




## Flow Transmitter FLUXUS F705\*\*-F2

### Technical Data

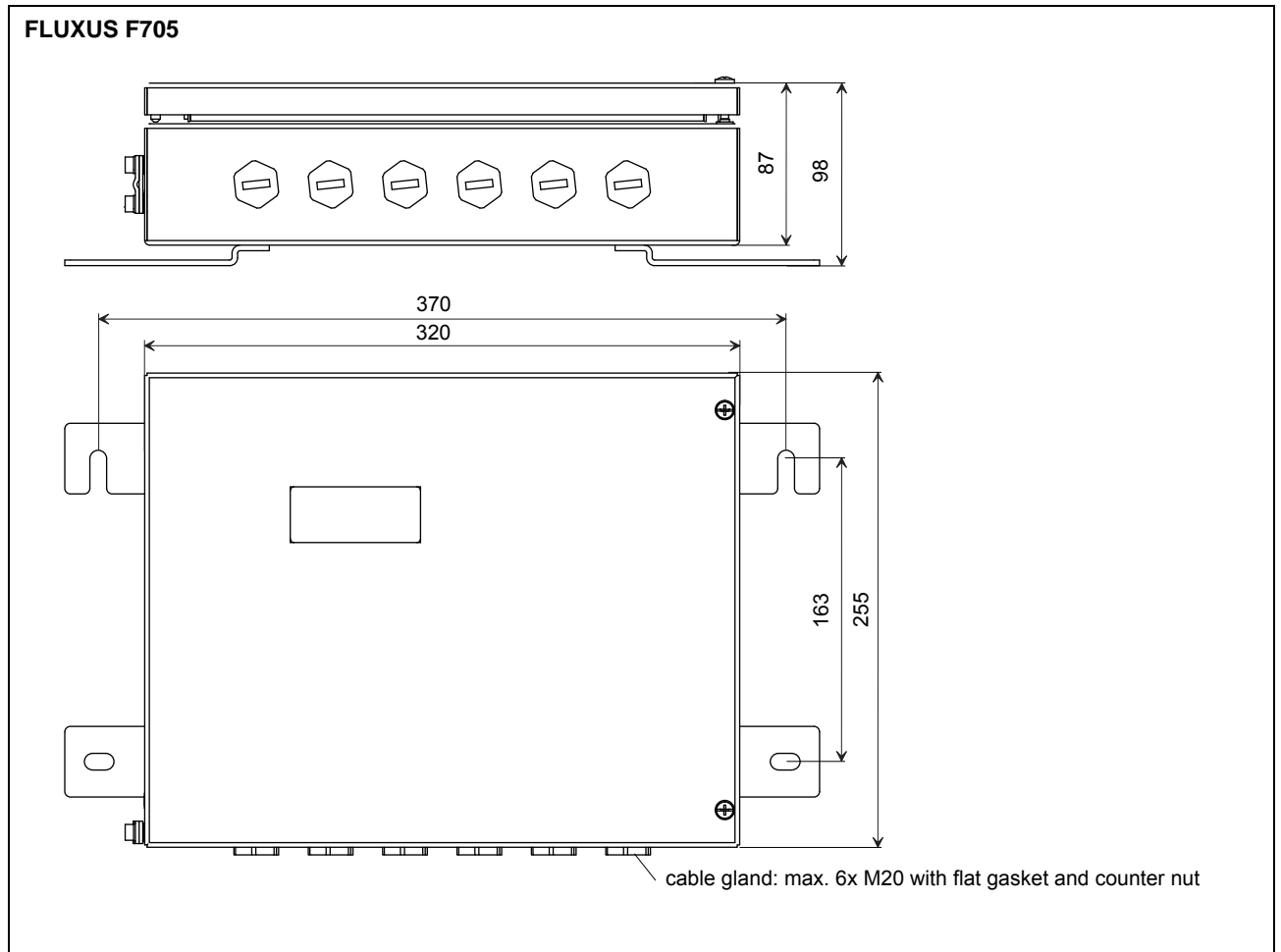
<b>FLUXUS</b>	<b>F705**-F2</b>
design	field device with stainless steel housing
	
