Moisture detectors and controllers

Moisture detectors type FF are used for signalling moisture breakthroughs in gas conditioning systems, which would damage the expensive gas analyser cell. They are placed into the gas stream and react to a very low moisture content hence they don't require the presence of condensate droplets.
After the cause of the high moisture is removed the moisture detectors will be dried by the gas stream. They are maintenance free.
The detectors can be used with the AGF-filters or with adapters type G or S.
The type FF-3 moisture detector provides a broken wire detection.

Several **controllers** for the FF moisture detectors are available:
Type ER 145 with intrinsically safe input and for long cables. One FF-1 or FF-3 can be connected.
In case of moisture detection the controller locks in and has to be resetted by switch. Moisture detection or a broken wire are shown by two LEDs.

Type FF-HM for rail mounting:

- connection of up to two moisture detectors FF-1 in parallel or one detector FF-3.
- potential free outputs for moisture detection and broken wire (the latter only with FF-3) in fail-safe mode.
- LEDs for power, moisture and broken wire
- configurable lock mode: detection may be locked or monostable. The reset in the locked mode may be done by the switch or external.

Types FF-x-U for wall mounting:

- these types have monostable outputs. Power, moisture detection and a broken wire are shown by LEDs.
- FF-1-U: one or two FF-1 may be connected. The controller has got two summarized outputs.
- FF-3-U: for connection of one FF-3. One summarized output for moisture and broken wire, one output for broken wire.
- FF-3-U-2: two FF-3-U units in one housing.

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11/1999

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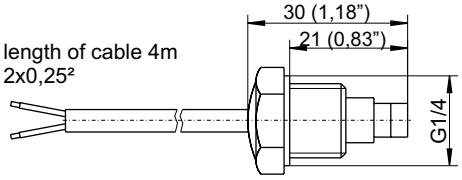
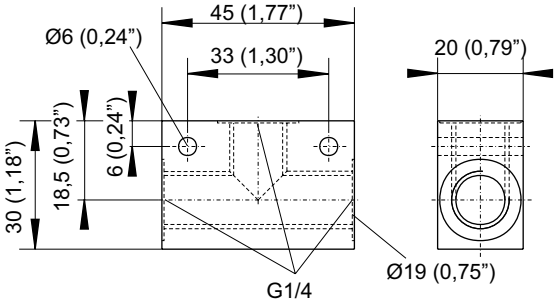
technical data

moisture detectors

	FF-1 and FF-3
material:	PVDF, stainless steel SS 316 Ti, Epoxy
length of cable:	standard 4 m / 13 ft
operating pressure max.:	4 bar / 58 psi
operating temperature max.:	80 °C / 176 °F
broken wire detection:	type FF-3





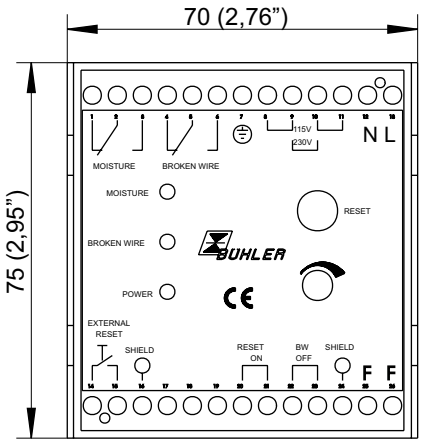
adapters

material	type G:	PVDF
	type S:	stainless steel SS 316

Controllers

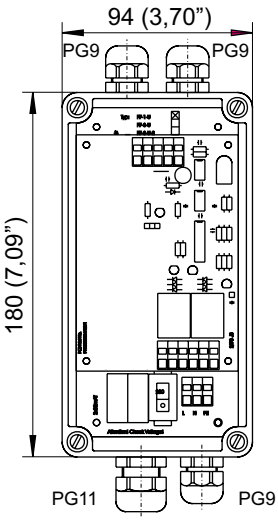
type	FF-HM-230	FF-HM 24	Typ FF-x-U	ER 145
power supply	230 / 115 V AC 50/60 Hz	24 V DC ±10%	230 / 115 V AC 50/60 Hz	230 V or 115 V AC 48…62 Hz
outputs max.	230 V / 2 A	230 V / 2 A	230 V / 2 A	AC: 250 V / 6 A DC: 30 V / 2 A
protection class	IP 40 terminals IP 20	IP 40 terminals IP 20	IP 65	IP 50 terminals IP 20
Ex-classification	-	-	-	Eex ia IIC
max. cable length	4 m / 13 ft	4 m / 13 ft	4 m / 13 ft	70 m / 230 ft
dimensions (B x H x T) mm	70 x 75 x 109	70 x 75 x 109	94 x 180 x 81	60 x 70 x 110
inches	2,8 x 3,0 x 4,3	2,8 x 3,0 x 4,3	3,7 x 7,1 x 3,2	2,4 x 2,8 x 4,3

FF-HM230



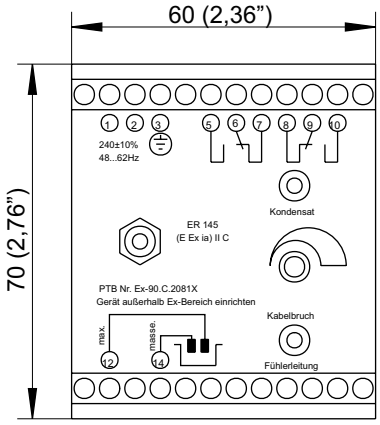
depth of housing 109 (4,29”)

FF-x-U



depth of housing 81 (3,19”)

ER-145



depth of housing 112 (4,41”)

Ordering information

part no..	*description*
41 10 999	moisture detector FF-1
41 89 999	moisture detector FF-3
40 11 000	adapter type G (PVDF)
41 11 005	adapter type S (stainless steel)
44 11 020	controller FF-HM-230
44 11 030	controller FF-HM-24
41 11 017	controller FF-1-U
41 11 015	controller FF-3-U
41 11 016	controller FF-3-U-2
41 11 012	controller ER-145, 230V
41 11 014	controller ER-145, 115V

we reserve the right to amend specification