


Flow Transmitter FLUXUS G704CA

Technical Data

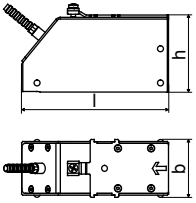
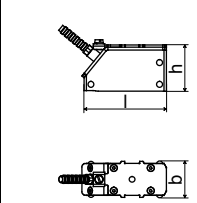
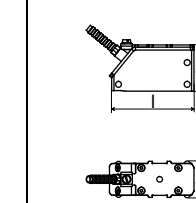
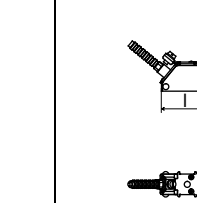
FLUXUS	G704CA
design	flow measurement on compressed air
	
measurement	
measurement principle	transit time difference correlation principle
flow velocity	0.01...35 m/s, depending on pipe diameter
repeatability	0.15 % of reading \pm 0.01 m/s
medium	compressed air
temperature compensation	corresponding to the recommendations in ANSI/ASME MFC-5.1-2011
accuracy	
volumetric flow rate	\pm 1...3 % of reading \pm 0.01 m/s depending on application \pm 0.5 % of reading \pm 0.01 m/s with field calibration
flow transmitter	
power supply	100...230 V/50...60 Hz or 20...32 V DC or 11...16 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, option: 70 ms
housing material	aluminum, powder coated
degree of protection according to IEC/EN 60529	IP65
dimensions	see dimensional drawing
weight	2.8 kg
fixation	wall mounting, optional: 2" pipe mounting
ambient temperature	-40...+60 °C, (< -20 °C without operation of the display)
display	2 x 16 characters, dot matrix, backlight
menu language	English, German, French, Dutch, Spanish
measuring functions	
physical quantities	operating volumetric flow rate, standard volumetric flow rate, mass flow rate, flow velocity
totalizer	volume, mass
diagnostic functions	sound speed, signal amplitude, SNR, SCNR, standard deviation of amplitudes and transit times
data logger	
loggable values	all physical quantities, totalized values and diagnostic values
capacity	> 100 000 measured values
SD card, removable (optional)	
loggable values	all physical quantities and totalized values
capacity	min. 2 GB
communication	
interface	RS232
serial data kit (optional)	
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 - FluxKoef: creating medium data sets - FluxSubstanceLoader: upload of medium data sets
cable	RS232 ¹
adapter	RS232 - USB ¹

FLUXUS	G704CA
outputs	
	The outputs are galvanically isolated from the transmitter.
number	on request
switchable current output	
number	1
range	4...20 mA (3.2...22 mA)
accuracy	0.04 % of reading $\pm 3 \mu\text{A}$
active output	$R_{\text{ext}} < 350 \Omega$
passive output	$U_{\text{ext}} = 8...30 \text{ V}$, depending on R_{ext} , $R_{\text{ext}} < 1 \text{ k}\Omega$
binary output	
number	3
optorelay	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 1...1000 ms
inputs	
	The inputs are galvanically isolated from the transmitter.
temperature input	
number	1
type	Pt100/Pt1000
connection	4-wire
range	-150...+560 °C
resolution	0.01 K
accuracy	$\pm 0.01 \%$ of reading $\pm 0.03 \text{ K}$
current input	
number	1
accuracy	0.1 % of reading $\pm 10 \mu\text{A}$
active input	$U_{\text{int}} = 24 \text{ V}$, $R_{\text{int}} = 50 \Omega$, $P_{\text{int}} < 0.5 \text{ W}$, not short-circuit proof
- range	0...20 mA
passive input	$R_{\text{int}} = 50 \Omega$, $P_{\text{int}} < 0.3 \text{ W}$
- range	-20...+20 mA