<b>measurement</b>	
measurement principle	transit time difference correlation principle, automatic NoiseTrek selection for measurements with high gaseous or solid content
flow velocity	0.01...25 m/s
repeatability	0.15 % of reading $\pm$ 0.01 m/s
fluid	all acoustically conductive liquids with < 10 % gaseous or solid content in volume (transit time difference principle)
temperature compensation	corresponding to the recommendations in ANSI/ASME MFC-5.1-2011
<b>accuracy<sup>1</sup></b>	
with standard calibration	$\pm$ 1.6 % of reading $\pm$ 0.01 m/s
with advanced calibration (optional)	$\pm$ 1.2 % of reading $\pm$ 0.01 m/s
with field calibration <sup>2</sup>	$\pm$ 0.5 % of reading $\pm$ 0.01 m/s
<b>flow transmitter</b>	
power supply	100...230 V/50...60 Hz or 20...32 V DC
power consumption	< 15 W
number of flow measuring channels	1, optional: 2
damping	0...100 s, adjustable
measuring cycle (1 channel)	100...1000 Hz
response time	1 s (1 channel), option: 70 ms
housing material	stainless steel 316L (1.4404)
degree of protection according to IEC/EN 60529	IP66
dimensions	see dimensional drawing
weight	4.9 kg
fixation	wall mounting, optional: 2 " pipe mounting
ambient temperature	-20...+55/60 °C
display	2 x 16 characters, dot matrix, backlight
menu language	English, German, French, Dutch, Spanish
<b>explosion protection</b>	
<b>F M</b>	transmitter marking
	<p>F705**-F2 F703Z2**[1 or 2]:</p> <p style="text-align: center;">  NI/Cl. I,II,III/Div. 2/  GP. A,B,C,D,E,F,G/  T5 Ta = 60 °C </p> <p>F703Z2**9:</p> <p style="text-align: center;">  NI/Cl. I,II,III/Div. 2/  GP. A,B,C,D,E,F,G/  T4A Ta = 55 °C </p>
<b>measuring functions</b>	
physical quantities	volumetric flow rate, mass flow rate, flow velocity, heat flow (if temperature inputs are installed)
totalizer	volume, mass, optional: heat quantity
calculation functions	average, difference, sum (2 measuring channels necessary)
diagnostic functions	sound speed, signal amplitude, SNR, SCNR, standard deviation of amplitudes and transit times

<sup>1</sup> for transit time difference principle, reference conditions and  $v > 0.15$  m/s

