25°C to 50°C (Non-freezing)	
Storage temperature range	-40°C to 70°C (Non-condensing)	
Ambient humidity	35 - 85%RH (Non-condensing)	
Insulation resistance	500VDC 20M Ω or higher	
Dielectric withstanding	1500 VAC for 1 minute	
Vibration	10-55 Hz / 1.5 mm double amplitude / 2 hours each in 3 direction	
Shock	500 m/s ² / 3 times each in 3 directions	
Protective structure	IP54	
Weight	Approx. 950 g (including cable with connector)	

Input/Output Circuit and Connection

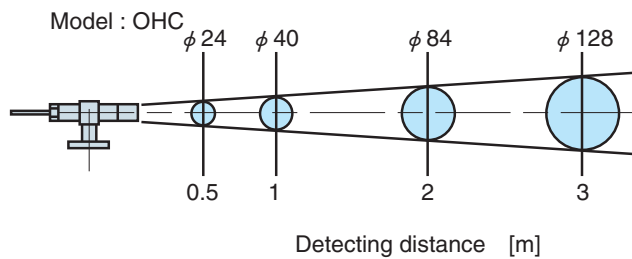
Model FD-A310C (Relay output type)



Model FD-A310CM (Photo MOS relay output type)

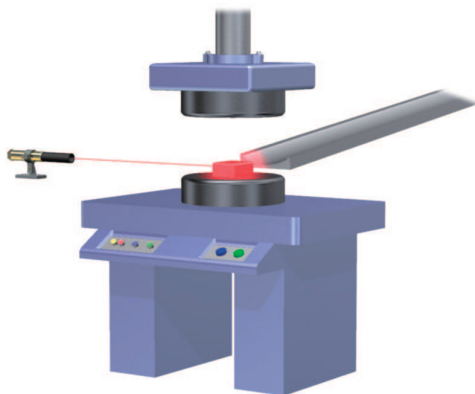


Detection field of view (mm)

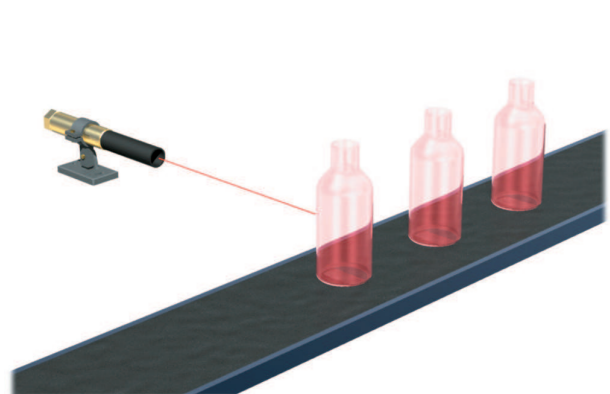


Applications

Detection of material on forging press



Detection of passage of heated bottles

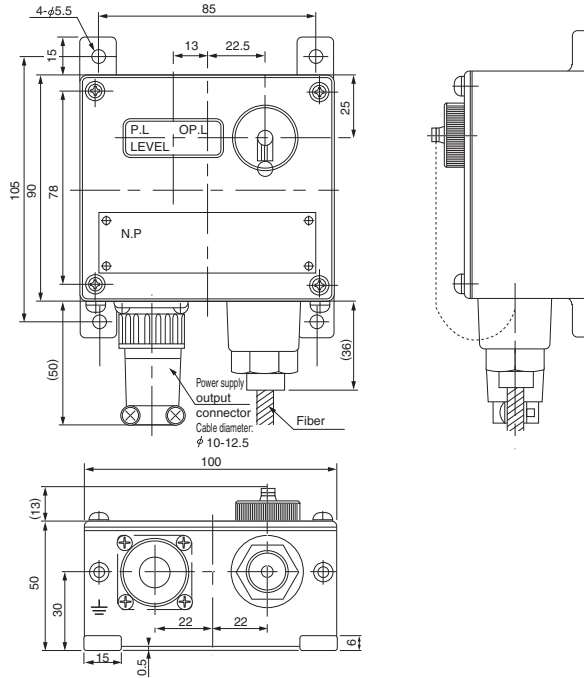


FD-A310C

Dimensions (in mm)

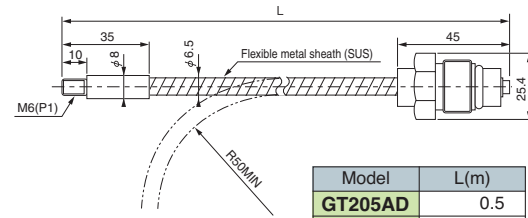
Amplifier

CAD



Fiber optic cable

CAD



Model	L(m)
GT205AD	0.5
GT21AD	1
GT22AD	2
GT23AD	3
GT25AD	5
GT27AD	7
GT210AD	10

Optical head

CAD

