

## Overview

The flowmeter systems of the SITRANS FC600 series are the resistant Coriolis multi-parameter flowmeter for extreme conditions.

The Coriolis flowmeters of this serie are rugged with superior performance under very tough operating conditions.

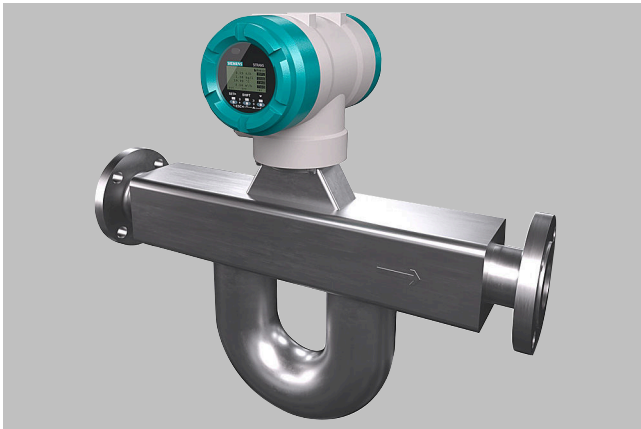
They are formed by one FCS600 sensor and one FCT transmitter:

- SITRANS FC620 is the combination of the FCS600 sensor and the FCT020 transmitter
- SITRANS FC640 is the combination of the FCS600 sensor and the FCT040 transmitter

Features:

- Resistant to high temperature up to 350 °C (662 °F)
- Resistant to high pressure up to 700 bar (10 153 psi) (gauge)
- Resistant to corrosive fluids
- Dual curved measuring tubes with optimum decoupling from external stresses and vibrations
- Wetted parts: stainless steel 316L or alloy 22
- Process connection: flange or thread
- Nominal sizes: DN 2, DN 4, DN 15, DN 25, DN 40, DN 65
- Connection sizes: DN 8 to DN 125 (3/8" to 5")
- Nominal flow: 45 to 100 000 kg/h (99 to 220 462 lb/h)
- FCS600 sensors can be combined with compact or remote transmitters
- Thick measuring tubes and optional alloy 22 wetted parts for long-term durability
- Superior aeration handling and advanced diagnostic functionality

Note: FC600 sizes DN 2 and DN 4 are only available with standard neck and remote transmitter



FC620/640 Coriolis flowmeter

# SITRANS FC (Coriolis) 2023

## Flowmeter systems

### SITRANS FC620/FC640

#### Benefits

##### Product features aligned to user value targets

	User value targets	SITRANS FC features and solutions
Engineering and project management	<ul style="list-style-type: none"> <li>• Reduce engineering investment</li> <li>• Cut specification effort</li> <li>• Minimize project expenditure</li> <li>• Decrease the spending on each measurement point</li> <li>• Eliminate function duplication</li> <li>• Reduce number of suppliers</li> </ul>	<ul style="list-style-type: none"> <li>• Siemens project teams offer complimentary evaluation of customer specifications, provided by regional and HQ experts</li> <li>• Simple product selection using intuitive sizing software</li> <li>• One SITRANS FC device can typically provide three to six individual measurements, all transmitted via digital communication, when planned during pre-project design</li> <li>• Added value functions: batch control, viscosity, thermal energy, concentration measurement (Fraction) of two component solutions and pressure compensation</li> </ul>
Installation	<ul style="list-style-type: none"> <li>• Reduce footprint and transport outlay of OEM machinery</li> <li>• Lower installation complexity</li> <li>• Avoid costly modifications of existing plant</li> </ul>	<ul style="list-style-type: none"> <li>• Can be installed in horizontal or vertical (self-draining) pipes</li> <li>• Twin tube bend design delivers strong signal to noise characteristic resistant to external influence, so install in tight spaces with no inlet and outlet restrictions</li> <li>• Adaptable to existing pipes: typically, three or four connection sizes for each sensor size</li> <li>• Flexible selection of traditional inputs, outputs, and digital communications</li> </ul>
Configuration and commissioning	<ul style="list-style-type: none"> <li>• Shorter commissioning schedules with lower costs</li> <li>• Faster start-up with reduced outgoings</li> </ul>	<ul style="list-style-type: none"> <li>• Easy setup wizard delivers working meters straight after start-up</li> <li>• microSD card stores sensor calibration data and default setup</li> <li>• Simple configuration using Process Device Manager (PDM)</li> <li>• Siemens device-specific faceplates simplify operation in plantwide control systems</li> </ul>
Efficient plant operation	<ul style="list-style-type: none"> <li>• Improve finished product consistency to reduce waste</li> <li>• Keep process performance when scaling production up or down</li> <li>• Optimize process control</li> <li>• Improve finished product quality enabling higher levels of profit</li> <li>• Reduce downtime with fast resolution of process upsets</li> <li>• Improve asset performance</li> </ul>	<ul style="list-style-type: none"> <li>• SITRANS FC meters are calibrated in rigs accredited to EN/ISO 17025 to ensure consistently high performance of flow, density and concentration measurements</li> <li>• First-class zero-point quality maintains high accuracy into the low flow region</li> <li>• High sensitivity and intelligent dynamic range keeps the measurement active in demanding high fluid damping cases</li> <li>• Designed-in resilience to process extremes</li> <li>• Self-verification alerts to potential performance issues due to unplanned process events, for example gas or vapor breakout or solid deposits building up in the tubes</li> <li>• Diagnostic data via local menu or PDM is backed by Siemens applications experts</li> <li>• Intelligent Siemens SITRANS IQ apps for continuing asset evaluation</li> </ul>
Maintenance and asset management	<ul style="list-style-type: none"> <li>• Optimize technician training</li> <li>• Reduce cost of spare parts</li> <li>• Increase predictive maintenance</li> <li>• Reduce production downtime and associated costs</li> <li>• Decrease unplanned maintenance</li> <li>• Maximize asset value</li> </ul>	<ul style="list-style-type: none"> <li>• Simple product design with interchangeable modular parts</li> <li>• microSD card loads sensor-specific data to deliver fast service exchange</li> <li>• Self-verification: tube health check monitors key diagnostics, including tube stiffness, driver and pickups; the user defines verification frequency and alarm behavior</li> <li>• Verification results indicate whether preventive maintenance action is required</li> <li>• Siemens SIMATIC Maintenance Station uses cyclical acquisition to provide life cycle reports and intelligent preventive maintenance strategies</li> </ul>
Industry compliance	<ul style="list-style-type: none"> <li>• Cut effort required to comply with Industry-specific demands</li> <li>• Reduce resource needed to maintain regulatory compliance</li> </ul>	<ul style="list-style-type: none"> <li>• Food and beverage sector covered with EHEDG and 3-A approvals, polished tubes</li> <li>• Global hazardous area approvals for international plant duplications</li> <li>• Common and emerging digital networks covered: HART, PROFIBUS PA, PROFINET</li> <li>• Class-leading safety: SIL2/SIL3, secondary containment, PED, NAMUR NE95</li> </ul>

## Application

## Application examples for SITRANS FC multi-parameter meters across diverse industry sectors

<b>Chemical and petrochemical</b> Bulk chemicals Industrial gases Polymers Agrochemicals Fine chemicals Aroma chemicals	<ul style="list-style-type: none"> <li>Transfer, loading and unloading of bulk chemicals</li> <li>Concentration control of acids and alkalis (process optimization)</li> <li>Accurate mass or volume flow of feed chemicals to in-line blending systems</li> <li>Accurate mass flow and density (quality) of reactor fluid feeds catalyst</li> <li>Chemical recovery</li> <li>Mass balance optimization</li> <li>Compressed and cryogenic gases</li> <li>Lubricating oil blending and dosing</li> <li>High accuracy measurement of critical fluid components</li> <li>Low flow control in pilot plants and R&amp;D facilities</li> </ul>
<b>Food and beverage</b> Food processing Dairies Breweries Distilleries Confectionary Soft drinks Animal feed plants OEM	<ul style="list-style-type: none"> <li>Accurate bulk transfer (mass or volume) of all dairy products: milk, cream, whey and yoghurt</li> <li>Fat concentration in cream</li> <li>Flow, density, temperature and concentration (Plato) during all fermentation processes</li> <li>Flow, density, temperature and sugar concentration (Brix) in soft drink processing</li> <li>Distilled spirits – % alcohol by volume (ABV), liters of pure alcohol, volume transfer, blending, batch and column still optimization and energy management, cask filling, tanker loading</li> <li>Flow and density of fruit juices and pulps</li> <li>Mixing and inventory control of confectionary ingredients, e.g. chocolate, syrup, oils, flavors</li> <li>Metering pump control</li> <li>Oils, fat enzymes dosing in animal feed plants</li> <li>CO<sub>2</sub> dosing</li> <li>CIP liquids</li> <li>Bottling of beer, spirits, wine, soft drinks, etc.</li> <li>Bulk sugar processing – molasses, sugar slurries, density, Brix of finished product</li> </ul>
<b>Oil and gas</b> Offshore/onshore Upstream/downstream Pipelines Distribution networks Refineries Skid manufacturers	<ul style="list-style-type: none"> <li>Loading/unloading of hydrocarbons (e.g. crude oil, bitumen) from/to ship, road tanker, rail car</li> <li>High pressure chemical injection</li> <li>High pressure low flow gas</li> <li>Net oil computing</li> <li>Gas void fraction</li> <li>Filling of gas bottles</li> <li>Furnace control</li> <li>Test separators</li> <li>LPG, natural gas hydration</li> <li>Well-head water-cut monitoring</li> <li>All hydrocarbon fluids in refineries</li> <li>Metrology, custody transfer</li> <li>Drilling mud</li> <li>Oil well cementing and hydrofracturing</li> </ul>

## Application (continued)

## Application examples for SITRANS FC multi-parameter meters across diverse industry sectors

<b>Life sciences</b> Pharmaceutical Bio	<ul style="list-style-type: none"> <li>High accuracy flow and batching of bioreactor feeds</li> <li>Solvent flow rate, density and batching</li> <li>Flow of demineralized and deionized water</li> <li>Solvents and fish oils used in high grade omega 3 oils</li> <li>Precision coatings</li> <li>Vacuum thin film coating</li> </ul>
<b>Household and personal care</b> Detergents Cosmetics	<ul style="list-style-type: none"> <li>Blending and batching of detergent ingredients</li> <li>Tanker loading and unloading</li> <li>Salt concentration</li> <li>Reliable measurement of aerated liquids</li> </ul>
<b>Automotive and aeronautical</b> Vehicle manufacturing Paint Engine testing OEM	<ul style="list-style-type: none"> <li>Fuel injection nozzle and pump testing</li> <li>Filling of under bonnet fluid reservoirs, air conditioning, coolant</li> <li>Fuel flow and density measurement in engine test beds</li> <li>Checking for air in oil using high accuracy density measurement</li> <li>Paint spray robots – requires accurate and fast measurements</li> <li>Aircraft fuel loading (kerosene)</li> <li>High pressure flow used in turbine blade manufacture</li> </ul>
<b>Power and energy</b> Renewable Hydrogen	<ul style="list-style-type: none"> <li>Boiler fuel flow and burner control</li> <li>Turbine fuel flow</li> <li>Glycol flow and concentration</li> <li>Bioethanol</li> </ul>
<b>Marine</b> OEM Shipbuilders	<ul style="list-style-type: none"> <li>Fuel consumption management</li> <li>Boiler control</li> <li>Bunkering management</li> <li>Density used to indicate fuel quality</li> </ul>
<b>Pulp, paper and textiles</b>	<ul style="list-style-type: none"> <li>Accurate dosing of dyes and chemicals</li> </ul>
<b>Water and environmental</b>	<ul style="list-style-type: none"> <li>Dosing of chemicals for water treatment</li> <li>Chemical concentration for water quality control</li> </ul>

# SITRANS FC (Coriolis) 2023

## Flowmeter systems

### SITRANS FC620/FC640

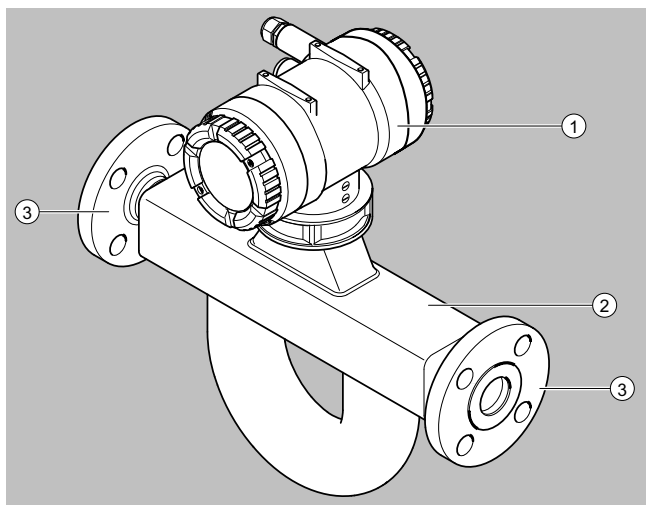
#### Design

##### Design options and related temperature range for FC600 series

Design version	Transmitter	Process fluid temperature range
Compact, standard neck	Aluminum	Standard [-50 ... +150 °C (-58 ... +302 °F)]
Compact, standard neck, hygienic clamps	Aluminum	Standard [-10 ... +140 °C (-14 ... +284 °F)]
Remote, standard neck or long neck	Aluminum or stainless steel	Standard [-70 ... +150 °C (-94 ... +302 °F)]
Remote, standard neck or long neck, hygienic clamps	Aluminum or stainless steel	Standard [-10 ... +140 °C (-14 ... +284 °F)]
Remote only, long neck only	Aluminum or stainless steel	Low [-196 ... +150 °C (-321 ... +302 °F)]
		Medium [-70 ... +230 °C (-94 ... +446 °F)]
		High [0 ... 350 °C (32 ... 662 °F)]

FCS600 in sizes DN 2 and DN 4 only available with:

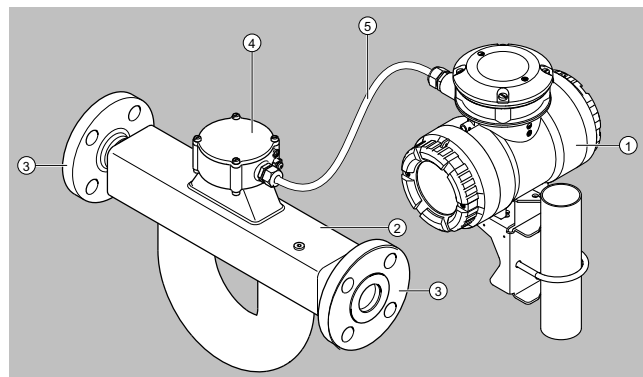
- High pressure autoclave adaptors
- Standard temperature range
- Standard sensor neck (pedestal)
- Remote mounted transmitters



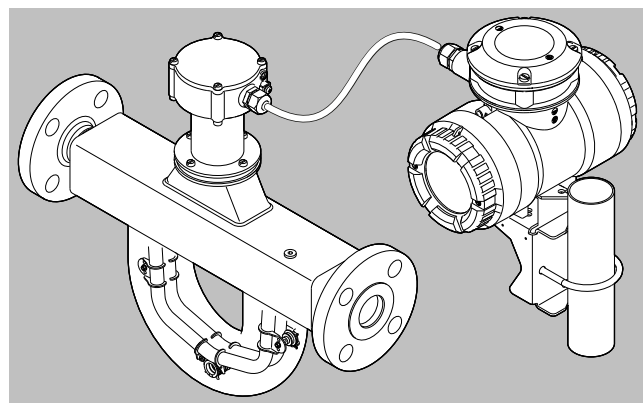
FCS600 sensor with compact, close mounted transmitter. Only sizes DN 15, DN 25, DN 40, and DN 65.