Transducers

Technical Data

Lamb Wave Transducers

technical type		GRK1N52	GRM1N52	GRP1N52	GRQ1N52
order code		GLK-NNNTS	GLM-NNNTS	GLP-NNNTS	GLQ-NNNTS
transducer frequency	MHz	0.5	1	2	4
medium pressure					
min.	bar	5	5	5	5
inner pipe diameter d¹					
min. extended	mm	60	30	15	7
min. recommended	mm	80	40	20	10
max. recommended	mm	250	90	50	22
max. extended	mm	250	150	70	35
pipe wall thickness					
min.	mm	4	2	1	0.5
max.	mm	9	5	3	1
material					
housing		PPSU with stainless steel cap 304 (1.4301)	PPSU with stainless steel cap 304 (1.4301)	PPSU with stainless steel cap 304 (1.4301)	PPSU with stainless steel cap 304 (1.4301)
contact surface		PPSU	PPSU	PPSU	PPSU
degree of protection according to IEC/EN 60529		IP67	IP65	IP65	IP65
transducer cable					
type		1699	1699	1699	1699
length	m	5	4	4	3
dimensions					
length l	mm	128.5	74	74	42
width b	mm	51	32	32	22
height h	mm	67.5	40.5	40.5	25.5
dimensional drawing					
ambient temperature					
min.	°C	-40	-40	-40	-40
max.	°C	+170	+170	+170	+170
temperature compensation		x	x	x	x

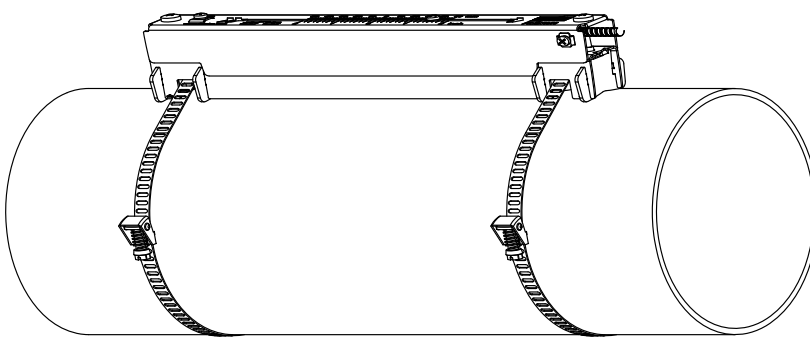
¹ Lamb wave transducer:

pipe diameter min. recommended/max. recommended: in reflection arrangement and for a flow velocity of 15 m/s

pipe diameter max. extended: in diagonal arrangement and for a flow velocity of 25 m/s

Transducer Mounting Fixture

Variofix L (VLK, VLM, VLQ)



material: stainless steel 304 (1.4301), 301 (1.4310), 410 (1.4006)

inner length:
VLK: 348 mm,
VLM: 234 mm
VLQ: 176 mm

dimensions:
VLK: 423 x 90 x 93 mm,
VLM: 309 x 57 x 63 mm
VLQ: 247 x 43 x 47 mm

Coupling Materials for Transducers

type	order code	ambient temperature °C	material	remark
coupling compound type N	990739-1	-30...+130	mineral grease paste	
coupling foil type VT	990739-0	-10...+200	fluoroelastomer	for transducers with transducer frequency K
	990739-14			for transducers with transducer frequency M, P, Q

Damping Mats

Technical Data

type		E30R4	E30R3
width	mm	225	50
thickness	mm	0.7	
length (per roll)	m	10	
weight	kg/m ²	1.015	
ambient temperature	°C	-30...+80	
properties		self-adhesive	

Dimensioning

transducer		damping mat							
transducer mounting fixture	order code	type	number of layers	transducer damping mat			transducer damping mat + 2x pipe damping mat		
				max. installation length [mm]	number of rolls ¹		max. installation length [mm]	number of rolls ¹	
					standard ²	extended ²		standard	extended
VarioFix L									
VLK	GLK	E30R4	1	890	1	1	1830	1	2
VLM	GLM	E30R3	1	660	1	1	1360	1	2
	GLP		1		1	1		1	
VLQ	GLQ	E30R3	1	540	1	1	1120	1	1

¹ calculation on the base of:

