

Technical Data F130I



Fig. 1-1 F130I

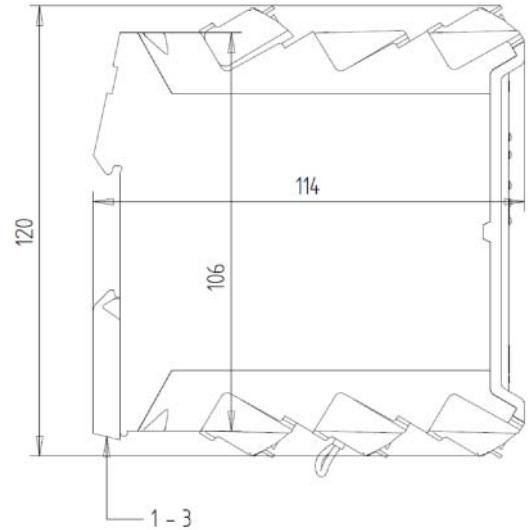


Fig. 1-2 dimensions F130I Housing material: Plastic

The right to make technical changes is reserved.

Input parameters	
Auxiliary power/device supply	
Supply voltage ¹	Factory setting 230 VAC +10 % -15 % or 120 VAC +10 % -20 %
Mains frequency ¹	47 Hz ... 63 Hz
Power consumption	≤ 10 VA
Internal device fusing	50 mAT for 230 V device 100 mAT for 120 V device
External device fusing (mandatory)	min. 500 mAT max. 4 AT
Ionisation input	
Supply voltage ^{1, 2} (Auxiliary power)	Device supply voltage
Ionisation current	from 1 µADC Flame ON
Mode	Continuous operation capable
¹ The product may not be transported, stored or operated outside the specified range. If it is, any guarantees with regard to safety-related functions lose their validity.	
² The attainable ionisation current at the plant is dependent on the supply voltage. The higher the supply voltage, the higher the sensitivity of the Ionisation lance. The min. sensitivity of the device of 1 uA is independent on the supply voltage. See also Chapter F130I connection diagram 120 V device.	
Connection cable for ionisation electrode	No limits (Note! The actual cable length is depending on the steam properties of the used cable. For a stable flame recognition, it should never fall below the sensor's minimum current!)
Connection cable for auxiliary power	< 3 m/9.8 ft
UV input	
Sensor voltage supply (Auxiliary power)	> 200 VAC- lead mains potential
Permitted external input voltage to X16/1 for connection of a switch contact	230 VAC 50/60 Hz

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Input parameters	
Input current in the ON state	$I_{\min} = 100 \mu\text{A}$
Mode	Intermittent operation Burner restart every ≤ 24 h necessary
Connection cable	< 10 m/32.8 ft
LDR input	
Sensor voltage supply (Auxiliary power)	≤ 42 V - lead mains potential
Detectable sensor resistance range	220 Ω ... 220 K Ω Flame ON
Sensor current	$\leq 100 \mu\text{A}$
Mode	Intermittent operation Burner restart ≤ 24 h necessary
Short-circuit detection	Yes
Connection cable	< 10 m/32.8 ft
Output parameters	
Output contact status signal	
Contact	Not safety-oriented, floating contact
Contact type	NO, in the event of a malfunction, the contact is closed.
Protection class	SKII, base isolation for the flame signal
Permissible switching voltage ¹	230 VAC $\cos \varphi \geq 0.3$
Contact fusing (internal)	1 AT
Specified external contact fusing ¹	0.5 AT
Flame signal output contact	
Contact	Safety-oriented, floating contact
Contact type	NO, for "flame ON", the contact is closed
Protection class	SKII, base isolation for the status signal
Permissible switching voltage ¹	≤ 230 VAC ≤ 48 VDC
Permissible switching current ¹	Max. 0.5 A $\cos \varphi 0,4$ Min. 10 mA provide external spark suppression for inductive loads, do not switch capacitive loads.
Contact fuse (soldered)	0.5 AT
Safety time (FFDT) Response time in the event of the flame going out	$t_{V \text{ Off}}$ configurable to 1 s or 3 s (standard 1 s) by using the DIP switch
Switch-on time	$t_{V \text{ On}} \leq 1$ s
Analogue output (current loop)	
Current	0/4 ... 20 mA
Load	max. 240 Ω
Intrinsic error	± 2 % from 1/3 of the value range
Connection cable	Connection cable ≥ 10 m/32.8 ft must be shielded and applied one side to FPE.
Shunt measuring	
Transmission ratio ionisation current to voltage to be measured	10 mV (DC) = 1 μA (DC)
Intrinsic error	≤ 2 %
Electrical safety	Contact protection by means of protective impedances

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Output parameters	
Min. impedance of the connected measuring device	1 MΩ
Connection cable	< 1 m/3.3 ft
Technical capacity	
Connection cross section	flexible 0.25 ... 2.5 mm ² /23 AWG ... 13 AWG rapid 0.20 ... 2.5 mm ² /24 AWG ... 13 AWG
Mode	Continuous operation for: <ul style="list-style-type: none"> • Ionisation flame monitoring Intermittent operation for: <ul style="list-style-type: none"> • Ionisation flame monitoring • Optical monitoring
Safety integrity level	DIN EN 61508 Part 2 - SIL 3
Overvoltage category	DIN EN 60730-1, ÜK III
Susceptibility to interference	DIN EN 298
Emitted interference	DIN EN 55022, Class B
Environmental capacity	
Protection class	DIN EN 60529, IP20
Ambient temperature ¹	-20 °C ... +60 °C/-4 °F ... 140 °F Environmental category D according to GL VI Part 7
Relative humidity	3K5, 5 % ... 95 % as per DIN EN 60721-3-3
Vibration and oscillation	GL, VI Part 7, Para. 9, characteristic 1 (0.7g/1.54 lb)
Storage/transport conditions	
Storage location	Enclosed spaces
Air temperature ¹	-20 °C ... +80 °C/-4 °F ... 176 °F
Relative humidity	According to DIN EN 60721-3-3: <ul style="list-style-type: none"> • Transport 2K3, up to 95 % • Storage 1K3, 5 % ... 95 %
Weight	approx. 0.5 kg/1.1 lb

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Order Information

Flame monitor F130I	Order number
Flame monitor F130I supply voltage 230 VAC	659G1001
Flame monitor F130I supply voltage 120 VAC	659G1002

Approvals



The information in this publication is subject to technical changes.

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