- |   |                    |
|---|--------------------|
| 1 | Transmitter        |
| 2 | FCS600 sensor      |
| 3 | Process connection |

#### Design (continued)

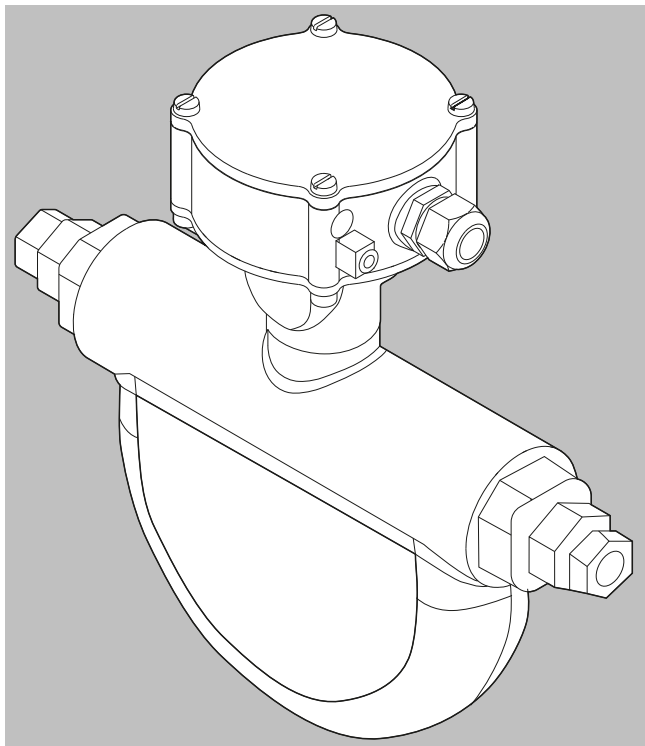


FCS600 sensor with remote transmitter, standard sensor neck



FCS600 sensor with remote transmitter, long sensor neck

- |   |                     |
|---|---------------------|
| 1 | Transmitter         |
| 2 | FCS600 sensor       |
| 3 | Process connection  |
| 4 | Sensor terminal box |
| 5 | Connecting cable    |

**Design (continued)**

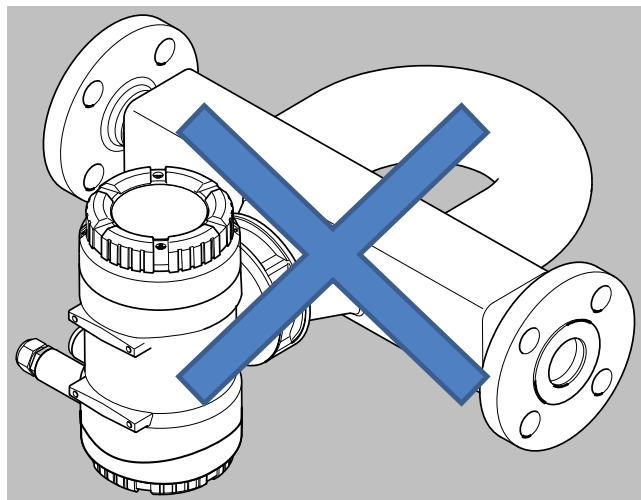
FCS600 sensors (remote transmitter only) in sizes DN 2 and DN 4 standard neck

**Installation guidelines**

FCS600 series flowmeters can be mounted horizontally, vertically and at an incline. The measuring tubes should be filled with the fluid during flow measurement as entrained gas may result in errors in measurement. Straight pipe runs at inlet or outlet are usually not required.

Avoid the following installation locations and positions:

- Measuring tubes as highest point in piping when measuring liquids
- Measuring tubes as lowest point in piping when measuring gases
- Immediately in front of a free pipe outlet in a downpipe
- Lateral positions

**Design (continued)**

Avoid measuring tubes in sideways position resulting in possible non-homogeneous fluid separation

# SITRANS FC (Coriolis) 2023

## Flowmeter systems

### SITRANS FC620/FC640

#### Function

##### **Compatible fluids**

FC600 series flowmeters can be used to measure the following liquids:

- Liquids
- Gases
- Mixtures, solutions, emulsions, suspensions and slurries

##### **Primary measured variables**

- Mass flow
- Density
- Temperature

**Based on the primary measured quantities, the transmitter also calculates**

- Volume flow
- Percent concentration (fraction) of a two-component mixture (FCT040 only)
- Partial component flow rate (net flow) of a mixture consisting of two components (FCT040 only)

##### **Bi-directional operation**

The mass flow, volume flow, and net flow measurements can be bi-directional.

##### **Measurement variables for NTEP approval**

- Mass flow uni-directional
- Volume flow uni-directional

##### **Feature overview**

- Designed to meet the highest safety requirements when operating at high pressures
- Temperatures from -196 °C (-321 °F), for cryogenic fluids, up to +350 °C (+662 °F)
- Insulation and heat tracing options for viscous and molten liquids
- Gas Void Fraction and Net Oil Computing functions combine to deliver in multi-phase applications
- Dynamic pressure compensation for accurate measurement under changing process pressure
- Accurate density measurement and up to four advanced concentration measurement data sets

## Selection and ordering data

SITRANS FC620/640 (High pressure and temperature)	Article No. 7ME446	Order code
Click on the Article No. for the online configuration in the PIA Life Cycle Portal.		
<b>Transmitter variant</b>		
None (spare sensor)	0	
Coriolis sensor FCS600 with transmitter FCT020	2	
Coriolis sensor FCS600 with transmitter FCT040	4	
SITRANS FC spare part transmitter, no sensor included	9	G 3 Y
<b>Sensor size, tube material (wetted), process connection material and size</b>		
Sensor size DN 2 tube material C22, process connection 316L, connection size 9/16"	0 A	
Sensor size DN 2 tube material C22, process connection 316L, connection size 3/4"	0 D	
Sensor size DN 4 tube material C22, process connection 316L, connection size 9/16"	1 A	
Sensor size DN 4 tube material C22, process connection 316L, connection size 3/4"	1 D	
Sensor size DN 15 tube material 316L, process connection 316L, connection size 3/8"	2 B	
Sensor size DN 15 tube material 316L, process connection 316L, connection size 1/2" DN 15	2 C	
Sensor size DN 15 tube material 316L, process connection 316L, connection size 3/4"	2 D	
Sensor size DN 15 tube material 316L, process connection 316L, connection size 1" DN 25	2 E	
Sensor size DN 15 tube material 316L, process connection 316L, connection size 1 1/2" DN 40	2 F	
Sensor size DN 25 tube material 316L, process connection 316L, connection size 1" DN 25	3 E	
Sensor size DN 25 tube material 316L, process connection 316L, connection size 1 1/2" DN 40	3 F	
Sensor size DN 25 tube material 316L, process connection 316L, connection size 2" DN 50	3 G	
Sensor size DN 40 tube material 316L, process connection 316L, connection size 1 1/2" DN 40	4 F	
Sensor size DN 40 tube material 316L, process connection 316L, connection size 2" DN 50	4 G	
Sensor size DN 40 tube material 316L, process connection 316L, connection size 2 1/2" DN 65	4 H	
Sensor size DN 40 tube material 316L, process connection 316L, connection size 3" DN 80	4 J	
Sensor size DN 65 tube material 316L, process connection 316L, connection size 3" DN 80	5 J	
Sensor size DN 65 tube material 316L, process connection 316L, connection size 4" DN 100	5 K	
Sensor size DN 65 tube material 316L, process connection 316L, connection size 5" DN 125	5 L	
Sensor size DN 15 tube material C22, process connection C22, connection size 1" DN 25	6 E	
Sensor size DN 15 tube material C22, process connection C22, connection size 1 1/2" DN 40	6 F	
Sensor size DN 15 tube material C22, process connection C22, connection size 2" DN 50	6 G	
Sensor size DN 25 tube material C22, process connection C22, connection size 1" DN 25	7 E	
Sensor size DN 25 tube material C22, process connection C22, connection size 1 1/2" DN 40	7 F	
Sensor size DN 25 tube material C22, process connection C22, connection size 2" DN 50	7 G	
Sensor size DN 40 tube material C22, process connection C22, connection size 2" DN 50	8 G	
Sensor size DN 40 tube material C22, process connection C22, connection size 2 1/2" DN 65	8 H	
Sensor size DN 40 tube material C22, process connection C22, connection size 3" DN 80	8 J	
No sensor (SITRANS FCT transmitter as spare part)	9 A	H 1 A
<b>Process connection</b>		
No connections (SITRANS FCT transmitter as spare part)	A 0	
EN flange PN 40, suitable for EN 1092-1 type B1, raised face (RF)	A 1	
EN flange PN 63, suitable for EN 1092-1 type B1, raised face (RF)	A 2	
EN flange PN 100, suitable for EN 1092-1 type B1, raised face (RF)	A 3	
EN flange PN 40, suitable for EN 1092-1 type D, groove	A 5	
EN flange PN 63, suitable for EN 1092-1 type D, groove	A 6	
EN flange PN 100, suitable for EN 1092-1 type D, groove	A 7	
EN flange PN 40, suitable for EN 1092-1 type E, spigot	B 1	
EN flange PN 63, suitable for EN 1092-1 type E, spigot	B 2	
EN flange PN 100, suitable for EN 1092-1 type E, spigot	B 3	
EN flange PN 40, suitable for EN 1092-1 type F, recess	B 5	
EN flange PN 63, suitable for EN 1092-1 type F, recess	B 6	
EN flange PN 100, suitable for EN 1092-1 type F, recess	B 7	
ASME flange class 150, suitable for ASME B16.5, raised face (RF)	D 1	
ASME flange class 300, suitable for ASME B16.5, raised face (RF)	D 2	
ASME flange class 600, suitable for ASME B16.5, raised face (RF)	D 3	
ASME flange class 900, suitable for ASME B16.5, raised face (RF)	D 4	
ASME flange class 1500, suitable for ASME B16.5, raised face (RF)	D 5	
ASME flange class 600, suitable for ASME B16.5, ring joint (RJ)	C 3	
ASME flange class 900, suitable for ASME B16.5, ring joint (RJ)	C 4	

## SITRANS FC (Coriolis) 2023

## Flowmeter systems

## SITRANS FC620/FC640

## Selection and ordering data (continued)

SITRANS FC620/640 (High pressure and temperature)	Article No. 7ME446	Order code
ASME flange class 1500, suitable for ASME B16.5, ring joint (RJ)		C 5
JIS flange 10K, JIS B 2220		L 2
JIS flange 20K, JIS B 2220		L 4
JIS G3447 / ISO2852 Clamp		J 1
Clamp process connection according to DIN 32676 series A		G 2
Clamp process connection according to DIN 32676 series C (Tri-Clamp)		G 6
Autoclave adapter		K 1
Process connection with internal thread G		E 1
Process connection with internal thread NPT		E 3
Special design		Z 1
		K 1 Y
<b>Max operational temperature</b>		
None (SITRANS FCT transmitter as spare part)		0
Media temperature -70 °C (-94 °F) Remote, -50 °C (-58 °F) Compact, max temperature 150 °C (302 °F)		1
Media temperature -196 ... 150 °C (-321 ... 302 °F)		2
Media temperature -70 ... 230 °C (-94 ... 446 °F)		3
Media temperature 0 ... 350 °C (32 ... 662 °F)		4
Media temperature -70 °C (-94 °F) Remote, -50 °C (-58 °F) Compact, max. temperature 150 °C (302 °F), high pressure		6
Media temperature -70 ... 230 °C (-94 ... 446 °F), high pressure		7
Media temperature 0 ... 350 °C (32 ... 662 °F), high pressure		8
<b>Calibration</b>		
No calibration		0
Massflow 0.1%, density 0.5 g/l		1
Massflow 0.1%, density 1 g/l		2
Massflow 0.1%, density 2 g/l		3
Massflow 0.1%, density 3 g/l		4
Massflow 0.1%, density 4 g/l		5
Massflow 0.1%, density 8 g/l		6
Massflow 0.2%, density 4 g/l		7
Massflow 0.2%, density 8 g/l		8
Accuracy for gas please select below		9
Massflow gas 0.75%		N 1 A
Massflow gas 0.5%		N 2 A
<b>Mounting style, transmitter housing and material</b>		
Compact type with "urethane-cured polyester powder coating" coated aluminum transmitter housing		A
Compact type with "corrosion protection coating" coated aluminum transmitter housing		B
Remote type with "urethane-cured polyester powder coating" coated aluminum transmitter housing and standard neck sensor		C
Remote type with "urethane-cured polyester powder coating" coated aluminum transmitter housing and long neck sensor		D
Remote type with "corrosion protection coating" coated aluminum transmitter housing and standard neck sensor		E
Remote type with "corrosion protection coating" coated aluminum transmitter housing and long neck sensor		F
Remote type stainless steel transmitter and standard neck sensor		G
Remote type stainless steel transmitter and long neck sensor		H
<b>Ex approvals</b>		
None		A
ATEX, explosion group IIC and IIIC		B
ATEX, explosion group IIB and IIIC		C
IECEX, explosion group IIC and IIIC		D
IECEX, explosion group IIB and IIIC		E
FM, groups A B C D E F G		H
FM, groups C D E F G		J
NEPSI, explosion group IIC and IIIC		M
NEPSI, explosion group IIB and IIIC		N
<b>Local user interface</b>		
Spare sensor without transmitter, no display applied		0
No display		1
With display		3



## Selection and ordering data (continued)

	Order code
<b>Further designs</b>	
Please add "-Z" to Article No. and specify order code(s).	
<b>Cable glands</b>	
Metric, no glands (M20)	A10
NPT, no glands (1/2")	A11
Metric, no glands (M20) steel armored cable	A20
NPT, no glands (1/2") steel armored cable	A21
<b>Sensor housing material</b>	
None (SITRANS FCT transmitter as spare part)	B00
Stainless steel 1.4301/304, 1.4404/316L	B01
Stainless steel 1.4404/316L DN 15	B02
Stainless steel 1.4404/316L DN 25	B03
Stainless steel 1.4404/316L DN 40	B04
Stainless steel 1.4404/316L DN 65	B05
Stainless steel 1.4404/316L DN 2/DN 4	B06
<b>I/O Configuration Ch1</b>	
None	E00
4-20 mA HART active	E06
4-20 mA HART passive	E07
PROFIBUS PA	E10
<b>I/O Configuration Ch2, Ch3 and Ch4</b>	
Spare sensor without transmitter, all communication types and I/Os apply	F00
1 passive current output, 1 passive pulse or status output	F01
1 passive current output, 2 passive pulse or status outputs	F02
1 passive current output, 1 passive pulse or status outputs, 1 passive NAMUR pulse or status output	F03
1 passive current output, 2 passive NAMUR pulse or status outputs	F04
1 passive pulse or status output	F11
2 passive pulse or status outputs, 1 passive status output	F12
2 passive pulse or status outputs, 1 voltage-free status input	F13
2 passive pulse or status outputs, 1 active current input	F14
2 passive pulse or status outputs, 1 passive current input	F15
1 passive pulse or status output, 1 passive current output, 1 active current input	F16
1 passive pulse or status output, 1 passive current output, 1 passive current input	F17
1 passive pulse or status output, 1 voltage-free status input, 1 active current input	F18
1 passive pulse or status output, 1 voltage-free status input, 1 passive current input	F19
1 passive pulse or status output, 1 active pulse or status output, 1 voltage-free status input	F20
1 passive pulse or status output, 1 active pulse or status output with pull-up resistor, 1 voltage-free status input	F21
1 active current output, 2 passive pulse or status outputs	F22
1 active current output, 1 passive pulse or status output, 1 voltage-free status input	F23
1 passive pulse or status output	F31
2 passive pulse or status outputs	F32

	Order code
1 passive pulse or status output, 1 active current input	F33
1 passive pulse or status output, 1 passive current input	F34
1 passive pulse or status output, 1 active pulse or status output	F35
1 passive pulse or status output, 1 active pulse or status output with pull-up resistor	F36
1 passive pulse or status output, 1 active current output	F37
1 passive pulse output	F41
Output CH1 intrinsically safe, 1 passive pulse output	F42
<b>Certificates</b>	
Declaration of compliance with the order 2.1 according to EN 10204	C11
Quality Inspection Certificate (Inspection Certificate 3.1 according to EN 10204)	C40
Certificate of Marking Transfer and Raw Material Certificates (Inspection Certificate 3.1 according to EN 10204), including IGC and conform to NACE MR0175 and MR0103	C13
Hydrostatic Pressure Test Certificate (Inspection Certificate 3.1 according to EN 10204)	C18
Degreasing of wetted surfaces according to ASTM G93-03 (Level C), including test report	C54
WPS according to DIN EN ISO 15809-1; WPQR according to DIN EN ISO 15814-1; WQC according to DIN EN 287-1 or DIN EN ISO 8908-4	C36
Welding procedures and certificate according to ASME IX	C37
X-ray inspection of flange weld seam according to DIN EN ISO 17636-1/B, evaluation according to AD 2000 HP 5/3 and DIN EN ISO 5817/C, including certificate	C33
X-ray test according to ASME V	C34
Dye penetrant test of process connection weld seams according to DIN EN ISO 3452-1, including certificate	C38
Dye penetrant test of flange welding according to ASME V, including certificate	C39
Ferrite test for flange welding according to DIN EN ISO 8249	C50
Positive Material Identification of wetted parts, including certificate (Inspection Certificate 3.1 according to EN 10204)	C15
3-A product conformity with 3-A certificate and marking, including Surface Roughness wetted parts $Ra \leq 0.8 \mu\text{m}$ and Surface Roughness Inspection Certificate	C62
EHEDG product conformity with EHEDG certificate and marking, including Surface Roughness wetted parts $Ra \leq 0.8 \mu\text{m}$ and Surface Roughness Inspection Certificate	C63
Surface Roughness wetted parts $Ra \leq 0.8 \mu\text{m}$	C60
Surface Roughness wetted parts $Ra \leq 0.8 \mu\text{m}$ and Surface Roughness Inspection Certificate	C61
ASME B31.3 compliance NORMAL FLUID SERVICE	C70
<b>Connecting cable type and length</b>	
without standard connecting cable	L50
5 meter (16.4 ft) remote connecting cable terminated standard gray / Ex blue	L51
10 meter (32.8 ft) remote connecting cable terminated standard gray / Ex blue	L54
15 meter (49.2 ft) remote connecting cable terminated standard gray / Ex blue	L57
20 meter (65.6 ft) remote connecting cable terminated standard gray / Ex blue	L60