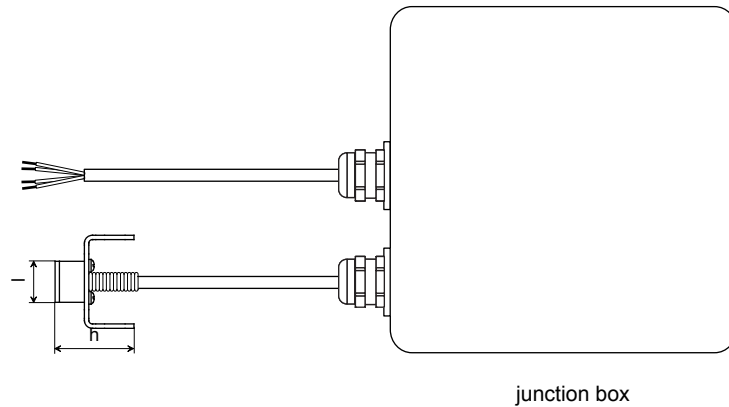
- max. installation length (installation of one transducer mounting fixture per transducer in reflection arrangement) and
- max. recommended pipe diameter (standard) or max. extended pipe diameter (extended)
 (for inner pipe diameter max. recommended and max. extended see Technical Data of the Transducers from page Seite 3)

² calculation for the number of rolls when both transducers are mounted in one transducer mounting fixture (reflection arrangement) or in diagonal arrangement: number of rolls/2 and round up to the nearest integer

Clamp-on Temperature Probe (optional)

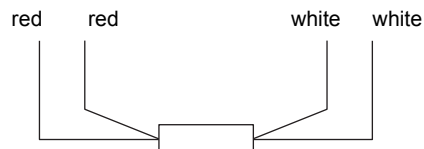
Technical Data

technical type	PT12F	
order code	770415-2	
type	Pt100	
connection	4-wire	
measuring range	°C	-50...+250
accuracy T	±(0.15 °C + 2 · 10 ⁻³ · T [°C]) class A	
housing	PEEK, stainless steel 304 (1.4301), copper	
degree of protection according to IEC/ EN 60529	IP66	
weight (without connector)	kg	0.32
fixation	clamp-on	
accessories		
thermal conductivity paste 200 °C		x
thermal conductivity foil 250 °C		x
plastic protection plate, insulation foam		x
dimensions		
length l	mm	14
width b	mm	30
height h	mm	27



Connection

Temperature Probe



Cable

		cable of temperature probe	extension cable
type		4 x 0.25 mm ² black	LIYCY 8 x 0.14 mm ² grey
standard length	m	3	5/10/25
max. length	m	-	200
cable jacket		PTFE	PVC

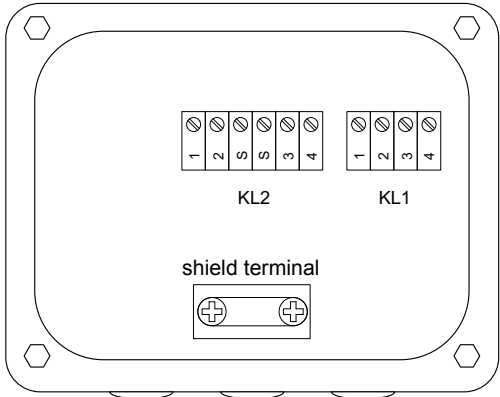
cable of temperature probe		extension cable	
white		blue	
red		grey	
red		red	
white		white	

Junction Box

technical type		JBT3
dimensions		see dimensional drawing
fixation		wall mounting optional: 2 " pipe mounting
material		
housing		stainless steel 304 (1.4301)
gasket		silicone
degree of protection according to IEC/ EN 60529		IP67
cable gland		max. 2x M12
ambient temperature		
min.	°C	-40
max.	°C	+80

Terminal Assignment

JBT3



temperature probe

terminal strip KL1

terminal	connection
1	red
2	red
3	white
4	white

extension cable

terminal strip KL2

terminal	connection
1	red
2	grey
3	white
4	blue



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