

Technical Data Flame Sensor FFS07



Fig. 1 Flame sensor FFS07 plug-in version

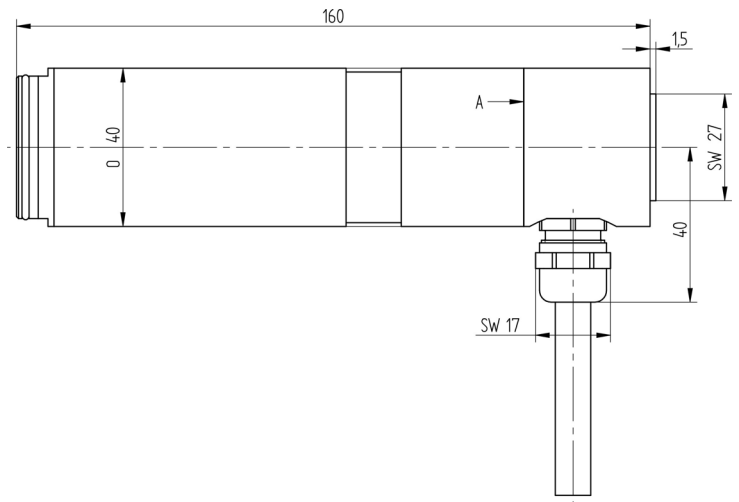


Fig. 2 Dimensional drawing flame sensor FFS07 plug-in version



Fig. 3 Flame Sensor FFS07 threaded connection version

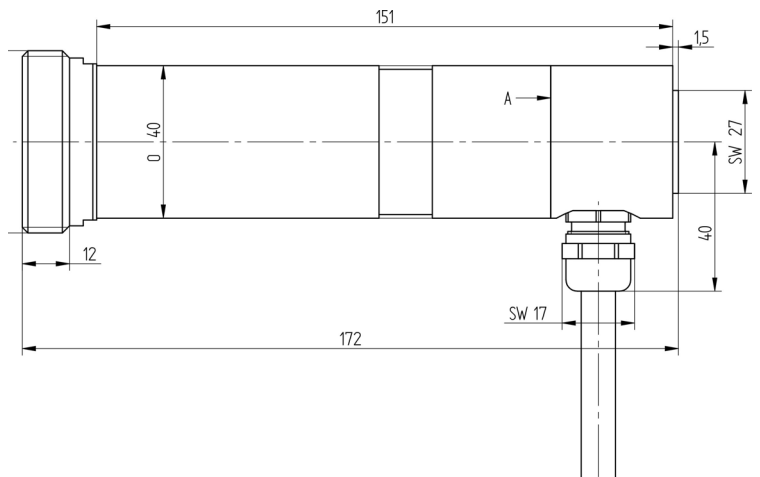


Fig. 4 Dimensional drawing flame sensor FFS07 threaded connection version

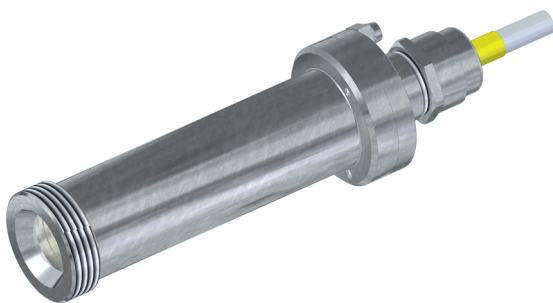


Fig. 5 Flame sensor FFS07 for Ex zone 1

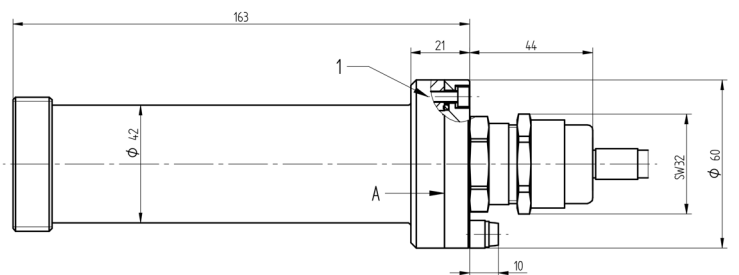


Fig. 6 Dimensional drawing flame sensor FFS07 for Ex zone 1

NOTICE

The connecting cable at FFS07 is marked for approx. 1.5 cm (0.6 in) with yellow heat-shrinkable sleeve.