## SITRANS FC (Coriolis) 2023

## Flowmeter systems

## SITRANS FC620/FC640

## Selection and ordering data (continued)

	Order code
30 meter (98.4 ft) remote connecting cable terminated standard gray / Ex blue	L63
without fire retardant connecting cable	L70
5 meter (16.4 ft) remote fire retardant connecting cable not terminated	L71
10 meter (32.8 ft) remote fire retardant connecting cable not terminated	L74
15 meter (49.2 ft) remote fire retardant connecting cable not terminated	L77
20 meter (65.6 ft) remote fire retardant connecting cable not terminated	L80
30 meter (98.4 ft) remote fire retardant connecting cable not terminated	L83
<b>SW functions</b>	
Heat measurement	S11
Tube health check	S12
Batching and filling function	S13
Netoil computing	S14
Viscosity computing function for liquids	S15
Standard concentration measurement	S16
<b>Marine approval</b>	
Marine approved DNV, ABS, KR piping class 2	S22
Marine approved DNV, ABS, KR piping class 3	S23
Marine approved LR, MR, TAC piping class 2	S24
Marine approved LR, MR, TAC piping class 3	S25
Marine approved BV piping class 2	S26
Marine approved BV piping class 3	S27
<b>Mounting</b>	
Namur built-in length according to NE132	S31
Rupture Disk	S32
<b>Insulation DN 15</b>	
Insulation	J10
Insulation and heat tracing, 1/2" ASME class 150, raised face (RF)	J12
Insulation and heat tracing, 1/2" ASME class 300, raised face (RF)	J13
Insulation and heat tracing, EN DN 15, PN 40	J14
Insulation, heat tracing with ventilation, 1/2" ASME class 150, raised face (RF)	J16
Insulation, heat tracing with ventilation, 1/2" ASME class 300, raised face (RF)	J17
Insulation, heat tracing with ventilation, EN DN 15, PN 40	J18
<b>Insulation DN 25</b>	
Insulation	J20
Insulation and heat tracing, 1/2" ASME class 150, raised face (RF)	J22
Insulation and heat tracing, 1/2" ASME class 300, raised face (RF)	J23
Insulation and heat tracing, EN DN 15, PN 40	J24
Insulation, heat tracing with ventilation, 1/2" ASME class 150, raised face (RF)	J26
Insulation, heat tracing with ventilation, 1/2" ASME class 300, raised face (RF)	J27
Insulation, heat tracing with ventilation, EN DN 15, PN 40	J28

	Order code
<b>Insulation DN 40</b>	
Insulation	J30
Insulation and heat tracing, 1/2" ASME class 150, raised face (RF)	J32
Insulation and heat tracing, 1/2" ASME class 300, raised face (RF)	J33
Insulation and heat tracing, EN DN 15, PN 40	J34
Insulation, heat tracing with ventilation, 1/2" ASME class 150, raised face (RF)	J36
Insulation, heat tracing with ventilation, 1/2" ASME class 300, raised face (RF)	J37
Insulation, heat tracing with ventilation, EN DN 15, PN 40	J38
<b>Insulation DN 65</b>	
Insulation	J40
Insulation and heat tracing, 1/2" ASME class 150, raised face (RF)	J42
Insulation and heat tracing, 1/2" ASME class 300, raised face (RF)	J43
Insulation and heat tracing, EN DN 15, PN 40	J44
Insulation, heat tracing with ventilation, 1/2" ASME class 150, raised face (RF)	J46
Insulation, heat tracing with ventilation, 1/2" ASME class 300, raised face (RF)	J47
Insulation, heat tracing with ventilation, EN DN 15, PN 40	J48
<b>Country specific delivery</b>	
Delivery to China including China RoHS mark	W21
Delivery to Korea including KC mark	W22
<b>Fraction setup</b>	
PIA: Please select four options	
Sugar / Water 0 ... 85 °Bx, 0 ... 80 °C (32 ... 176 °F)	G01
NaOH / Water 2 ... 50 WT%, 0 ... 100 °C (32 ... 212 °F)	G02
KOH / Water 0 ... 60 WT%, 54 ... 100 °C (129 ... 212 °F)	G03
NH <sub>4</sub> NO <sub>3</sub> / Water 1 ... 50 WT%, 0 ... 80 °C (32 ... 176 °F)	G04
NH <sub>4</sub> NO <sub>3</sub> / Water 20 ... 70 WT%, 20 ... 100 °C (68 ... 212 °F)	G05
HCl / Water 22 ... 34 WT%, 20 ... 40 °C (68 ... 104 °F)	G06
HNO <sub>3</sub> / Water 50 ... 67 WT%, 10 ... 60 °C (50 ... 140 °F)	G07
H <sub>2</sub> O <sub>2</sub> / Water 30 ... 75 WT%, 4 ... 44 °C (39 ... 111 °F)	G09
Ethylene Glycol / Water 10 ... 50 WT%, -20 ... 40 °C (-4 ... 104 °F)	G10
Amylum = Starch / Water 33 ... 43 WT%, 35 ... 45 °C (95 ... 113 °F)	G11
Methanol / Water 35 ... 60 WT%, 0 ... 40 °C (32 ... 104 °F)	G12
Alcohol / Water 55 ... 100 VOL%, 10 ... 40 °C (50 ... 104 °F)	G20
Sugar / Water 40 ... 80 °Bx, 75 ... 100 °C (167 ... 212 °F)	G21
Alcohol / Water 66 ... 100 WT%, 15 ... 40 °C (59 ... 104 °F)	G30
Alcohol / Water 66 ... 100 WT%, 10 ... 40 °C (50 ... 104 °F)	G37
<b>Tag name</b>	
Tag name plate, SS (max. 16 characters)	Y11
HART Tag No. (max. 8 characters)	Y25
HART Tag No. (max. 32 characters)	Y26
PROFIBUS PA NODE ADDRESS (4 characters HEX)	Y28
PROFIBUS PA SOFTWARE TAG (max. 32 characters)	Y29

## Selection and ordering data (continued)

Order code	
Customer installation length	
Customer installation length (mm)	Y30

Order code	
<b>Calibration</b>	
Customer 5-point mass flow calibration	D61
Customer 10-point mass flow calibration	D62
<b>Special versions</b>	
ID-Number of special design	Y99

## Technical specifications

**Mass flow rate of liquids**

The mass flow rate characteristics of SITRANS FC meters are defined by the values of zero stability,  $Q_{\text{flat}}$ ,  $Q_{\text{nom}}$  and  $Q_{\text{max}}$ .

Zero stability is the maximum allowable flow rate value that can be displayed at zero flow under reference conditions. It is a good indicator of the meter performance as flow rates reduce and approach zero.

- $Q_{\text{flat}}$  is the mass flow rate above which the base accuracy is maintained (0.1% when using FCT040 transmitters).

- $Q_{\text{nom}}$  is the nominal mass flow rate of water at reference conditions that would result in a pressure drop of 1 bar (15 psi).
- $Q_{\text{max}}$  is the recommended maximum mass flow rate for each sensor size.

For questions regarding expected performance in specific applications, please contact your regional Siemens Measurement Intelligence team.

**Flow rate summary by FCS600 sensor size**

Nominal size	Zero stability		$Q_{\text{flat}}$		$Q_{\text{nom}}$		$Q_{\text{max}}$	
	kg/h	lb/h	kg/h	lb/min	kg/h	lb/min	kg/h	lb/min
DN 2	0.005	0.011	4.00	0.147	45.0	1.65	94.0	3.45
DN 4	0.018	0.040	14.0	0.514	170	6.24	300	11.0
DN 15	0.150	0.330	250	9.18	3 000	110	5 000	184
DN 25	0.500	1.10	830	30.5	10 000	367	17 000	624
DN 40	1.60	3.52	2 670	98.0	32 000	1 174	50 000	1 835
DN 65	5.00	11.0	8 330	306	100 000	3 670	170 000	6 239

**Performance summary by FCS600 sensor size and transmitter type**

Sensor size			DN 2	DN 4	DN 15	DN 25	DN 40	DN 65
<b>Mass flow (liquids)</b>								
Accuracy	% (of rate)	FCT020	± 0.2	± 0.2	± 0.2	± 0.2	± 0.2	± 0.2
	% (of rate)	FCT040	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1
Zero stability	kg/h (lb/h)		± 0.005 (0.011)	± 0.018 (0.44)	± 0.15 (0.33)	± 0.5 (1.1)	± 1.6 (3.52)	± 5 (11)
<b>Density (liquids)</b>								
Accuracy	kg/m <sup>3</sup> (lb/ft <sup>3</sup> )	FCT020	± 8 (0.5)	± 4 (0.25)	± 4 (0.25)	± 4 (0.25)	± 4 (0.25)	± 4 (0.25)
	kg/m <sup>3</sup> (lb/ft <sup>3</sup> )	FCT040	± 8 (0.5)	± 1 (0.06)	± 0.5 (0.03)	± 0.5 (0.03)	± 0.5 (0.03)	± 0.5 (0.03)
<b>Mass flow (gases)</b>								
Accuracy	% (of rate)	FCT020	± 0.75	± 0.75	± 0.75	± 0.75	± 0.75	± 0.75
	% (of rate)	FCT040	± 0.5	± 0.5	± 0.35	± 0.35	± 0.35	± 0.35
<b>Temperature</b>								
Accuracy	°C (°F)		± 0.5 (0.9)	± 0.5 (0.9)	± 0.5 (0.9)	± 0.5 (0.9)	± 0.5 (0.9)	± 0.5 (0.9)

## Note:

The accuracy values in the table above are based on reference conditions at the time of calibration and represent the combined measurement uncertainties including sensor, electronic and pulse output interface.

Liquid density calibration is performed when density accuracy of 0.5 kg/m<sup>3</sup> (0.03 lb/ft<sup>3</sup>) is selected in the model code.

**Mass flow calibration and density adjustment for liquids**

Siemens SITRANS FC Coriolis meters are calibrated in rigs accredited according to the international standard EN ISO/IEC 17025:2018. Each flowmeter comes with a standard calibration certificate.

Mass flow calibration takes place at reference conditions. Specific values are listed in the standard calibration certificate.

**Mass flow calibration reference conditions**

Fluid	Water
Density	900 ... 1 100 kg/m <sup>3</sup> (56 ... 69 lb/ft <sup>3</sup> )
Fluid temperature	10 ... 35 °C (50 ... 95 °F), average temperature: 22.5 °C (72.5 °F)
Ambient temperature	10 ... 35 °C (50 ... 95 °F)
Process pressure	1 ... 5 bar (15 ... 73 psi)

# SITRANS FC (Coriolis) 2023

## Flowmeter systems

### SITRANS FC620/FC640

#### Technical specifications (continued)

##### Density calibration reference conditions

Flow condition	Fully developed flow profile
Fluid densities used to obtain density calibration constants	700 kg/m <sup>3</sup> (44 lb/ft <sup>3</sup> ) 1 000 kg/m <sup>3</sup> (62 lb/ft <sup>3</sup> ) 1 650 kg/m <sup>3</sup> (103 lb/ft <sup>3</sup> )
Fluid temperature	20 °C (68 °F)
Determination of temperature compensation coefficients	20 ... 80 °C (68 ... 176 °F)

##### Analog output performance specification

Typical additional uncertainty when using the analog current output:

Sensor size	Sensor wetted parts	Additional flow measurement errors due to change in operating pressure from reference pressure	
		in % of rate per 1 bar variation	in % of rate per 1 psi variation
DN 2	Alloy 22 / AISI 316L stainless steel	-0.0001	-0.000007
DN 4	Alloy 22 / AISI 316L stainless steel	-0.0001	-0.000007
DN 15	AISI 316L stainless steel or alloy 22	-0.0005	-0.00003
DN 25	AISI 316L stainless steel	-0.0024	-0.00017
	Alloy 22	-0.0023	-0.00016
DN 40	AISI 316L stainless steel	-0.0034	-0.00023
	Alloy 22	-0.0035	-0.00024
DN 65	AISI 316L stainless steel	-0.0084	-0.00058
	Alloy 22	-0.0074	-0.00051

##### Process temperature effect

For mass flow measurement, process fluid temperature effect is defined as the change in sensor flow accuracy due to process fluid temperature change, away from the 20 °C (68 °F) reference condition. Variation in process temperature influences the measuring tube characteristics and this is compensated for using the built-in PT 1000 temperature sensor.

A small flow uncertainty remains in the compensation circuit defined below.

Uncertainty due to process temperature change:  $\pm 0.001\%$  of mass flow rate per °C ( $\pm 0.0006\%$  of mass flow rate per °F)

##### Temperature effect on zero

Temperature effect on the mass flow zero-point quality can be corrected by zeroing at the process fluid temperature.

##### Process conditions

##### Process fluid temperature range

Note: Some design combinations may not be available in all sizes.

Design version	Transmitter	Process fluid temperature range
Compact, standard neck	Aluminum	Standard [-50 ... +50 °C (-58 ... +302 °F)]
Compact, standard neck, hygienic clamps	Aluminum	Standard [-10 ... +140 °C (-14 ... +284 °F)]
Remote, standard neck or long neck	Aluminum or stainless steel	Standard [-70 ... +150 °C (-94 ... +302 °F)]
Remote, standard neck or long neck, hygienic clamps		Standard [-10 ... +140 °C (-14 ... +284 °F)]
Remote only, long neck only	Aluminum or stainless steel	Low [-196 ... +150 °C (-321 ... +302 °F)]
Remote only, long neck only		Medium [-70 ... +230 °C (-94 ... +446 °F)]
Remote only, long neck only		High [0 ... 350 °C (32 ... 662 °F)]

$\pm 0.04\%$  at a nominal mid-range current output of 12 mA, which includes the effects of: output adjustment, linearity, power supply variation, load resistance variation, short-term and long-term drift for one year and ambient temperature effect on the transmitter in the range 20 °C  $\pm$  30 °C (14 ... 122 °F).

##### Process pressure effect on flow measurement performance

Changes in operating pressure have a small effect on the mass flow measurement performance. When the pressure changes are very large this effect can be corrected by a dynamic pressure input or a fixed process pressure.

##### Operating pressure

The maximum allowed process pressure depends on the selected process connection and process temperature.

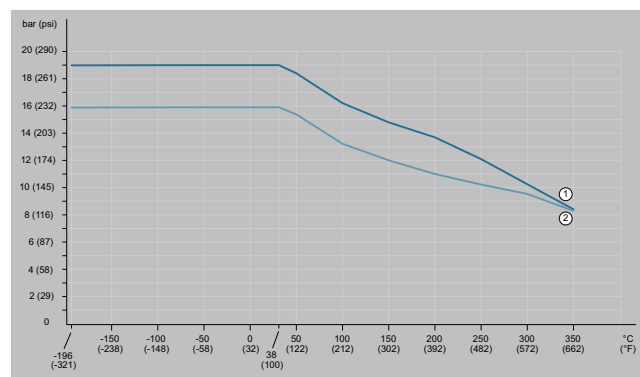
The given process temperature and process pressure ranges are calculated and approved without corrosion or erosion effects.

##### Pressure versus temperature relationship depending on selected process connection

The following diagrams show the process pressure as a function of process temperature as well as the process connection used (type and size of process connection).

Calculations for ASME flanges are based on ASME B16.5 Material group 2.2 (316/316L dual certified).

