

CERAMIC PRESSURE DETECTOR



Features

- Application Specific Integrated Circuit (ASIC) technology for high accuracy through compensation of linearity and temperature errors.
- Ceramic pressure sensing element.
- Continuous pressure measurement, dynamic, and threshold functionality.
- Fast response time.
- No oil-filled diaphragm.

General

The Fike ceramic explosion pressure detector is designed to continuously measure the pressures inside the protected hazards. The extremely fast response time of the pressure detector allows the Explosion Protection Controller (EPC) to take more than 4,000 samples every second. Using the same instantaneous speed, this information is then processed to determine if the pressure change is that of a developing explosion.

Approvals

- Factory Mutual (FM)
 - Explosion Suppression System
- Factory Mutual (FM) Hazardous
 - Class I, Div 1, 2, Group A, B, C, D
 - Class II, Div 1, 2, Group E, F, G
 - Class III, Div 1, 2
- Factory Mutual (FM) Hazardous
 - Class I, Div 1, 2, Group A, B, C, D
 - Class II, Div 1, 2, Group E, F, G
 - Class III, Div 1, 2
- Appareils destinés à être utilisés en ATmosphères EXplosibles (ATEX) II 1/2 D/G EEx ia IIC T6
- National Electronic Manufacturers Association (NEMA) 4X / IP65
- Eurasian Conformity Mark (EAC)*
- Certified Product Listing (CSA)
 - LR 159130
- Conformité Européenne (CE)

*Approval limited to part #2994502201-C-S

Ordering Information

Ceramic Detectors	
Fike Part No.	Description
29945022-C-S	316 SST body, FKM ¹ seal, ±4.35 psig
2994502201-C-S	316 SST body, FDA compliant EPDM seal, ±4.35 psig
02-11294	Hastelloy® (HC276) body, FFKM ² seal, ±4.35 psig
02-11339	316 SST body, FKM ¹ seal, -4 to +11 psig
02-13206	316 SST body, FKM ¹ Seal, -9 to +6 psig
02-14036	316 SST body, FFKM ² Seal, -9 to +6 psig

¹ Also known by the trade name Viton®.
² Also known by the trade name Kalrez® or Simriz®.

Intrinsic Safety Barriers*	
Fike Part No.	Description
02-15854	Single channel, 4-20mA with LED power indicator
02-15855	Dual channel, 4-20mA with LED power indicator

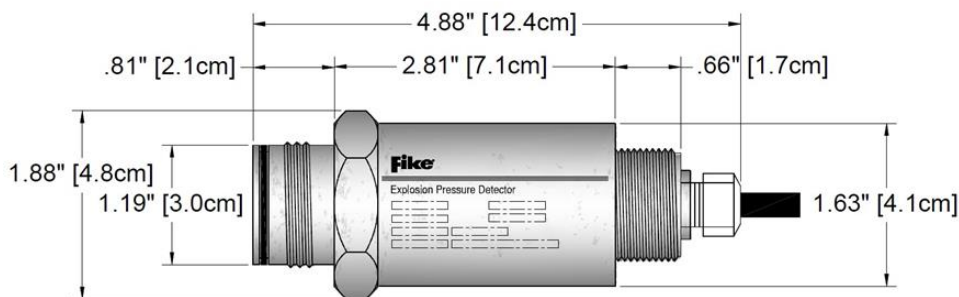
*Consult Fike CERex Manual E06-061 to determine if an intrinsic safety barrier is required.

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Specifications

Sensing Principle	Capacitive Ceramic
Pressure	Standard: ± 4.35 psig (± 300 mbarg) Extended Range: -6 to +9 psig (-414 to +621 mbarg) High Pressure: -4 to +11 psig (-276 to +758 mbarg)
Overpressure	60 psig (4 barg)
Deflagration Overpressure	175 psig (12 barg)
Vacuum Resistance	Full vacuum
Process Connection	G 1"
Material	Wetted: Ceramic (Al_2O_3) sensor, 316 SST/HC276 body, FKM/FFKM/EPDM seal Housing: 316 SST, Aluminum
Power Supply	12-30 Vdc (20.4-26.4 Vdc for FM applications)
Temperature Range	Maximum Process: +215°F (102°C) Cleaning Incidental: +300°F (149°C) Ambient/Storage: 0 to 140°F (-18 to +60°C)
Output	4-20mA
Response Time	< 1ms
Accuracy	$\pm 0.9\%$ of span with EPC
Enclosure	NEMA 4X / IP65
Humidity (non-condensing)	80% RH maximum

Product Diagram/Dimensions



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