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Dimension

Housing type	plug-in version (standard) V = threaded connection version Ex = potentially explosive area zone 1/21	
Weight	0.40 kg 0.88 lb	Standard version with 3 m 9.84 ft cable
	0.45 kg 0.99 lb	V-version with 3 m 9.84 ft cable
	0.50 kg 1.10 lb	Ex-version with 3 m 9.84 ft cable
Material	FFS07 (plug-in version and threaded connection version): Corrosion-resistant aluminium EN AW 6082 (seawater 2*; atmospheric condition 1*), nickel plated	
	FFS07 Ex: Brass EN CW614N, nickel plated	

* Comparative evaluation from 1 (very good) to 6 (unsuitable)

Characteristics

Operation possible with	F152, ETAMATIC, MCC CMS, MCC BC400	
Compatible	FFS07 UV FFS07 IR	successor type of FFS05 UV - ... successor type of FFS05 IR - ...
Viewing angle	UV IR	approx. 8° approx. 60°
Sensitivity measuring output	IR	> 10 mVAC
Spectral range	UV-4 IR-1 IR-1 T	215 ... 360 nm (replaces UV-2) 1.200 ... 2.800 nm 1.200 ... 2.800 nm

Input variable flame scanner

Auxiliary power

Voltage	max. 42 VDC min. 24 VDC
Current consumption	≤ 20 mA

Pulse

Current	High > 0,8 mA Low < 0,4 mA
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Output parameters

Signal canal A + B

Frequency	max. 170 Hz min. 7 Hz
Signal delay	negligible

Connection/extension cable

Type	6 x 0,5 mm ² 6 x 20 AWG shielded, z.B. LiYCY minimum cross section 0,5 mm ² 20 AWG
Cable length	< 300 m 984,25 ft

Wear Parts



	none
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
Technical Resilience

Operating mode	continuous operation 72 h operating according with TRD 604
Safety integrity level	DIN EN 61508 part 2 - SIL 3 in conjunction with F152
Overvoltage category	DIN EN 60730-1 ÜKIII
susceptibility to interference	DIN EN 60730-1
emitted interference	DIN EN 55022, class B

Application in hazardous areas of zone 1/21:

Certificate	EPS 14 ATEX 1 696 IECEX EPS 14.0042
Marking	 II 2G Ex d IIC T6 Gb  II 2D Ex tb IIIC T80°C Db

Application in hazardous areas of zone 2/22:

Certificate	IECEX IBE 15.0010X, ATEX Conformity
Marking	 II 3G Ex nA IIC T5 (T6) Gc X  II 3D Ex tc IIIC T95°C Dc X

Operating Condition

Relative humidity	0 % ... 95 % non-condensing
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Environmental Conditions

Operation	permissible temperature range	UV: -20 ... +65 °C -+4 ... +149 °F IR: -20 ... +60 °C -+4 ... +140 °F
Transport	permissible temperature range	UV: -20 ... +65 °C -+4 ... +149 °F IR: -20 ... +60 °C -+4 ... +140 °F
Storage	permissible temperature range	UV: -20 ... +65 °C -+4 ... +149 °F IR: -20 ... +60 °C -+4 ... +140 °F
Degree of protection	according to DIN EN 60529	IP67 for Ex zone 2 IP66 for Ex zone 1
Protection class		III

NOTICE

The limits of the technical data must be strictly adhered to.

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Order Information

NOTICE

All options marked with * correspond to the standard selection.

Description / Type	Order no.
Flame sensor FFS07, light incidence aperture is in line with the axis, IP66/IP67	659D21...
A 10 – SPECTRUM	Selection
TYP UV-4 UV-SPECTAL RANGE 215 ... 360 nm	04*
TYP IR-1 IR-SPECTAL RANGE 1.200 ... 2.800 nm	10
TYP IR-1 T IR-SPECTAL RANGE 1.200 ... 2.800 nm	20
A 20 – HOUSING	Selection
HOUSING FOR PLUG-IN, IP67, NEMA 4X Suitable bracket FH30-00, FH30-10, FH40-10	0
HOUSING WITH THREADED CONNECTION, IP67, NEMA 4X Suitable bracket FV30-00, FV30-10, FV40-10	V*
HOUSING IR WITH THREADED CONNECTION FOR EX-AREA 1 in acc. to ATEX and IECEx, IP66 Suitable brackets FV30-00, FV30-10, FV40-10	Z1 IR/V
HOUSING UV WITH THREADED CONNECTION FOR EX-AREA 1 in acc. to ATEX and IECEx, IP66 Suitable brackets FV30-00, FV30-10, FV40-10	Z1 UV/V
A 30 – CABLE LENGTH*	Selection
Length 10 m 33 ft	10
SILICON, length 10 m 33 ft ¹⁾	10/Si
Length 3 m 10 ft	3*
SILICON, length 3 m 10 ft ¹⁾	3/Si
Length 5 m 16 ft	5
SILICON, length 5 m 16 ft ¹⁾	5/Si
Length 0.3 m 1 ft, only available with plug	OE
SILICON, length 0.3 m 1 ft, only available with plug ¹⁾	OE/Si
¹⁾ not valid for flame scanners EX zone 1	
A 40 – PLUG	Selection
WITHOUT PLUG	0*
WITH PLUG	STE

The information in this publication is subject to technical changes.



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