##### ASME class 150

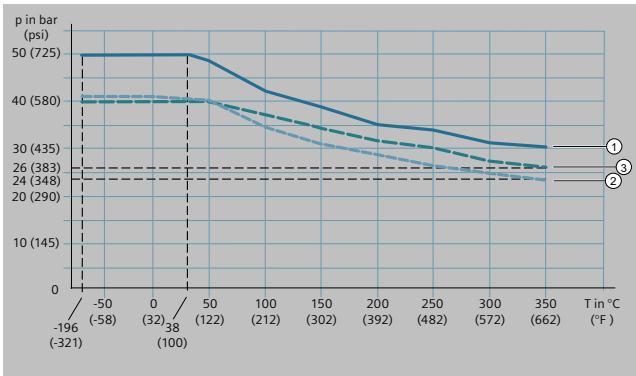


Allowed process pressure as a function of process fluid temperature

- 1 Process connection compatible to ASME B16.5 class 150
- 2 Heat tracing connection compatible to ASME B16.5 class 150

## Technical specifications (continued)

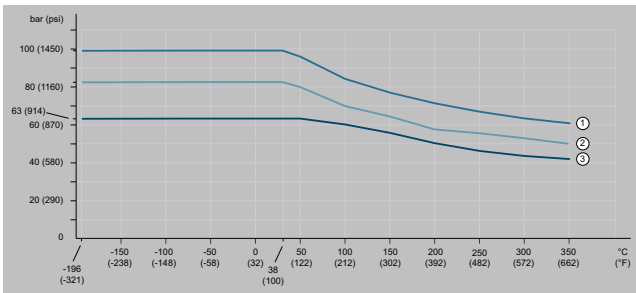
### ASME class 300, EN PN 40



Allowed process pressure as a function of process fluid temperature

- 1 Process connection compatible to ASME B16.5 class 300
- 2 Process and heat tracing connection compatible to EN 1092-1 PN 40
- 3 Process and heat tracing connection for ASME B16.5 class 300

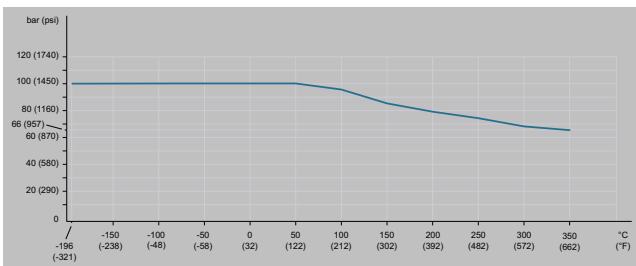
### ASME class 600, EN PN63



Allowed process pressure as a function of process fluid temperature

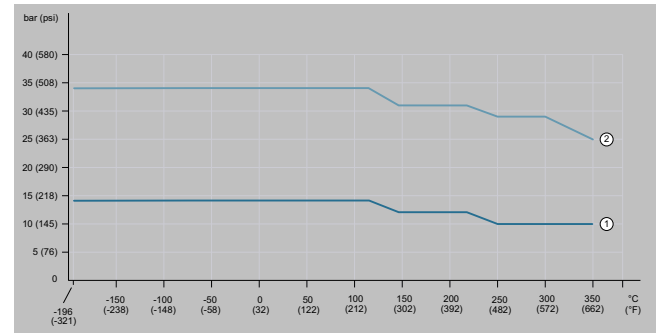
- 1 Process connection compatible to ASME B16.5 class 600
- 2 Not used for this product
- 3 Process connection compatible to EN 1092-1 PN 63

### EN PN 100



Allowed process pressure as a function of process fluid temperature, compatible to EN 1092-1 PN 100

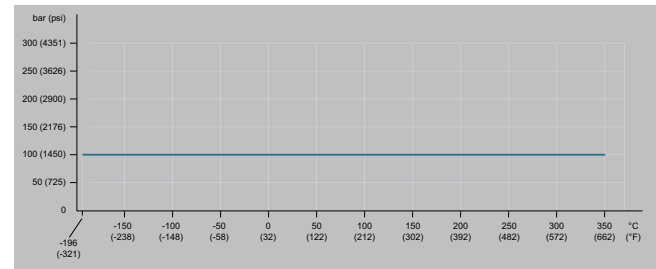
### JIS 10K, JIS 20K



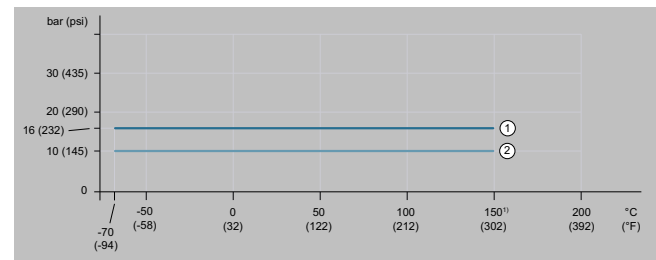
Allowed process pressure as a function of process connection temperature

- 1 Process connection compatible to JIS B 2220 10K
- 2 Process connection compatible to JIS B 2220 20K

### Process connection with internal thread G and NPT (standard pressure)



### Clamp process connection according to JIS/ISO 2852



Allowed process pressure as a function of process connection temperature

- 1 Clamp connection for JIS/ISO 2852 up to 2"
- 2 Clamp connection for JIS/ISO 2852 above 2"

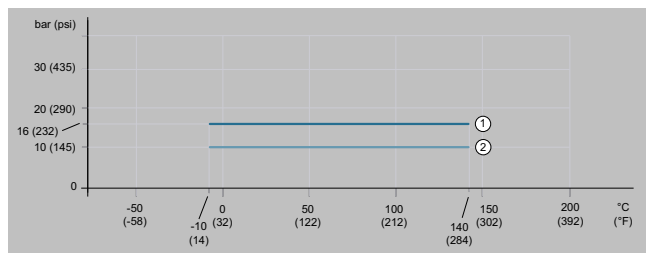
## SITRANS FC (Coriolis) 2023

## Flowmeter systems

## SITRANS FC620/FC640

## Technical specifications (continued)

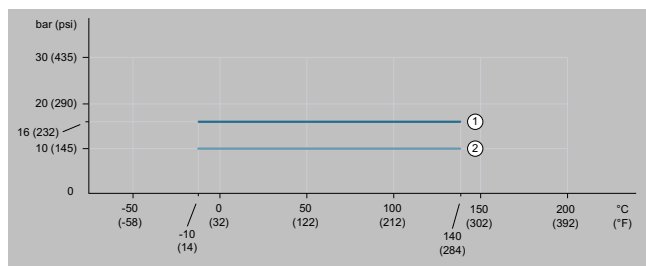
## Clamp process connection according to DIN 32676 series A



Allowed process pressure as a function of process fluid temperature

- 1 Clamp connection compatible to DIN 32676 series A up to DN 50
- 2 Clamp connection compatible to DIN 32676 series A above DN 50

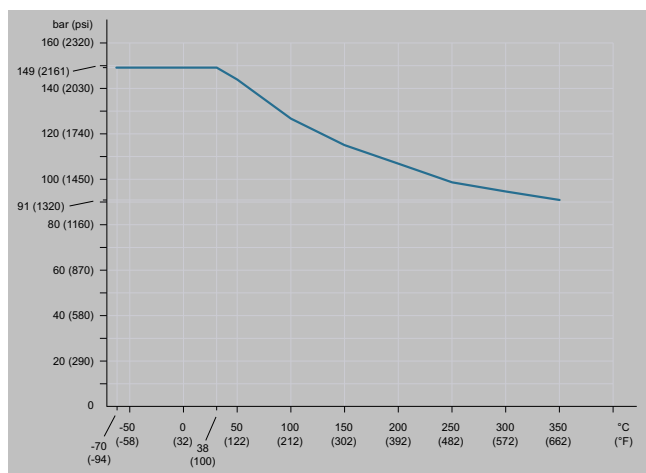
## Clamp process connection according to DIN 32676 series C (Tri-Clamp)



Allowed process pressure as a function of process fluid temperature

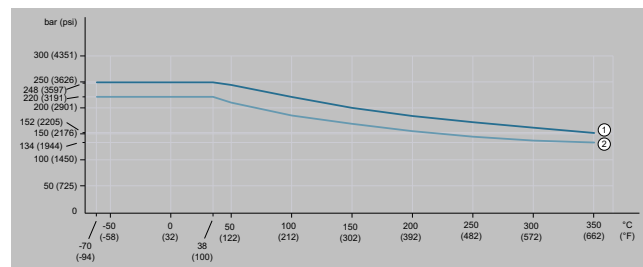
- 1 Clamp connection compatible to DIN 32676 series C up to 2"
- 2 Clamp connection compatible to DIN 32676 series C above 2"

## ASME class 900



Allowed process pressure as a function of process fluid temperature, compatible to ASME B16.5 class 900

## ASME class 1500

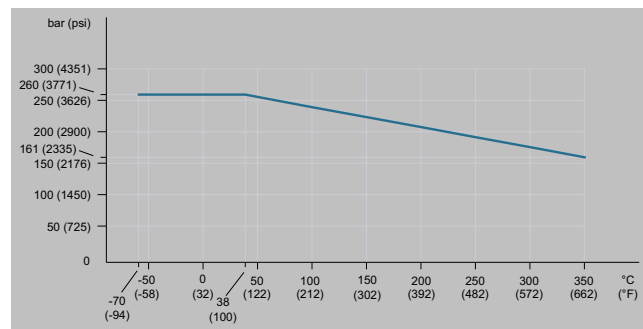


Allowed process pressure as a function of process connection temperature

- 1 Process connection compatible to ASME B16.5 class 1500:
  - With alloy 22 wetted parts (without ASME compliance)
  - With 316L wetted parts in size DN 15 (without ASME compliance)
  - With alloy 22 wetted parts in size DN 15 (requires option code C70, compliant with ASME B31.3 normal fluid service)
- 2 Process connection compatible to ASME B16.5 class 1500:
  - With 316L wetted parts in size DN 25 (without ASME compliance)
  - With 316L wetted parts in size DN 15 (requires option code C70, compliant with ASME B31.3 normal fluid service)
  - With alloy 22 wetted parts in size DN 25 (requires option code C70, compliant with ASME B31.3 normal fluid service)

## Process connection with internal thread G and NPT (high pressure)

Note: Only available with FCS600 size DN 15 with 316L wetted parts

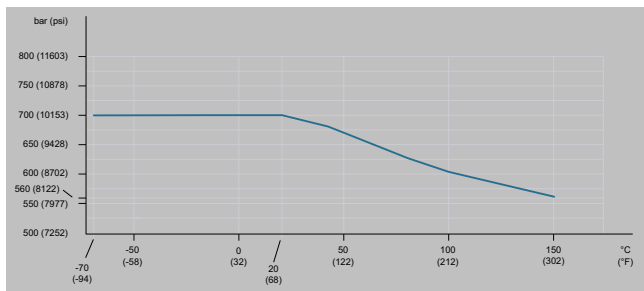


Allowed process pressure as a function of process connection temperature

## Process connection compatible to medium pressure autoclave

Note: Only available with FCS600 sizes DN 2 and DN 4

## Technical specifications (continued)



Allowed process pressure as a function of process connection temperature

### Rupture disc

The rupture disc is located on the sensor housing. It is available with some FC600 specification combinations (selectable using order option code S32).

Its bursting pressure is 20 bar (291 psi), the nominal diameter is 8 mm (0.315 in.). In the case of larger nominal diameters and high pressures, the entire process pressure may not be released across the

rupture disc. In such case it is possible to request a customized design from your local Siemens sales organization.

In the event of a burst pipe, the rupture disc provides an acoustic signal in applications with gases.

### Ambient conditions

Allowed ambient and storage temperature of SITRANS FC600 series is influenced by the temperature specification of FCS600 sensor, FCTOX0 transmitter and the interconnecting cable.

### Ambient temperature

Device surrounding air temperature is considered as ambient temperature. If the device is operating outdoors make sure that the solar irradiation does not increase the surface temperature of the device higher than the allowed maximum ambient temperature. Transmitter display has limited legibility below -20 °C (-4 °F).

The sensor ambient temperature limits may also be influenced by the process fluid temperature, details shown in the chapter "Sensors" (Technical specifications).

### Maximum ambient temperature ranges for FC600 series

Cable type	Transmitter style	Device	Ambient temperature range
None	Compact	Sensor and transmitter	-40 ... +60 °C (-40 ... +140 °F)
Standard cable	Remote	Sensor	-50 ... +80 °C (-58 ... +176 °F)
		Transmitter	-40 ... +60 °C (-40 ... 140 °F)
Fire retardant cable	Remote	Sensor	-35 ... +80 °C (-31 ... +176 °F)
		Transmitter	-35 ... +60 °C (-31 ... +140 °F)

### Ambient temperature range for NTEP custody transfer approval

Cable type	Transmitter style	Device	Ambient temperature range
None	Compact	Sensor and transmitter	-40 ... +50 °C (-40 ... +122 °F)
Standard cable	Remote	Sensor	-50 ... +80 °C (-58 ... +176 °F)
		Transmitter	-40 ... +50 °C (-40 ... +122 °F)
Fire retardant cable	Remote	Sensor	-35 ... +80 °C (-31 ... +176 °F)
		Transmitter	-35 ... +50 °C (-31 ... +122 °F)

### Maximum storage temperature ranges for FC600 series

Cable type	Transmitter style	Device	Storage temperature range
None	Compact	Sensor and transmitter	-40 ... +60 °C (-40 ... +140 °F)
Standard cable	Remote	Sensor	-50 ... +80 °C (-58 ... +176 °F)
		Transmitter	-40 ... +60 °C (-40 ... +140 °F)
Fire retardant cable	Remote	Sensor	-35 ... +80 °C (-31 ... +176 °F)
		Transmitter	-35 ... +60 °C (-31 ... +140 °F)

### Temperature specification of FC600 series Ex versions located in hazardous areas

Please select appropriate equipment in accordance with the laws and regulations of the relevant country/region when it is used in a location where explosive atmospheres may be present.

The maximum ambient and process fluid temperatures depending on explosion groups and temperature classes can be determined via the SITRANS FC order code together with the Ex code (see the corresponding explosion proof type manual).

Note: The maximum process fluid temperature could be further restricted due to process connection type, refer to curves above under the heading "Allowed ambient temperature for FCS600 sensors".

### FCS600 nominal sizes DN 2 and DN 4, remote transmitter

#### Ex approvals:

All gas groups: ATEX, IEC Ex, FM, EAC Ex, NEPSI, Korea Ex, UK Ex

## SITRANS FC (Coriolis) 2023

## Flowmeter systems

## SITRANS FC620/FC640

## Technical specifications (continued)

Temperature class	Maximum process temperature	Maximum ambient temperature	
		Standard cable	Fire retardant cable
T6	75 °C (167 °F)	43 °C (109 °F)	43 °C (109 °F)
T5	90 °C (194 °F)	58 °C (136 °F)	58 °C (136 °F)
T4	125 °C (257 °F)	80 °C (176 °F)	74 °C (165 °F)
T3	150 °C (302 °F)	80 °C (176 °F)	60 °C (140 °F)
T2	150 °C (302 °F)	80 °C (176 °F)	60 °C (140 °F)
T1	150 °C (302 °F)	80 °C (176 °F)	60 °C (140 °F)

**FC600 nominal sizes DN 15, DN 25, DN 40 and DN 65, compact transmitter**

• Gas groups A, B, C, D, E, F and G: FM

**Standard temperature**Ex approvals:

• Gas groups IIC and IIIC: ATEX, IEC Ex, EAC Ex, NEPSI, Korea Ex, UK Ex

Temperature class	Maximum process temperature	Maximum ambient temperature
T6	66 °C (150 °F)	43 °C (109 °F)
T5	82 °C (179 °F)	58 °C (136 °F)
T4	118 °C (244 °F)	60 °C (140 °F)
T3	150 °C (302 °F)	60 °C (140 °F)
T2	150 °C (302 °F)	60 °C (140 °F)
T1	150 °C (302 °F)	60 °C (140 °F)

Ex approvals:

• Gas groups IIB and IIIC: ATEX, IEC Ex, EAC Ex, NEPSI, Korea Ex, UK Ex

• Gas groups C, D, E, F and G: FM

Temperature class	Maximum process temperature	Maximum ambient temperature
T6	59 °C (138 °F)	59 °C (138 °F)
T5	75 °C (167 °F)	60 °C (140 °F)
T4	112 °C (233 °F)	60 °C (140 °F)
T3	150 °C (302 °F)	60 °C (140 °F)
T2	150 °C (302 °F)	60 °C (140 °F)
T1	150 °C (302 °F)	60 °C (140 °F)

**FC600 nominal sizes DN 15, DN 25, DN 40 and DN 65, remote transmitter**

• Gas groups A, B, C, D, E, F and G: FM

**Standard temperature, standard neck**Ex approvals:

• Gas groups IIC and IIIC: ATEX, IEC Ex, EAC Ex, NEPSI, Korea Ex, UK Ex

Temperature class	Maximum process temperature	Maximum ambient temperature	
		Standard cable	Fire retardant cable
T6	66 °C (150 °F)	41 °C (105 °F)	41 °C (105 °F)
T5	82 °C (179 °F)	56 °C (132 °F)	56 °C (132 °F)
T4	118 °C (244 °F)	80 °C (176 °F)	62 °C (143 °F)
T3	150 °C (302 °F)	78 °C (172 °F)	49 °C (120 °F)
T2	150 °C (302 °F)	78 °C (172 °F)	49 °C (120 °F)
T1	150 °C (302 °F)	78 °C (172 °F)	49 °C (120 °F)

Ex approvals:

Gas groups IIB and IIIC: ATEX, IEC Ex, EAC Ex, NEPSI, Korea Ex, UK Ex



## Technical specifications (continued)

Temperature class	Maximum process temperature	Maximum ambient temperature	
		Standard cable	Fire retardant cable
T6	59 °C (138 °F)	59 °C (138 °F)	59 °C (138 °F)
T5	75 °C (167 °F)	75 °C (167 °F)	75 °C (167 °F)
T4	112 °C (233 °F)	80 °C (176 °F)	65 °C (149 °F)
T3	150 °C (302 °F)	78 °C (172 °F)	49 °C (120 °F)
T2	150 °C (302 °F)	78 °C (172 °F)	49 °C (120 °F)
T1	150 °C (302 °F)	78 °C (172 °F)	49 °C (120 °F)

Ex approvals:

Gas groups C, D, E, F and G: FM

Temperature class	Maximum process temperature	Maximum ambient temperature	
		Standard cable	Fire retardant cable
T6	59 °C (138 °F)	59 °C (138 °F)	59 °C (138 °F)
T5	75 °C (167 °F)	75 °C (167 °F)	70 °C (158 °F)
T4	112 °C (233 °F)	80 °C (176 °F)	65 °C (149 °F)
T3	150 °C (302 °F)	78 °C (172 °F)	49 °C (120 °F)
T2	150 °C (302 °F)	78 °C (172 °F)	49 °C (120 °F)
T1	150 °C (302 °F)	78 °C (172 °F)	49 °C (120 °F)

**Standard temperature, long neck**Ex approvals:

Gas groups IIC and IIIC: ATEX, IEC Ex, EAC Ex, NEPSI, Korea Ex, UK Ex

Temperature class	Maximum process temperature	Maximum ambient temperature	
		Standard cable	Fire retardant cable
T6	66 °C (150 °F)	47 °C (116 °F)	47 °C (116 °F)
T5	82 °C (179 °F)	62 °C (143 °F)	62 °C (143 °F)
T4	118 °C (244 °F)	80 °C (176 °F)	74 °C (165 °F)
T3	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)
T2	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)
T1	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)