<sup>2</sup> reference uncertainty < 0.2 %

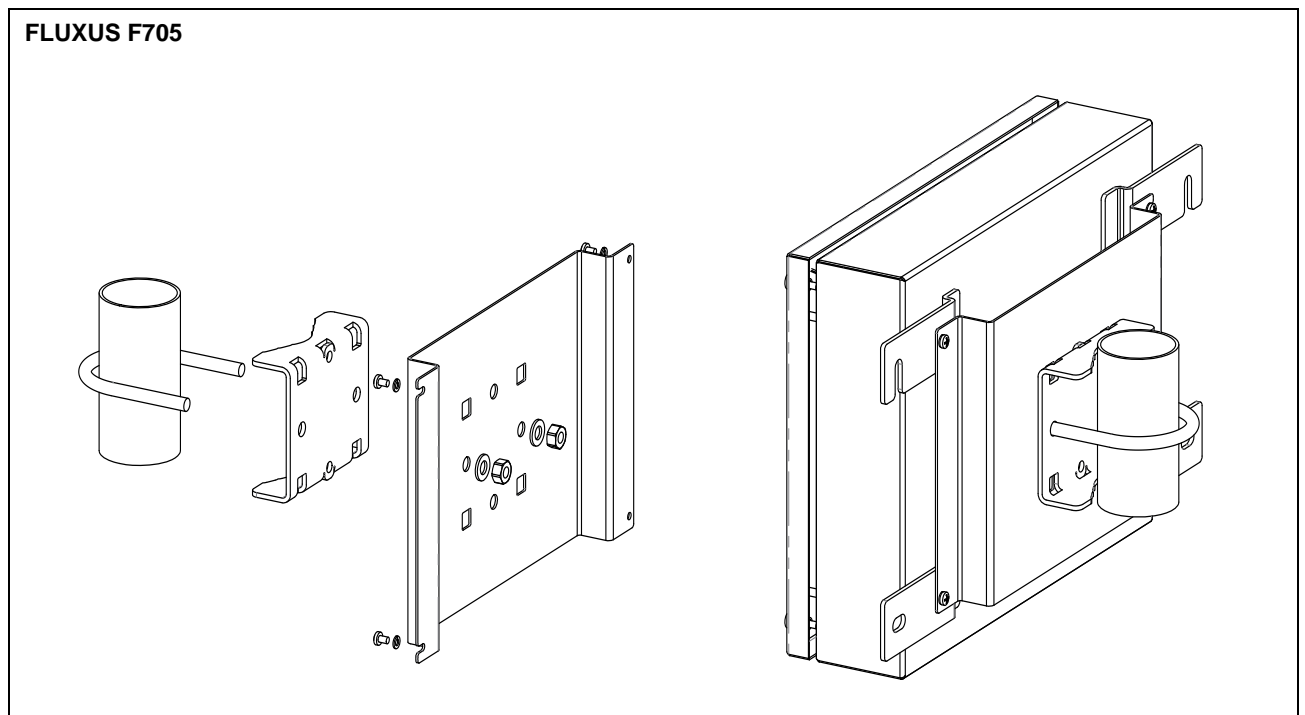
<b>FLUXUS</b>	<b>F705**-F2</b>
<b>data logger</b>	
loggable values	all physical quantities, totalized values and diagnostic values
capacity	> 100 000 measured values
<b>communication</b>	
interface	- process integration (optional): RS485 (emitter) or Modbus RTU or HART or FF - diagnosis: RS232
<b>serial data kit (optional)</b>	
software (all Windows™ versions)	- FluxData: download of measurement data, graphical presentation, conversion to other formats (e.g. for Excel™) - FluxDiag (optional): online diagnostics and report generation - FluxSubstanceLoader: upload of fluid data sets
cable	RS232
adapter	RS232 - USB
<b>outputs (optional)</b>	
	The outputs are galvanically isolated from the transmitter.
number	on request
<b>current output</b>	
current output - range - accuracy - active output - passive output	0/4...20 mA 0.1 % of reading ±15 µA $R_{ext} < 500 \Omega$ $U_{ext} = 4...24 \text{ V}$ , depending on $R_{ext}$ , $R_{ext} < 1 \text{ k}\Omega$
current output I1 in HART mode - range - passive output	4...20 mA $U_{ext} = 10...24 \text{ V}$
<b>voltage output</b>	
range accuracy internal resistance	0...1 V or 0...10 V 0...1 V: 0.1 % of reading ±1 mV 0...10 V: 0.1 % of reading ±10 mV $R_{int} = 500 \Omega$
<b>frequency output</b>	
range open collector	0...5 kHz 24 V/4 mA, $R_{int} = 66.5 \Omega$
<b>binary output</b>	
Reed relay open collector optorelay	48 V/100 mA, P1...P4: $R_{int} = 22 \Omega$ 24 V/4 mA, P1...P4: $R_{int} = 22 \Omega$ 26 V/100 mA
binary output as alarm output - functions	limit, change of flow direction or error
binary output as pulse output - pulse value - pulse width	0.01...1000 units optorelay: 1...1000 ms Reed relay, open collector: 80...1000 ms
<b>inputs (optional)</b>	
	The inputs are galvanically isolated from the transmitter.
number	max. 4, on request
<b>temperature input</b>	
type connection range resolution accuracy	Pt100/Pt1000 4-wire -150...+560 °C 0.01 K ±0.01 % of reading ±0.03 K
<b>current input</b>	
accuracy active input - range passive input - range	0.1 % of reading ±10 µA $U_{int} = 24 \text{ V}$ , $R_{int} = 50 \Omega$ , $P_{int} < 0.5 \text{ W}$ , not short-circuit proof 0...20 mA $R_{int} = 50 \Omega$ , $P_{int} < 0.3 \text{ W}$ -20...+20 mA
<b>voltage input</b>	
range accuracy internal resistance	0...1 V 0.1 % of reading ±1 mV $R_{int} = 1 \text{ M}\Omega$
<b>binary input</b>	
switching signal functions	5...26 V, 1 mA - resetting the measured values - resetting the totalizers - stopping the totalizers - activation of the measuring mode for highly dynamic flows

### Dimensions



in mm

### 2 " Pipe Mounting Kit (optional)





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TSFLUXUS\_SU\_705xx-2V1-7EN\_Leu, 2016-04-20