

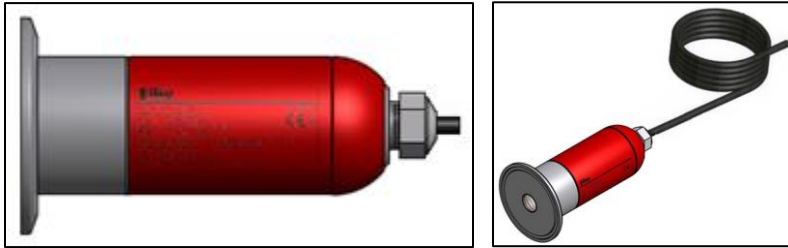
## IR OPTICAL DETECTORS

### DESCRIPTION

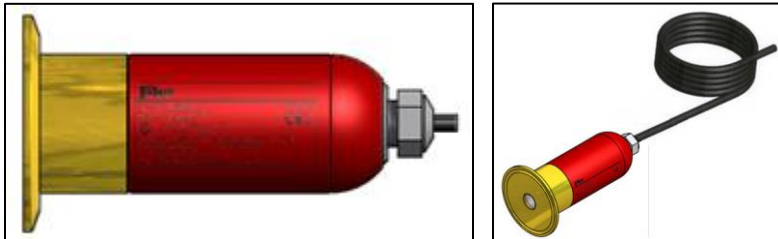
The Fike IR Optical Detectors consist of a photodiode installed into a robust stainless steel housing. The detector reacts to differences of the received radiation caused by for instance a flame passing by the lenses.

### TYPES

#### STANDARD IR OPTICAL DETECTOR

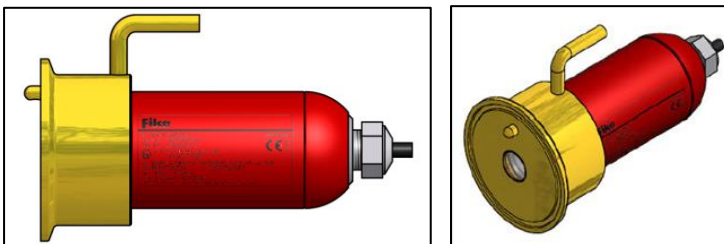


#### COATED IR OPTICAL DETECTOR



The titanium nitride coated tri-clamp process connection and the flush sapphire lens protect the IR optical detector from abrasive processes.

#### COATED IR OPTICAL DETECTOR WITH AIR PURGE



#### APPROVALS:

- ATEX
- CE
- IP67 (dust or hybrid)





With the integrated air purge the detector lens can be kept clean during operation to ensure the timely detection of an explosion in processes where product build up can be expected.

## **FEATURES AND BENEFITS**

- Wide viewing angle
- Flush sapphire polished lens
- Extremely fast response time
- High overpressure and temperature rating
- Corrosion resistance
- Removable head
- Long term stability
- Titanium nitride coating for wear resistance <sup>(1)</sup>
- Air purge for lens cleaning during operation <sup>(2)</sup>
- Approvals: CE, ATEX and IP 67 (Dust or Hybrid)

(1) Only applies to coated optical detectors (with and without air purge).


(2) Only applies to coated optical detector with air purge.

## **MOUNTING**

The IR Optical Detector is available in several different mounting configurations. Mounting accessories are also available to reduce product build-up and aid with installation. Contact your nearest Fike office or representative for more details.



## SPECIFICATIONS

Type	Standard IR Optical Detector <sup>(1)</sup>	Coated IR Optical Detector	Coated IR Optical Detector with Air Purge
Dust (D – black cable)	P/N 29985131	P/N 29985141	P/N 29985341
Hybrid (G/D – blue cable)	P/N 29985031	P/N 29985041	P/N 29985241
Sensing Principle	Photodiode		
Detection Range	400 nm – 1100 nm (peak 850 nm)		
Viewing Angle	100°		
Maximum process pressure	7 bar		
Process Connection	2" tri-clamp		
Wetted Parts	1.4404 (316L SST)	1.4404 (316L SST) with titanium nitride coating	
	Sapphire lens		
	Silicone and Viton FKM O-ring (both FDA)		
Housing	1.4404 (316L SST), Aluminum		
Temperature Range	Process: -20 to +80°C (Standard product) Process: -20 to +260°C ( With light guides) Ambient: -20 to +65°C Storage: -20 to +80°C		
Power Supply	18 to 30 VDC		
Current Consumption	100 mA max		
Output Signal	4 – 20 mA current loop 1x electronic switch (Alarm contact)		
Response Time <sup>(2)</sup>	< 4 ms		
Electrical connection	Fixed shielded cable 5 x 0.25 mm <sup>2</sup> Blue or Black diam. 6.0mm (length 3m)		
Approvals	CE  II 1GD Ex ia IIC T* Ga T6: -20°C < Ta < +54°C T5: -20°C < Ta < +65°C Ui= 28VDC Ii= 100mA Pi= 700mW Li= 3µH Ci= 3,5nF  II 1D Ex ta IIIC T258°C Da -20°C < Ta < +65°C  IP 67		

(1) Optional with light guide. See data sheet X.2.47.X.X for additional information.

(2) Response time definition: from light source (flame) to EPC controller output change.