Ex approvals:

Gas groups A, B, C, D, E, F and G: FM

Temperature class	Maximum process temperature	Maximum ambient temperature	
		Standard cable	Fire retardant cable
T6	66 °C (150 °F)	47 °C (116 °F)	47 °C (116 °F)
T5	82 °C (179 °F)	62 °C (143 °F)	62 °C (143 °F)
T4	118 °C (244 °F)	80 °C (176 °F)	70 °C (158 °F)
T3	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)
T2	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)
T1	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)

Ex approvals:

Gas groups IIB and IIIC: ATEX, IEC Ex, EAC Ex, NEPSI, Korea Ex, UK Ex

Temperature class	Maximum process temperature	Maximum ambient temperature	
		Standard cable	Fire retardant cable
T6	59 °C (138 °F)	59 °C (138 °F)	59 °C (138 °F)
T5	75 °C (167 °F)	75 °C (167 °F)	75 °C (167 °F)
T4	112 °C (233 °F)	80 °C (176 °F)	74 °C (165 °F)
T3	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)
T2	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)
T1	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)

## SITRANS FC (Coriolis) 2023

## Flowmeter systems

## SITRANS FC620/FC640

## Technical specifications (continued)

Ex approvals:

Gas groups C, D, E, F and G: FM

Temperature class	Maximum process temperature	Maximum ambient temperature Standard cable	Fire retardant cable
T6	59 °C (138 °F)	59 °C (138 °F)	59 °C (138 °F)
T5	75 °C (167 °F)	75 °C (167 °F)	70 °C (158 °F)
T4	112 °C (233 °F)	80 °C (176 °F)	70 °C (158 °F)
T3	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)
T2	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)
T1	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)

**Low temperature, long neck**Ex approvals:

Gas groups IIC and IIIC: ATEX, IEC Ex, EAC Ex, NEPSI, Korea Ex, UK Ex

Temperature class	Maximum process temperature	Maximum ambient temperature Standard cable	Fire retardant cable
T6	60 °C (140 °F)	60 °C (140 °F)	60 °C (140 °F)
T5	76 °C (168 °F)	76 °C (168 °F)	76 °C (168 °F)
T4	113 °C (235 °F)	80 °C (176 °F)	74 °C (165 °F)
T3	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)
T2	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)
T1	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)

Ex approvals:

Gas groups A, B, C, D, E, F and G: FM

Temperature class	Maximum process temperature	Maximum ambient temperature Standard cable	Fire retardant cable
T6	60 °C (140 °F)	60 °C (140 °F)	60 °C (140 °F)
T5	76 °C (168 °F)	76 °C (168 °F)	70 °C (158 °F)
T4	113 °C (235 °F)	80 °C (176 °F)	70 °C (158 °F)
T3	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)
T2	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)
T1	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)

Ex approvals:

Gas groups IIB and IIIC: ATEX, IEC Ex, EAC Ex, NEPSI, Korea Ex, UK Ex

Temperature class	Maximum process temperature	Maximum ambient temperature Standard cable	Fire retardant cable
T6	58 °C (136 °F)	58 °C (136 °F)	58 °C (136 °F)
T5	74 °C (165 °F)	74 °C (165 °F)	74 °C (165 °F)
T4	111 °C (232 °F)	80 °C (176 °F)	74 °C (165 °F)
T3	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)
T2	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)
T1	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)

Ex approvals:

Gas groups C, D, E, F and G: FM

## Technical specifications (continued)

Temperature class	Maximum process temperature	Maximum ambient temperature	
		Standard cable	Fire retardant cable
T6	58 °C (136 °F)	58 °C (136 °F)	58 °C (136 °F)
T5	74 °C (165 °F)	74 °C (165 °F)	70 °C (158 °F)
T4	111 °C (232 °F)	80 °C (176 °F)	70 °C (158 °F)
T3	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)
T2	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)
T1	150 °C (302 °F)	80 °C (176 °F)	70 °C (158 °F)

**Medium temperature, long neck**Ex approvals:

Gas groups IIC and IIIC: ATEX, IEC Ex, EAC Ex, NEPSI, Korea Ex, UK Ex

Temperature class	Maximum process temperature	Maximum ambient temperature	
		Standard cable	Fire retardant cable
T6	66 °C (150 °F)	47 °C (116 °F)	47 °C (116 °F)
T5	82 °C (179 °F)	62 °C (143 °F)	62 °C (143 °F)
T4	118 °C (244 °F)	80 °C (176 °F)	74 °C (165 °F)
T3	185 °C (365 °F)	80 °C (176 °F)	64 °C (147 °F)
T2	220 °C (428 °F)	80 °C (176 °F)	59 °C (138 °F)
T1	220 °C (428 °F)	80 °C (176 °F)	59 °C (138 °F)

Ex approvals:

Gas groups A, B, C, D, E, F and G: FM

Temperature class	Maximum process temperature	Maximum ambient temperature	
		Standard cable	Fire retardant cable
T6	66 °C (150 °F)	47 °C (116 °F)	47 °C (116 °F)
T5	82 °C (179 °F)	62 °C (143 °F)	62 °C (143 °F)
T4	118 °C (244 °F)	80 °C (176 °F)	70 °C (158 °F)
T3	185 °C (365 °F)	80 °C (176 °F)	64 °C (147 °F)
T2	220 °C (428 °F)	80 °C (176 °F)	59 °C (138 °F)
T1	220 °C (428 °F)	80 °C (176 °F)	59 °C (138 °F)

Ex approvals:

Gas groups IIB and IIIC: ATEX, IEC Ex, EAC Ex, NEPSI, Korea Ex, UK Ex

Temperature class	Maximum process temperature	Maximum ambient temperature	
		Standard cable	Fire retardant cable
T6	59 °C (138 °F)	59 °C (138 °F)	59 °C (138 °F)
T5	75 °C (167 °F)	75 °C (167 °F)	75 °C (167 °F)
T4	112 °C (233 °F)	80 °C (176 °F)	74 °C (165 °F)
T3	181 °C (357 °F)	80 °C (176 °F)	64 °C (147 °F)
T2	220 °C (428 °F)	80 °C (176 °F)	59 °C (138 °F)
T1	220 °C (428 °F)	80 °C (176 °F)	59 °C (138 °F)

Ex approvals:

Gas groups C, D, E, F and G: FM

Temperature class	Maximum process temperature	Maximum ambient temperature	
		Standard cable	Fire retardant cable
T6	59 °C (138 °F)	59 °C (138 °F)	59 °C (138 °F)
T5	75 °C (167 °F)	75 °C (167 °F)	70 °C (158 °F)
T4	112 °C (233 °F)	80 °C (176 °F)	70 °C (158 °F)
T3	181 °C (357 °F)	80 °C (176 °F)	64 °C (147 °F)
T2	220 °C (428 °F)	80 °C (176 °F)	59 °C (138 °F)
T1	220 °C (428 °F)	80 °C (176 °F)	59 °C (138 °F)

## SITRANS FC (Coriolis) 2023

## Flowmeter systems

## SITRANS FC620/FC640

## Technical specifications (continued)

**High temperature, long neck**Ex approvals:

All gas groups: ATEX, IEC Ex, EAC Ex, NEPSI, Korea Ex, UK Ex

Temperature class	Maximum process temperature	Maximum ambient temperature	
		Standard cable	Fire retardant cable
T6	65 °C (149 °F)	62 °C (143 °F)	62 °C (143 °F)
T5	80 °C (176 °F)	77 °C (170 °F)	77 °C (170 °F)
T4	115 °C (239 °F)	80 °C (176 °F)	74 °C (165 °F)
T3	180 °C (356 °F)	80 °C (176 °F)	65 °C (149 °F)
T2	275 °C (527 °F)	73 °C (163 °F)	50 °C (122 °F)
T1	350 °C (662 °F)	60 °C (140 °F)	40 °C (104 °F)

Ex approvals:

All gas groups: FM

Temperature class	Maximum process temperature	Maximum ambient temperature	
		Standard cable	Fire retardant cable
T6	65 °C (149 °F)	62 °C (143 °F)	62 °C (143 °F)
T5	80 °C (176 °F)	77 °C (170 °F)	70 °C (158 °F)
T4	115 °C (239 °F)	80 °C (176 °F)	70 °C (158 °F)
T3	180 °C (356 °F)	80 °C (176 °F)	65 °C (149 °F)
T2	275 °C (527 °F)	73 °C (163 °F)	50 °C (122 °F)
T1	350 °C (662 °F)	60 °C (140 °F)	40 °C (104 °F)

**Additional ambient and environmental specifications**

Specification	Rating/level of compliance
Relative humidity	0 ... 95%
Ingress protection	IP66 or IP67 with suitable cable glands
Environmental pollution	Pollution degree 4 in accordance with EN 61010-1 whilst in operation
Maximum altitude	2 000 m (6 600 ft) above mean sea level (MSL)
Mechanical load	<ul style="list-style-type: none"> <li>Transmitter: 10 ... 500 Hz, 1g</li> <li>Sensor: 10 ... 500 Hz, 1g according to IEC 60068-2-6</li> </ul>
Electromagnetic (EMC) Immunity	<ul style="list-style-type: none"> <li>EN IEC 61326-1, Table 2</li> <li>EN IEC 61326-2-3</li> <li>EN IEC 61326-2-5</li> <li>NAMUR NE 21 recommendation</li> <li>DNV-CG-0339 section 3, chapter 14</li> </ul>
Surge Immunity Emission	<ul style="list-style-type: none"> <li>EN 61000-4-5 for lightning protection</li> <li>EN IEC 61000-3-2, Class A (harmonic current emissions)</li> <li>EN IEC 61000-3-3, Class A (voltage fluctuations)</li> <li>Immunity assessment criterion: output signal fluctuation is within <math>\pm 1\%</math> of the output span</li> </ul>
Overvoltage	Category II according to EN IEC 61010-1

**Approvals and certificates – summary**

Position in code, type	Order code	Description
15, Ex approval	B	ATEX, explosion group IIC and IIIC
15, Ex approval	C	ATEX, explosion group IIB and IIIC
15, Ex approval	D	IECEx, explosion group IIC and IIIC

Position in code, type	Order code	Description
15, Ex approval	E	IECEx, explosion group IIB and IIIC
15, Ex approval	H	FM, groups A, B, C, D, E, F, G
15, Ex approval	J	FM, groups C, D, E, F, G
15, Ex approval	M	NEPSI, explosion group IIC and dust proof
15, Ex approval	N	NEPSI, explosion group IIB and dust proof
15, Ex approval	F	EAC Ex, explosion group IIC and IIIC
15, Ex approval	G	EAC Ex, explosion group IIB and IIIC
15, Ex approval	P	Korea Ex, explosion group IIC and IIIC
15, Ex approval	Q	Korea Ex, explosion group IIB and IIIC
15, Ex approval	U	UKEx, explosion group IIC and IIIC
15, Ex approval	V	UKEx, explosion group IIB and IIIC
ZS2, Marine approval	S22	Marine approval according DNV, ABS and KR piping class 2
ZS2, Marine approval	S23	Marine approval according DNV, ABS and KR piping class 3
ZS2, Marine approval	S24	Marine approval according LR MR TAC piping class 2
ZS2, Marine approval	S25	Marine approval according LR MR TAC piping class 3
ZS2, Marine approval	S26	Marine approved BV piping class 2
ZS2, Marine approval	S27	Marine approved BV piping class 3
ZC1, Certificate	C16	NTEP approval, accuracy class 0.3 acc. NIST Handbook 44
ZC1, Certificate	C11	Compliance with the order 2.1 EN 10204
ZC1, Certificate	C40	Quality Inspection Certificate 3.1 EN 10204
ZC1, Certificate	C13	3.1 EN 10204 + IGC + NACE MR0175, MR0103
ZC1, Certificate	C18	Pressure Test Certificate 3.1 EN 10204
ZC1, Certificate	C54	Degreasing ASTM G93-03, including report
ZC1, Certificate	C36	WPS; WPQR; WQC
ZC1, Certificate	C37	Welding procedures and Certificate ASME IX
ZC1, Certificate	C33	X-ray EN ISO 17636-1/B
ZC1, Certificate	C34	X-ray test according to ASME V

## Technical specifications (continued)

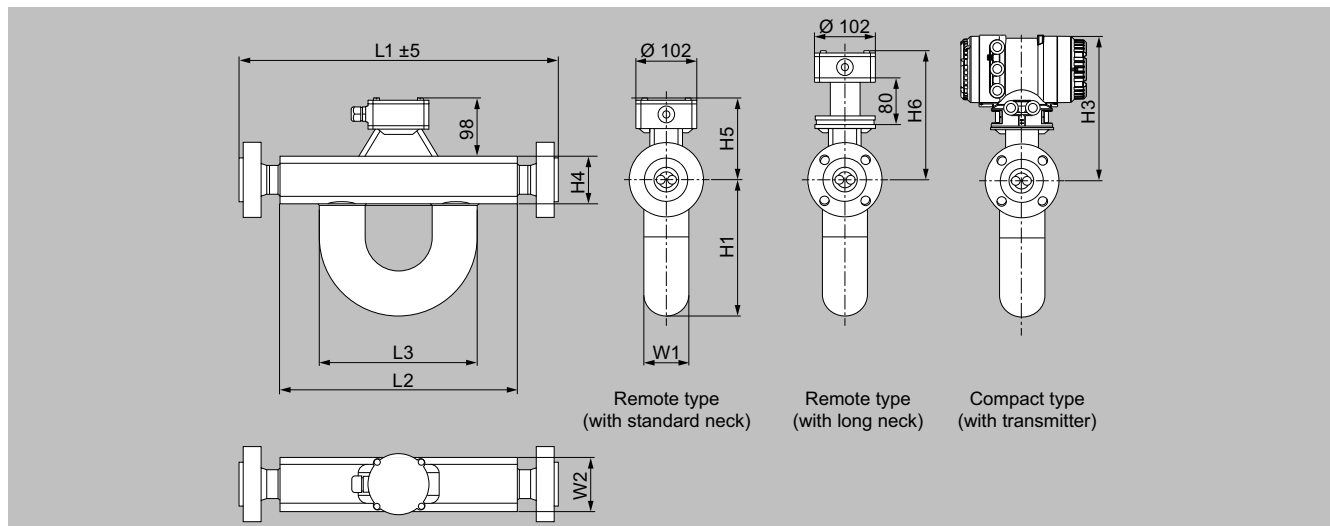
Position in code, type	Order code	Description
ZC1, Certificate	C38	Dye penetration EN ISO 3452-1
ZC1, Certificate	C39	Dye penetration ASME V
ZC1, Certificate	C20	Functional Safety (IEC 61508) - SIL2/3

Position in code, type	Order code	Description
ZC1, Certificate	C60	Surface wetted parts $Ra \leq 0.8 \mu\text{m}$
ZC1, Certificate	C61	Surface wetted parts $Ra \leq 0.8 \mu\text{m}$ , with certificate
ZC1, Certificate	C62	3A approval, surface wetted parts $Ra \leq 0.8 \mu\text{m}$
ZC1, Certificate	C63	EHEDG approval, surface wetted parts $Ra \leq 0.8 \mu\text{m}$
ZC1, Certificate	C15	PMI 3.1 according to EN 10204
ZC1, Certificate	C50	Ferrite test EN ISO 8249 for flange

## Dimensional drawings

Drawings, dimensions and weight for FCS600 sensors

FCS dimensions and weight (excluding high pressure versions)



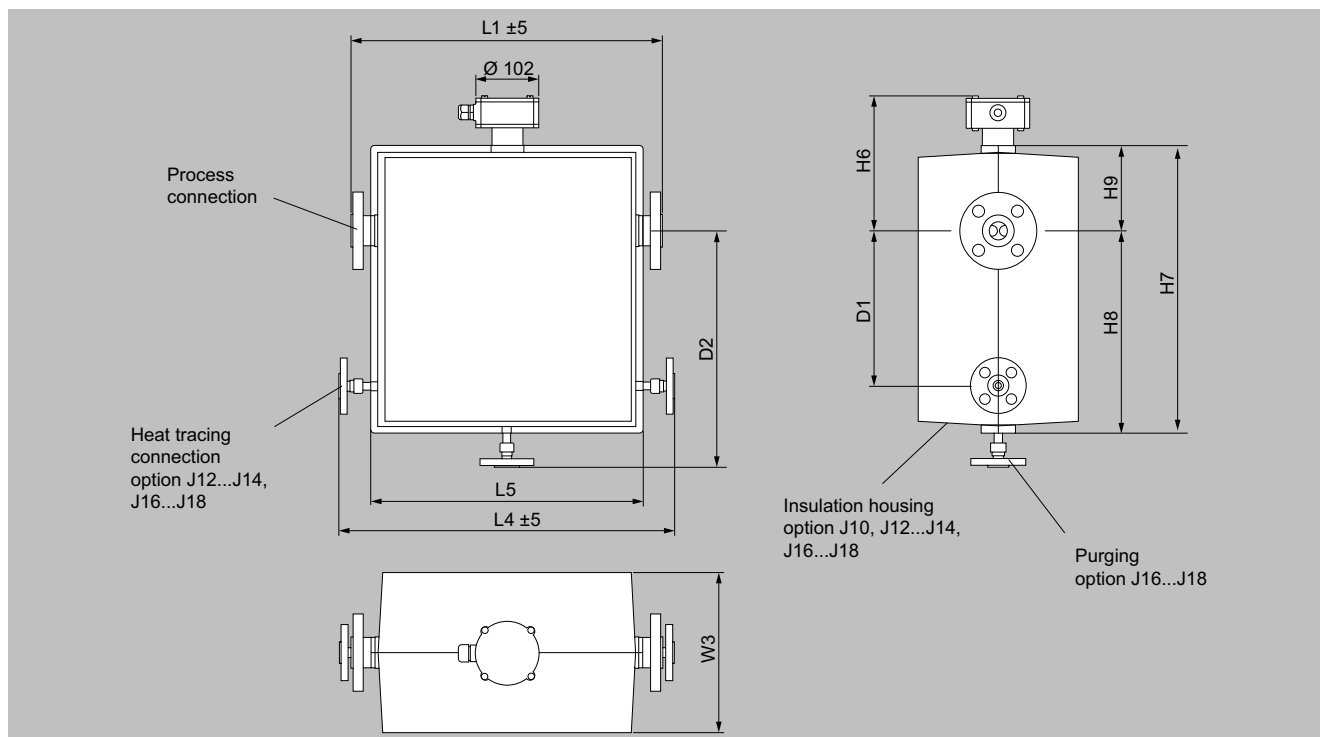
Dimensions in mm

## SITRANS FC (Coriolis) 2023

## Flowmeter systems

## SITRANS FC620/FC640

## Dimensional drawings (continued)



Dimensions in mm (with insulation and heating options)

## FCS600 sensor dimensions without L1

Nominal size	L2	L3	L4	L5	W1	W2	W3	D1	D2
Dimensions in mm (inch)									
DN 15	272 (10.7)	212 (8.3)	420 (16.5)	310 (12.2)	60 (2.4)	80 (3.1)	240 (9.4)	200 (7.9)	330 (13)
DN 25	400 (15.7)	266 (10.5)	540 (21.3)	439 (17.3)	76 (3)	90 (3.5)	260 (10.2)	250 (9.8)	380 (15)
DN 40	490 (19.3)	267 (10.5)	640 (25.2)	530 (20.9)	89 (3.5)	110 (4.3)	260 (10.2)	250 (9.8)	430 (16.9)
DN 65	850 (33.5)	379 (14.9)	1000 (39.4)	894 (35.2)	129 (5.1)	160 (6.3)	302 (11.9)	350 (13.8)	545 (21.5)

Nominal size	H1	H3	H4	H5	H6	H7	H8	H9
Dimensions in mm (inch)								
DN 15	177 (7)	267 (10.5)	80 (3.1)	138 (5.4)	218 (8.6)	411 (16.2)	273 (10.7)	138 (5.4)
DN 25	230 (9.1)	267 (10.5)	80 (3.1)	138 (5.4)	218 (8.6)	464 (18.3)	326 (12.8)	138 (5.4)
DN 40	268 (10.6)	277 (10.9)	100 (3.9)	148 (5.8)	228 (9)	524 (20.6)	376 (14.8)	148 (5.8)
DN 65	370 (14.6)	294.5 (11.6)	135 (5.3)	165 (6.5)	246 (9.7)	668 (26.3)	503 (19.8)	165 (6.5)

## Overall length L1 and weight

The overall length of the sensor depends on the selected process connection (type and size). The following tables list the overall length and weight as functions of the individual process connection.

The weights in the tables are for the remote type. Additional weight for the compact type: up to 3.2 kg (7.1 lb).

## L1 dimension and weight with process connections according to ASME B16.5, AISI 316L wetted parts

Process connection size and type	FCS600 sensor nominal size							
	DN 15		DN 25		DN 40		DN 65	
	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)
ASME ½" class 150, raised face (RF)	370 (14.6)	10 (22)	n/a	n/a	n/a	n/a	n/a	n/a
ASME ½" class 300, raised face (RF)	370 (14.6)	10.4 (23)	n/a	n/a	n/a	n/a	n/a	n/a
ASME ½" class 600, raised face (RF)	380 (15)	10.6 (23)	n/a	n/a	n/a	n/a	n/a	n/a

## Dimensional drawings (continued)

Process connection size and type	FCS600 sensor nominal size							
	DN 15		DN 25		DN 40		DN 65	
	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)
ASME ½" class 600, ring joint (RJ)	380 (15)	10.6 (23)	n/a	n/a	n/a	n/a	n/a	n/a
ASME 1" class 150, raised face (RF)	370 (14.6)	10.8 (24)	500 (19.7)	14.8 (33)	n/a	n/a	n/a	n/a
ASME 1" class 300, raised face (RF)	370 (14.6)	11.8 (26)	500 (19.7)	15.8 (35)	n/a	n/a	n/a	n/a
ASME 1" class 600, raised face (RF)	390 (15.4)	12.2 (27)	520 (20.5)	16.2 (36)	n/a	n/a	n/a	n/a
ASME 1" class 600, ring joint (RJ)	390 (15.4)	12.4 (27)	520 (20.5)	16.2 (36)	n/a	n/a	n/a	n/a
ASME 1½" class 150, raised face (RF)	380 (15)	11.8 (26)	500 (19.7)	15.8 (35)	600 (23.6)	25 (56)	n/a	n/a
ASME 1½" class 300, raised face (RF)	380 (15)	14.2 (31)	510 (20.1)	18.2 (40)	600 (23.6)	27.2 (60)	n/a	n/a
ASME 1½" class 600, raised face (RF)	400 (15.7)	15.4 (34)	530 (20.9)	19.2 (42)	620 (24.4)	28.2 (62)	n/a	n/a
ASME 1½" class 600, ring joint (RJ)	400 (15.7)	15.4 (34)	530 (20.9)	19.4 (43)	620 (24.4)	28.2 (62)	n/a	n/a
ASME 2" class 150, raised face (RF)	n/a	n/a	510 (20.1)	17.4 (38)	600 (23.6)	26.4 (58)	n/a	n/a
ASME 2" class 300, raised face (RF)	n/a	n/a	510 (20.1)	19 (42)	600 (23.6)	28 (62)	n/a	n/a
ASME 2" class 600, raised face (RF)	n/a	n/a	540 (21.3)	20.8 (46)	630 (24.8)	29.8 (66)	n/a	n/a
ASME 2" class 600, ring joint (RJ)	n/a	n/a	540 (21.3)	21.2 (47)	630 (24.8)	29.8 (66)	n/a	n/a
ASME 2½" class 150, raised face (RF)	n/a	n/a	n/a	n/a	610 (24)	29.6 (65)	n/a	n/a
ASME 2½" class 300, raised face (RF)	n/a	n/a	n/a	n/a	610 (24)	31 (68)	n/a	n/a
ASME 2½" class 600, raised face (RF)	n/a	n/a	n/a	n/a	640 (25.2)	33.4 (74)	n/a	n/a
ASME 2½" class 600, ring joint (RJ)	n/a	n/a	n/a	n/a	640 (25.2)	34.4 (76)	n/a	n/a
ASME 3" class 150, raised face (RF)	n/a	n/a	n/a	n/a	610 (24)	30.6 (67)	1 000 (39.4)	60.2 (133)
ASME 3" class 300, raised face (RF)	n/a	n/a	n/a	n/a	620 (24.4)	34.6 (76)	1 000 (39.4)	63.4 (140)
ASME 3" class 600, raised face (RF)	n/a	n/a	n/a	n/a	640 (25.2)	38 (84)	1 000 (39.4)	65.8 (145)
ASME 3" class 600, ring joint (RJ)	n/a	n/a	n/a	n/a	640 (25.2)	38.6 (85)	1 000 (39.4)	65.8 (145)
ASME 4" class 150, raised face (RF)	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (39.4)	64 (141)
ASME 4" class 300, raised face (RF)	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (39.4)	71.4 (157)
ASME 4" class 600, raised face (RF)	n/a	n/a	n/a	n/a	n/a	n/a	1 030 (40.6)	82.6 (182)
ASME 4" class 600, ring joint (RJ)	n/a	n/a	n/a	n/a	n/a	n/a	1 030 (40.6)	82.8 (183)
ASME 5" class 150, raised face (RF)	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (39.4)	66 (146)
ASME 5" class 300, raised face (RF)	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (39.4)	78.4 (173)
ASME 5" class 600, raised face (RF)	n/a	n/a	n/a	n/a	n/a	n/a	1 030 (40.6)	102.8 (227)
ASME 5" class 600, ring joint (RJ)	n/a	n/a	n/a	n/a	n/a	n/a	1 030 (40.6)	103.6 (228)

## SITRANS FC (Coriolis) 2023

## Flowmeter systems

## SITRANS FC620/FC640

## Dimensional drawings (continued)

*L1 dimension and weight with process connections according to ASME B16.5, alloy 22 wetted parts*

Process connection size and type	FCS600 sensor nominal size		DN 25		DN 40	
	DN 15 L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)
ASME 1" class 150, raised face (RF)	390 (15.4)	11.4 (25)	n/a	n/a	n/a	n/a
ASME 1" class 300, raised face (RF)	390 (15.4)	12.6 (28)	n/a	n/a	n/a	n/a
ASME 1" class 600, raised face (RF)	390 (15.4)	12.4 (27)	n/a	n/a	n/a	n/a
ASME 1½" class 150, raised face (RF)	390 (15.4)	12.6 (28)	520 (20.5)	16.5 (35)	n/a	n/a
ASME 1½" class 300, raised face (RF)	390 (15.4)	15.4 (34)	520 (20.5)	19.1 (42)	n/a	n/a
ASME 1½" class 600, raised face (RF)	400 (15.7)	15.6 (34)	530 (20.9)	19.6 (43)	n/a	n/a
ASME 2" class 150, raised face (RF)	390 (15.4)	14.8 (33)	520 (20.5)	18.5 (41)	620 (24.4)	27.3 (60)
ASME 2" class 300, raised face (RF)	390 (15.4)	16 (35)	520 (20.5)	20.5 (45)	620 (24.4)	29.1 (64)
ASME 2" class 600, raised face (RF)	410 (16.1)	17.6 (39)	540 (21.3)	21.6 (48)	630 (24.8)	29.7 (66)
ASME 2½" class 150, raised face (RF)	n/a	n/a	n/a	n/a	620 (24.4)	30.9 (68)
ASME 2½" class 300, raised face (RF)	n/a	n/a	n/a	n/a	620 (24.4)	32.5 (72)
ASME 2½" class 600, raised face (RF)	n/a	n/a	n/a	n/a	640 (25.2)	33.9 (75)
ASME 3" class 150, raised face (RF)	n/a	n/a	n/a	n/a	620 (24.4)	32.8 (72)
ASME 3" class 300, raised face (RF)	n/a	n/a	n/a	n/a	620 (24.4)	36.6 (81)
ASME 3" class 600, raised face (RF)	n/a	n/a	n/a	n/a	640 (25.2)	38.9 (86)

*L1 dimension and weight with process connections according to EN 1092-1, AISI 316L wetted parts*

Process connection size and type	FCS600 sensor nominal size		DN 25		DN 40		DN 65	
	DN 15 L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)
EN DN 15 PN 40 type B1, raised face (RF)	370 (14.6)	10.6 (23)	n/a	n/a	n/a	n/a	n/a	n/a
EN DN 15 PN 40 type D, with groove	370 (14.6)	10.4 (23)	n/a	n/a	n/a	n/a	n/a	n/a
EN DN 15 PN 40 type E, with spigot	370 (14.6)	10.4 (23)	n/a	n/a	n/a	n/a	n/a	n/a
EN DN 15 PN 40 type F, with recess	370 (14.6)	10.4 (23)	n/a	n/a	n/a	n/a	n/a	n/a
EN DN 15 PN 100 type B1, raised face (RF)	380 (15)	11.4 (25)	n/a	n/a	n/a	n/a	n/a	n/a
EN DN 15 PN 100 type D, with groove	380 (15)	11.4 (25)	n/a	n/a	n/a	n/a	n/a	n/a
EN DN 15 PN 100 type E, with spigot	380 (15)	11.2 (25)	n/a	n/a	n/a	n/a	n/a	n/a
EN DN 15 PN 100 type F, with recess	380 (15)	11.4 (25)	n/a	n/a	n/a	n/a	n/a	n/a
EN DN 25 PN 40 type B1, raised face (RF)	370 (14.6)	11.6 (26)	500 (19.7)	15.6 (34)	n/a	n/a	n/a	n/a
EN DN 25 PN 40 type D, with groove	370 (14.6)	11.4 (25)	500 (19.7)	15.4 (34)	n/a	n/a	n/a	n/a
EN DN 25 PN 40 type E, with spigot	370 (14.6)	11.2 (25)	500 (19.7)	15.2 (34)	n/a	n/a	n/a	n/a
EN DN 25 PN 40 type F, with recess	370 (14.6)	11.4 (25)	500 (19.7)	15.4 (34)	n/a	n/a	n/a	n/a



## Dimensional drawings (continued)

Process connection size and type	FCS600 sensor nominal size							
	DN 15		DN 25		DN 40		DN 65	
	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)
EN DN 25 PN 100 type B1, raised face (RF)	390 (15.4)	14 (31)	520 (20.5)	18.2 (40)	n/a	n/a	n/a	n/a
EN DN 25 PN 100 type D, with groove	390 (15.4)	14 (31)	520 (20.5)	18 (40)	n/a	n/a	n/a	n/a
EN DN 25 PN 100 type E, with spigot	390 (15.4)	13.6 (30)	520 (20.5)	17.6 (39)	n/a	n/a	n/a	n/a
EN DN 25 PN 100 type F, with recess	390 (15.4)	14 (31)	520 (20.5)	18 (40)	n/a	n/a	n/a	n/a
EN DN 40 PN 40 type B1, raised face (RF)	370 (14.6)	13 (29)	500 (19.7)	17 (37)	600 (23.6)	26.2 (58)	n/a	n/a
EN DN 40 PN 40 type D, with groove	370 (14.6)	13 (29)	500 (19.7)	17 (37)	600 (23.6)	26 (57)	n/a	n/a
EN DN 40 PN 40 type E, with spigot	370 (14.6)	12.6 (28)	500 (19.7)	16.6 (37)	600 (23.6)	25.8 (57)	n/a	n/a
EN DN 40 PN 40 type F, with recess	370 (14.6)	12.8 (29)	500 (19.7)	16.8 (37)	600 (23.6)	26 (57)	n/a	n/a
EN DN 40 PN 100 type B1, raised face (RF)	450 (17.7)	17.6 (39)	560 (22)	21.2 (47)	620 (24.4)	29.8 (66)	n/a	n/a
EN DN 40 PN 100 type D, with groove	450 (17.7)	17.4 (38)	560 (22)	21.2 (47)	620 (24.4)	29.6 (65)	n/a	n/a
EN DN 40 PN 100 type E, with spigot	450 (17.7)	17 (37)	560 (22)	20.8 (46)	620 (24.4)	29.2 (64)	n/a	n/a
EN DN 40 PN 100 type F, with recess	450 (17.7)	17.4 (38)	560 (22)	21 (46)	620 (24.4)	29.6 (65)	n/a	n/a
EN DN 50 PN 40 type B1, raised face (RF)	n/a	n/a	500 (19.7)	18.4 (41)	600 (23.6)	27.4 (60)	n/a	n/a
EN DN 50 PN40 type D, with groove	n/a	n/a	500 (19.7)	18.2 (40)	600 (23.6)	27.4 (60)	n/a	n/a
EN DN 50 PN 40 type E, with spigot	n/a	n/a	500 (19.7)	18 (40)	600 (23.6)	27 (60)	n/a	n/a
EN DN 50 PN 40 type F, with recess	n/a	n/a	500 (19.7)	18.2 (40)	600 (23.6)	27.2 (60)	n/a	n/a
EN DN 50 PN 63 type B1, raised face (RF)	n/a	n/a	520 (20.5)	21.6 (48)	620 (24.4)	30.6 (67)	n/a	n/a
EN DN 50 PN 63 type D, with groove	n/a	n/a	520 (20.5)	21.4 (47)	620 (24.4)	30.4 (67)	n/a	n/a
EN DN 50 PN 63 type E, with spigot	n/a	n/a	520 (20.5)	21 (46)	620 (24.4)	30 (66)	n/a	n/a
EN DN 50 PN 63 type F, with recess	n/a	n/a	520 (20.5)	21.2 (47)	620 (24.4)	30.2 (67)	n/a	n/a
EN DN 50 PN 100 type B1, raised face (RF)	n/a	n/a	590 (23.2)	25.2 (56)	660 (26)	33.6 (74)	n/a	n/a
EN DN 50 PN 100 type D, with groove	n/a	n/a	590 (23.2)	25 (55)	660 (26)	33.4 (74)	n/a	n/a
EN DN 50 PN 100 type E, with spigot	n/a	n/a	590 (23.2)	24.4 (54)	660 (26)	33 (73)	n/a	n/a
EN DN 50 PN 100 type F, with recess	n/a	n/a	590 (23.2)	24.8 (56)	660 (26)	33.4 (74)	n/a	n/a
EN DN 80 PN 40 type B1, raised face (RF)	n/a	n/a	n/a	n/a	610 (24)	31 (68)	1 000 (39.4)	60.4 (133)
EN DN 80 PN 40 type D, with groove	n/a	n/a	n/a	n/a	610 (24)	30.8 (68)	1 000 (39.4)	60.2 (133)
EN DN 80 PN 40 type E, with spigot	n/a	n/a	n/a	n/a	610 (24)	30.4 (67)	1 000 (39.4)	59.8 (132)
EN DN 80 PN 40 type F, with recess	n/a	n/a	n/a	n/a	610 (24)	30.6 (67)	1 000 (39.4)	60 (132)
EN DN 80 PN 63 type B1, raised face (RF)	n/a	n/a	n/a	n/a	620 (24.4)	34.4 (76)	1 000 (39.4)	63.4 (140)
EN DN 80 PN 63 type D, with groove	n/a	n/a	n/a	n/a	620 (24.4)	34.2 (75)	1 000 (39.4)	63.2 (139)
EN DN 80 PN 63 type E, with spigot	n/a	n/a	n/a	n/a	620 (24.4)	33.6 (74)	1 000 (39.4)	62.8 (138)
EN DN 80 PN 63 type F, with recess	n/a	n/a	n/a	n/a	620 (24.4)	33.8 (75)	1 000 (39.4)	63 (139)
EN DN 80 PN 100 type B1, raised face (RF)	n/a	n/a	n/a	n/a	730 (28.7)	41.8 (92)	1 000 (39.4)	67.2 (148)

## SITRANS FC (Coriolis) 2023

## Flowmeter systems

## SITRANS FC620/FC640

## Dimensional drawings (continued)

Process connection size and type	FCS600 sensor nominal size							
	DN 15		DN 25		DN 40		DN 65	
	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)
EN DN 80 PN 100 type D, with groove	n/a	n/a	n/a	n/a	730 (28.7)	41.6 (92)	1 000 (39.4)	67 (148)
EN DN 80 PN 100 type E, with spigot	n/a	n/a	n/a	n/a	730 (28.7)	41 (90)	1 000 (39.4)	66.4 (146)
EN DN 80 PN 100 type F, with recess	n/a	n/a	n/a	n/a	730 (28.7)	41.4 (91)	1 000 (39.4)	66.6 (147)
EN DN 100 PN 40 type B1, raised face (RF)	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (39.4)	63.6 (140)
EN DN 100 PN 40 type D, with groove	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (39.4)	63.2 (139)
EN DN 100 PN 40 type E, with spigot	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (39.4)	62.4 (138)
EN DN 100 PN 40 type F, with recess	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (39.4)	62.6 (138)
EN DN 100 PN 63 type B1, raised face (RF)	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (39.4)	68 (150)
EN DN 100 PN 63 type D, with groove	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (39.4)	67.8 (149)
EN DN 100 PN 63 type E, with spigot	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (39.4)	67 (148)
EN DN 100 PN 63 type F, with recess	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (39.4)	67.4 (149)
EN DN 100 PN 100 type B1, raised face (RF)	n/a	n/a	n/a	n/a	n/a	n/a	1 050 (41.3)	76.6 (169)
EN DN 100 PN 100 type D, with groove	n/a	n/a	n/a	n/a	n/a	n/a	1 050 (41.3)	76.2 (168)
EN DN 100 PN 100 type E, with spigot	n/a	n/a	n/a	n/a	n/a	n/a	1 050 (41.3)	75.4 (166)
EN DN 100 PN 100 type F, with recess	n/a	n/a	n/a	n/a	n/a	n/a	1 050 (41.3)	75.8 (167)
EN DN 125 PN 40 type B1, raised face (RF)	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (39.4)	67.6 (149)
EN DN 125 PN 40 type D, with groove	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (39.4)	67.2 (148)
EN DN 125 PN 40 type E, with spigot	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (39.4)	66.4 (146)
EN DN 125 PN 40 type F, with recess	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (39.4)	66.6 (147)
EN DN 125 PN 63 type B1, raised face (RF)	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (39.4)	77.8 (172)
EN DN 125 PN 63 type D, with groove	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (39.4)	77.4 (171)
EN DN 125 PN 63 type E, with spigot	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (39.4)	76.4 (168)
EN DN 125 PN 63 type F, with recess	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (39.4)	76.8 (169)
EN DN 125 PN 100 type B1, raised face (RF)	n/a	n/a	n/a	n/a	n/a	n/a	1 100 (43.3)	93.2 (205)
EN DN 125 PN 100 type D, with groove	n/a	n/a	n/a	n/a	n/a	n/a	1 100 (43.3)	92.8 (205)
EN DN 125 PN 100 type E, with spigot	n/a	n/a	n/a	n/a	n/a	n/a	1 100 (43.3)	91.4 (202)
EN DN 125 PN 100 type F, with recess	n/a	n/a	n/a	n/a	n/a	n/a	1 100 (43.3)	92.4 (204)

## Dimensional drawings (continued)

*L1 dimension and weight with process connections according to EN 1092-1, alloy 22 wetted parts*

Process connection size and type	FCS600 sensor nominal size		DN 25		DN 40	
	DN 15 L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)
EN DN 25 PN 40, type B1, raised face (RF)	390 (15.4)	11.7 (26)	520 (20.5)	15.7 (35)	n/a	n/a
EN DN 40 PN 40, type B1, raised face (RF)	390 (15.4)	13.7 (30)	520 (20.5)	17.5 (39)	n/a	n/a
EN DN 50 PN 40, type B1, raised face (RF)	n/a	n/a	520 (20.5)	19.3 (43)	620 (24.4)	28 (62)
EN DN 80 PN 40, type B1, raised face (RF)	n/a	n/a	n/a	n/a	620 (24.4)	32.6 (72)

*L1 dimension and weight with process connections according to JIS B 2220, AISI 316L wetted parts*

Process connection size and type	FCS600 sensor nominal size		DN 25		DN 40		DN 65	
	DN 15 L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)
JIS DN 15 10 K	370 (14.6)	10.4 (23)	n/a	n/a	n/a	n/a	n/a	n/a
JIS DN 15 20 K	370 (14.6)	10.4 (23)	n/a	n/a	n/a	n/a	n/a	n/a
JIS DN 25 10 K	370 (14.6)	11.4 (25)	500 (19.7)	15.6 (34)	n/a	n/a	n/a	n/a
JIS DN 25 20 K	370 (14.6)	11.8 (26)	500 (19.7)	15.8 (35)	n/a	n/a	n/a	n/a
JIS DN 40 10 K	370 (14.6)	12.2 (27)	500 (19.7)	16.2 (36)	600 (23.6)	25.4 (56)	n/a	n/a
JIS DN 40 20 K	370 (14.6)	12.6 (28)	500 (19.7)	16.6 (37)	600 (23.6)	25.8 (57)	n/a	n/a
JIS DN 50 10 K	n/a	n/a	500 (19.7)	17 (37)	600 (23.6)	26 (57)	n/a	n/a
JIS DN 50 20 K	n/a	n/a	500 (19.7)	17.2 (38)	600 (23.6)	26.2 (58)	n/a	n/a
JIS DN 80 10 K	n/a	n/a	n/a	n/a	600 (23.6)	27.8 (61)	1 000 (40.2)	57.8 (127)
JIS DN 80 20 K	n/a	n/a	n/a	n/a	610 (24)	30.4 (67)	1 000 (40.2)	60 (132)
JIS DN 100 10 K	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (40.2)	59 (130)
JIS DN 100 20 K	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (40.2)	63 (139)
JIS DN 125 10 K	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (40.2)	62.8 (138)
JIS DN 125 20 K	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (40.2)	69 (152)

*L1 dimension and weight with process connections according to JIS B 2220, alloy 22 wetted parts*

Process connection size and type	FCS600 sensor nominal size		DN 25		DN 40	
	DN 15 L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)
JIS DN 25 10 K	390 (15.4)	12.1 (27)	n/a	n/a	n/a	n/a
JIS DN 25 20 K	390 (15.4)	12.5 (28)	n/a	n/a	n/a	n/a
JIS DN 40 10 K	390 (15.4)	13.6 (30)	520 (20.5)	17.4 (38)	n/a	n/a
JIS DN 40 20 K	390 (15.4)	14 (31)	520 (20.5)	17.6 (39)	n/a	n/a
JIS DN 50 10 K	n/a	n/a	520 (20.5)	18.6 (41)	620 (24.4)	27.3 (60)
JIS DN 50 20 K	n/a	n/a	520 (20.5)	18.8 (41)	620 (24.4)	27.3 (60)
JIS DN 80 10 K	n/a	n/a	n/a	n/a	620 (24.4)	30.8 (68)
JIS DN 80 20 K	n/a	n/a	n/a	n/a	620 (24.4)	33.3 (73)

*L1 dimension and weight with G threaded process connections, AISI 316L wetted parts*

Process connection size and type	FCS600 sensor nominal size		DN 25		DN 40		DN 65	
	DN 15 L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)
G 3/8"	390 (15.4)	9.4 (21)	n/a	n/a	n/a	n/a	n/a	n/a
G 1/2"	390 (15.4)	9.4 (21)	n/a	n/a	n/a	n/a	n/a	n/a
G 3/4"	390 (15.4)	9.4 (21)	n/a	n/a	n/a	n/a	n/a	n/a

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## Flowmeter systems

## SITRANS FC620/FC640

## Dimensional drawings (continued)

*L1 dimension and weight with NPT threaded process connections, AISI 316L wetted parts*

Process connection size and type	FCS600 sensor nominal size							
	DN 15		DN 25		DN 40		DN 65	
	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)
3/8" NPT	390 (15.4)	9.4 (21)	n/a	n/a	n/a	n/a	n/a	n/a
1/2" NPT	390 (15.4)	9.4 (21)	n/a	n/a	n/a	n/a	n/a	n/a
3/4" NPT	390 (15.4)	9.4 (21)	n/a	n/a	n/a	n/a	n/a	n/a

*L1 dimension and weight with hygienic clamp process connections to DIN 32676 Series A, AISI 316L wetted parts*

Process connection size and type	FCS600 sensor nominal size							
	DN 15		DN 25		DN 40		DN 65	
	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)
DIN 32676 series A, DN 25	370 (14.8)	9.2 (20)	n/a	n/a	n/a	n/a	n/a	n/a
DIN 32676 series A, DN 40	370 (14.8)	9.2 (20)	500 (19.7)	13.2 (29)	n/a	n/a	n/a	n/a
DIN 32676 series A, DN 50	n/a	n/a	500 (19.7)	13.2 (29)	600 (23.6)	22.4 (49)	n/a	n/a
DIN 32676 series A, DN 65	n/a	n/a	n/a	n/a	600 (23.6)	22.5 (50)	n/a	n/a
DIN 32676 series A, DN 100	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (39.4)	52.1 (115)

*L1 dimension and weight with hygienic clamp process connections to DIN 32676 Series C (Tri-clamp), AISI 316L wetted parts*

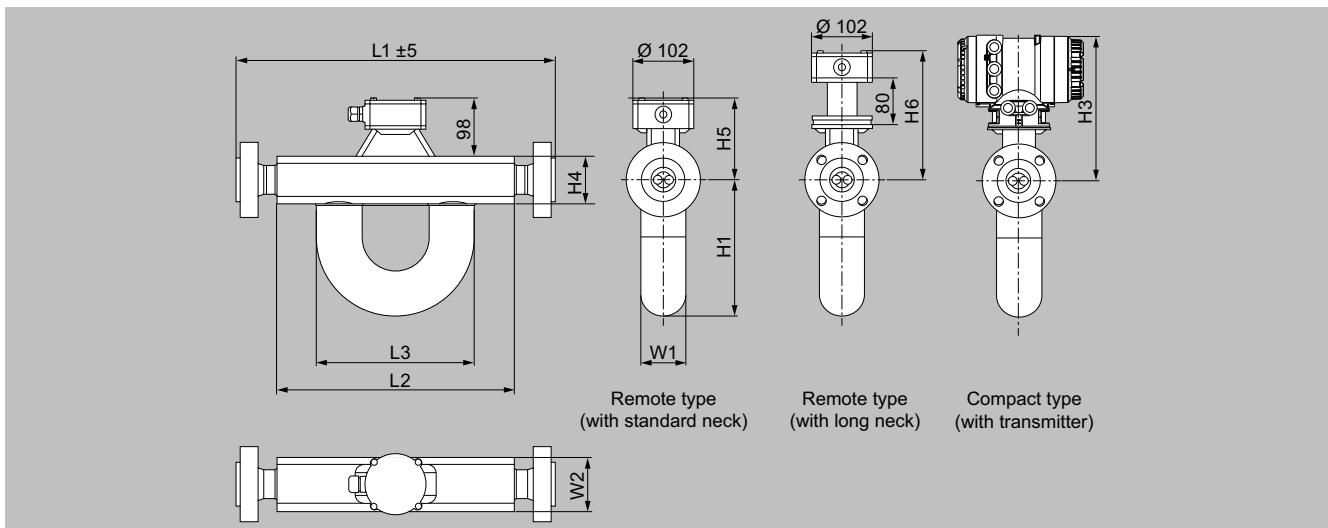
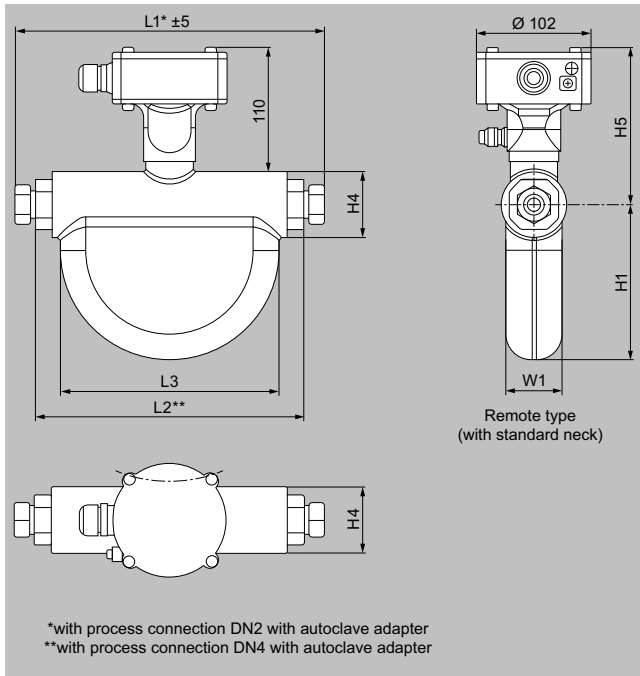
Process connection size and type	FCS600 sensor nominal size							
	DN 15		DN 25		DN 40		DN 65	
	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)
DIN 32676 series C, 1"	370 (14.8)	9.2 (20)	n/a	n/a	n/a	n/a	n/a	n/a
DIN 32676 series C, 1 1/2"	370 (14.8)	9.2 (20)	500 (19.7)	13.2 (29)	n/a	n/a	n/a	n/a
DIN 32676 series C, 2"	n/a	n/a	500 (19.7)	13.2 (29)	600 (23.6)	22.4 (49)	n/a	n/a
DIN 32676 series C, 3"	n/a	n/a	n/a	n/a	600 (23.6)	22.5 (50)	n/a	n/a
DIN 32676 series C, 4"	n/a	n/a	n/a	n/a	n/a	n/a	1 000 (39.4)	52.2 (115)

*L1 dimension and weight with hygienic clamp process connections to JIS/ISO 2852, AISI 316L wetted parts*

Process connection size and type	FCS600 sensor nominal size							
	DN 15		DN 25		DN 40		DN 65	
	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)
JIS/ISO 2852, 1"	370 (14.8)	9.2 (20)	n/a	n/a	n/a	n/a	n/a	n/a
JIS/ISO 2852, 1 1/2"	370 (14.8)	9.2 (20)	500 (19.7)	13.2 (29)	n/a	n/a	n/a	n/a
JIS/ISO 2852, 2"	n/a	n/a	500 (19.7)	13.3 (29)	600 (23.6)	22.4 (49)	n/a	n/a
JIS/ISO 2852, 3"	n/a	n/a	n/a	n/a	600 (23.6)	22.5 (50)	n/a	n/a

## Dimensional drawings (continued)

## FCS600 dimensions and weight (high pressure versions)



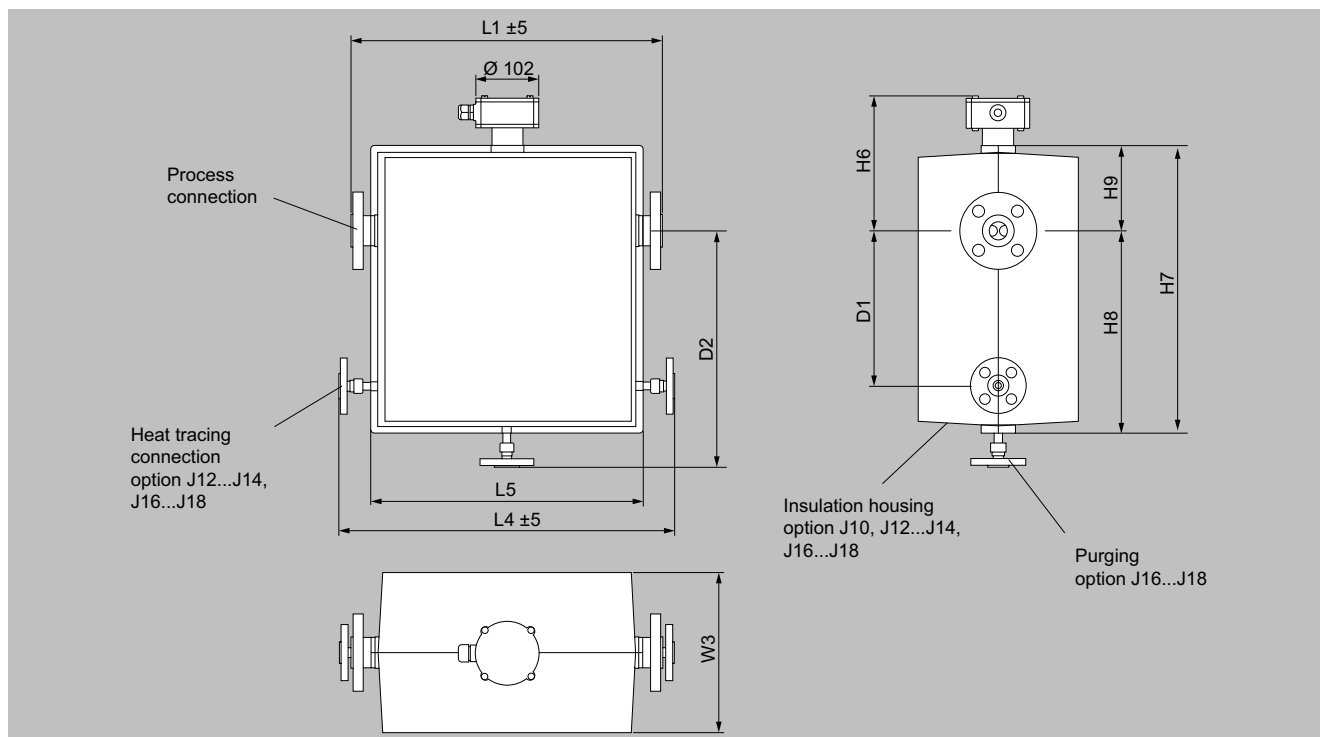
Dimensions in mm for sizes DN 15, DN 25 and DN 40

## SITRANS FC (Coriolis) 2023

## Flowmeter systems

## SITRANS FC620/FC640

## Dimensional drawings (continued)



Dimensions in mm, version with insulation housing for sizes DN 15, DN 25 and DN 40 only

## Dimensions without length L1

Nominal size	L2	L3	L4	L5	W1	W2	W3	D1	D2
Dimensions in mm (inch)									
DN 2	240 (9.5)	195 (7.7)			50 (2.0)				
DN 4	240 (9.5)	195 (7.7)			50 (2.0)				
DN 15	272 (10.7)	212 (8.3)	420 (16.5)	310 (12.2)	60 (2.4)	80 (3.1)	240 (9.4)	200 (7.9)	330 (13)
DN 25	400 (15.7)	266 (10.5)	540 (21.3)	439 (17.3)	76 (3)	90 (3.5)	260 (10.2)	250 (9.8)	380 (15)
DN 40	490 (19.3)	267 (10.5)	640 (25.2)	530 (20.9)	89 (3.5)	110 (4.3)	260 (10.2)	250 (9.8)	430 (16.9)

Nominal size	H1	H3	H4	H5	H6	H7	H8	H9
Dimensions in mm (inch)								
DN 2	138 (5.4)		59 (2.3)	140 (5.5)				
DN 4	138 (5.4)		59 (2.3)	140 (5.5)				
DN 15	177 (7)	267 (10.5)	80 (3.1)	138 (5.4)	218 (8.6)	411 (16.2)	273 (10.7)	138 (5.4)
DN 25	230 (9.1)	267 (10.5)	80 (3.1)	138 (5.4)	218 (8.6)	464 (18.3)	326 (12.8)	138 (5.4)
DN 40	268 (10.6)	277 (10.9)	100 (3.9)	148 (5.8)	228 (9)	524 (20.6)	376 (14.8)	148 (5.8)

## Overall length L1 and weight

The overall length of the sensor depends on the selected process connection (type and size). The following tables list the overall length and weight as functions of the individual process connection.

The weights in the tables are for the remote type. Additional weight for the compact type: up to 3.2 kg (7.1 lb).

## Dimensional drawings (continued)

**L1 dimension and weight for medium pressure autoclave process connections**

Wetted parts AISI 316L stainless steel and alloy 22

Process connection size and type	FCS600 sensor nominal size DN 2		DN 4	
	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)
Autoclave 9/16" adapter	275 (10.8)	7 (15.4)	275 (10.8)	7 (15.4)
Autoclave 3/4"	240 (9.5)	7 (15.4)	240 (9.5)	7 (15.4)

**L1 dimension and weight for process connections compatible to ASME B16.5, AISI 316L wetted parts**

Process connection size and type	FCS600 sensor nominal size DN 15		DN 25		DN 40	
	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)
ASME 1/2" class 900, raised face (RF)	400 (15.7)	12.6 (28)	n/a	n/a	n/a	n/a
ASME 1/2" class 900, ring joint (RJ)	400 (15.7)	13 (29)	n/a	n/a	n/a	n/a
ASME 1/2" class 1 500, raised face (RF)	400 (15.7)	12.6 (28)	n/a	n/a	n/a	n/a
ASME 1/2" class 1 500, ring joint (RJ)	400 (15.7)	13 (29)	n/a	n/a	n/a	n/a
ASME 1" class 900, raised face (RF)	450 (17.7)	16.4 (36)	540 (21.3)	20.6 (45)	n/a	n/a
ASME 1" class 900, ring joint (RJ)	450 (17.7)	16.6 (37)	540 (21.3)	20.4 (45)	n/a	n/a
ASME 1" class 1500, raised face (RF)	450 (17.7)	16.4 (36)	n/a	n/a	n/a	n/a
ASME 1" class 1500, ring joint (RJ)	450 (17.7)	16.6 (37)	n/a	n/a	n/a	n/a
ASME 2" class 900, raised face (RF)	n/a	n/a	660 (26)	35.2 (78)	720 (28.3)	43 (95)
ASME 2" class 900, ring joint (RJ)	n/a	n/a	660 (26)	35.6 (78)	720 (28.3)	43.4 (96)

**L1 dimension and weight for process connections compatible to ASME B16.5, alloy 22 wetted parts**

Process connection size and type	FCS600 sensor nominal size DN 15		DN 25		DN 40	
	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)
ASME 1" class 900, raised face (RF)	400 (15.7)	16.4 (36)	n/a	n/a	n/a	n/a
ASME 1" class 900, ring joint (RJ)	n/a	n/a	580 (23)	21 (46)	n/a	n/a
ASME 1" class 1 500, raised face (RF)	400 (15.7)	16.4 (36)	n/a	n/a	n/a	n/a
ASME 1" class 1 500, ring joint (RJ)	n/a	n/a	580 (23)	21 (46)	n/a	n/a
ASME 2" class 900, raised face (RF)	n/a	n/a	580 (23)	34 (75)	710 (28)	44 (97)
ASME 2" class 900, ring joint (RJ)	n/a	n/a	580 (23)	36 (80)	710 (28)	44 (97)
ASME 2" class 1 500, ring joint (RJ)	n/a	n/a	580 (23)	36 (80)	710 (28)	44 (97)
ASME 3" class 900, raised face (RF)	n/a	n/a	n/a	n/a	710 (28)	50 (110)
ASME 3" class 900, ring joint (RJ)	n/a	n/a	n/a	n/a	710 (28)	52 (115)

## SITRANS FC (Coriolis) 2023

## Flowmeter systems

## SITRANS FC620/FC640

## Dimensional drawings (continued)

*L1 dimension and weight for process connections with internal thread G*

Process connection size and type	FCS600 sensor nominal size					
	DN 15		DN 25		DN 40	
	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)
G 3/8"	390 (15.4)	9.4 (21)	n/a	n/a	n/a	n/a
G 1/2"	390 (15.4)	9.4 (21)	n/a	n/a	n/a	n/a
G 3/4"	390 (15.4)	9.4 (21)	n/a	n/a	n/a	n/a

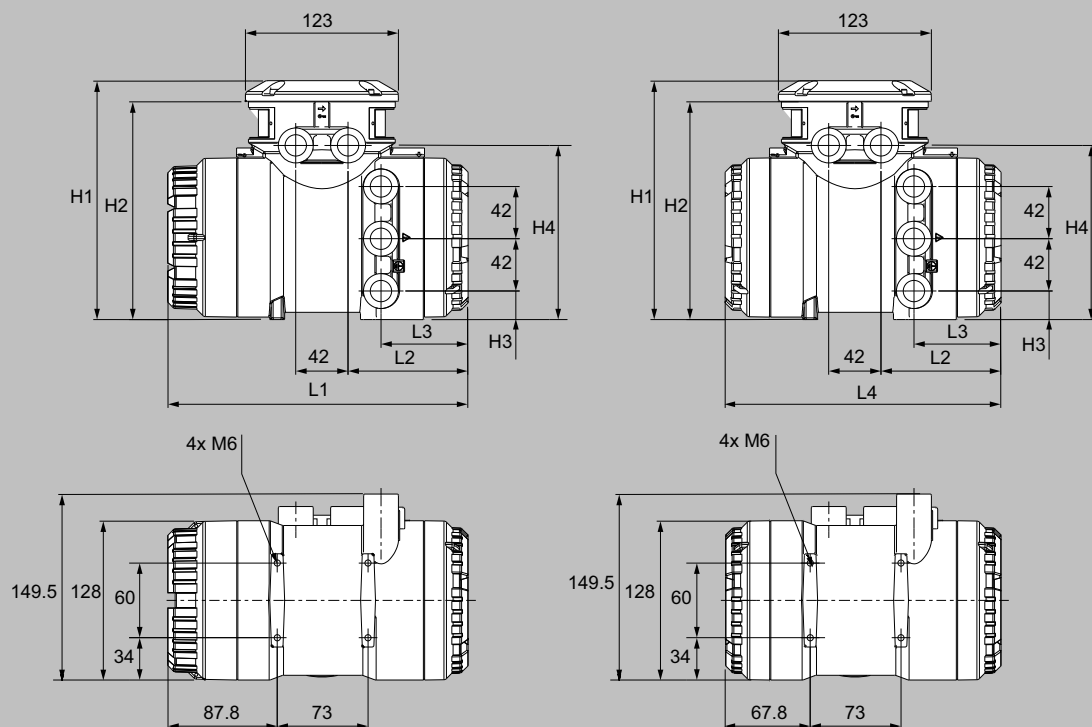
*L1 dimension and weight for process connections with internal thread NPT*

Process connection size and type	FCS600 sensor nominal size					
	DN 15		DN 25		DN 40	
	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)	L1 in mm (inch)	Weight in kg (lb)
3/8" NPT	390 (15.4)	9.4 (21)	n/a	n/a	n/a	n/a
1/2" NPT	390 (15.4)	9.4 (21)	n/a	n/a	n/a	n/a
3/4" NPT	390 (15.4)	9.4 (21)	n/a	n/a	n/a	n/a



## Dimensional drawings (continued)

## Drawings, dimensions and weight for FCT020 and FCT040 transmitters



Dimensions of FCT020 or FCT040 transmitter in mm. Transmitter with display shown on the left. Transmitter without display shown on the right.

## Dimensions L1 to L4 and H1 to H4 (material options: stainless steel, aluminum)

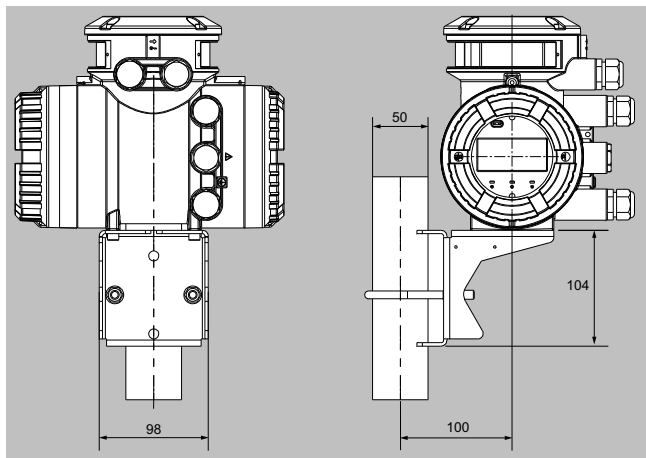
Material	L1 in mm (inch)	L2 in mm (inch)	L3 in mm (inch)	L4 in mm (inch)	H1 in mm (inch)	H2 in mm (inch)	H3 in mm (inch)	H4 in mm (inch)
Stainless steel	255.5 (10.06)	110.5 (4.35)	69 (2.72)	235 (9.25)	201 (7.91)	184 (7.24)	24 (0.94)	150.5 (5.93)
Aluminum	241.5 (9.51)	96.5 (3.8)	70 (2.76)	221 (8.7)	192 (7.56)	175 (6.89)	23 (0.91)	140 (5.51)

## SITRANS FC (Coriolis) 2023

## Flowmeter systems

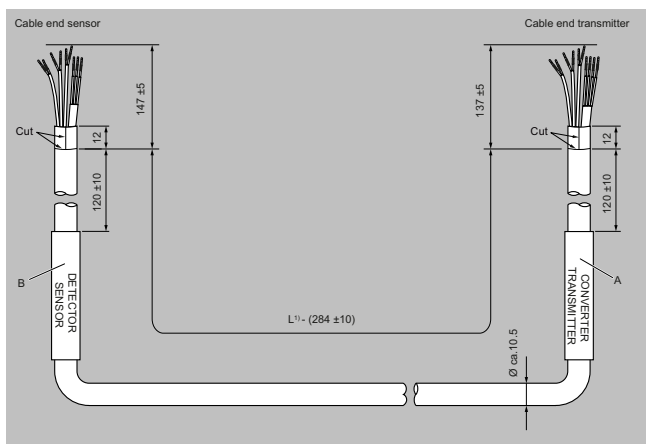
## SITRANS FC620/FC640

## Dimensional drawings (continued)



## Connecting cable dimensions and weights

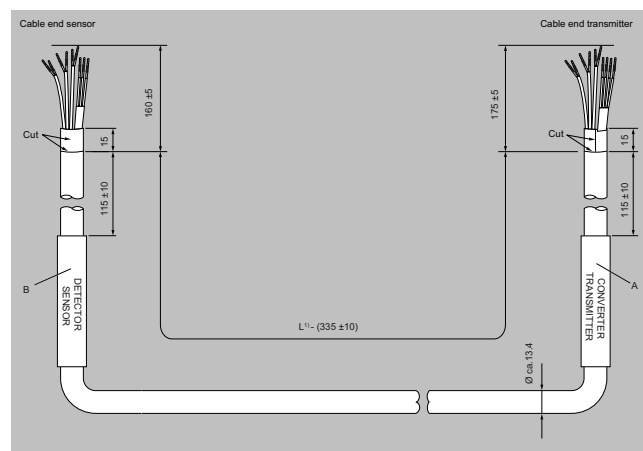
## Standard cable



Dimensions in mm. Standard terminated cable. A and B are factory-fitted labels.

Option code	Cable length, L	Cable colour
L51	5 m (16.4 ft)	Non-Ex: gray / Ex: blue
L54	10 m (32.8 ft)	
L57	15 m (49.2 ft)	
L60	20 m (65.6 ft)	
L63	30 m (98.4 ft)	

## Standard cable with steel-armored option

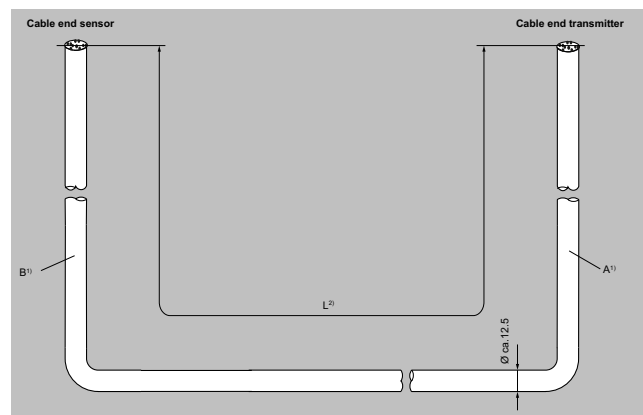


Dimensions in mm. Steel-armored terminated cable. A and B are factory-fitted labels.

Option code	Cable length, L	Cable colour
L51 + A20/A21	5 m (16.4 ft)	Blue
L54 + A20/A21	10 m (32.8 ft)	
L57 + A20/A21	15 m (49.2 ft)	
L60 + A20/A21	20 m (65.6 ft)	
L63 + A20/A21	30 m (98.4 ft)	

Weight of cable  $\leq 0.300$  kg/m (0.202 lb/ft)

## Fire retardant cable



Dimensions in mm. Fire retardant unterminated cable. Labels A and B are supplied loose with termination kit.

Option code	Cable length, L	Cable colour
L71	5 m (16.4 ft)	Gray
L74	10 m (32.8 ft)	
L77	15 m (49.2 ft)	
L80	20 m (65.6 ft)	
L83	30 m (98.4 ft)	

Weight of cable  $\leq 0.270$  kg/m (0.181 lb/ft)