

NEW — Sept 2008

**Includes ST75V
with Vortab**

*Now with dual 4-20 mA
analog outputs and 2 line
x 16 characters
LCD digital
display*

FCI ST75 Series Flowmeters

Small Line, Mass Flowmeters for Industrial and Commercial Process Gases

**Low cost, easy installation flow measuring
for 1/4 to 2 inch [6 mm to 51 mm] line sizes**



FCI ST75 Flowmeter

- Burner and Boiler Fuel and Air Feed Lines
- Industrial Furnaces, Kilns and Oven Fuel/Air Controls
- Heat Treating Gas Controls
- Air Compressor System Control and Point-of-Use Monitoring
- Chiller Air Flow Measurements
- Co-Gen and Turbine Generator Fuel Flow Measurements
- Dosing and Gas Injection Rate Controls

**FCI FLUID COMPONENTS
INTERNATIONAL LLC**

FCI ST75 Series Flowmeters

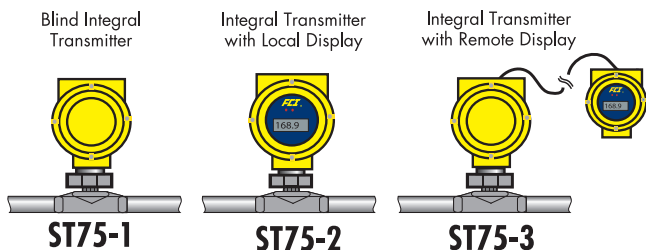
Superior Air and Gas Flow Measurement

ST75 is an accurate, no moving parts, direct mass flow measurement and monitoring solution for fuel gases, air, compressed air, inert and other gas flows within industrial processes. It is available in nine different sizes for direct, in-line installation in line sizes from 1/4 to 2 inch [6 to 51 mm].

By combining precision lithography structured platinum RTD sensors embedded in FCI's equal mass thermowells with microprocessor electronics and precise actual gas calibration, the ST75 achieves outstanding flow measurement performance. Using FCI's proven thermal dispersion technology, the ST75's direct mass flow measurement, eliminates the cost and space of additional sensors required by inferred technologies. With its 100:1 turndown and flow ranges from 0.01 to 559 SCFM [0.01 to 950 NCMH], the ST75 measures over a wide flow range, from low to high flow conditions. The ST75 is available in specific calibrations for most gases including natural gas, methane and other hydrocarbon gases, as well as, nitrogen, CO₂, argon and all inert gases, compressed air and more.

Easy to Install, Easy to Use

The ST75's standard "T" fitting design allows for fast, simple in-line installation. Standard NPT, line size selections include 1/4", 1/2", 3/4", 1", 1 1/2" and 2". For compression fitting tube applications, selections include 1/4", 1/2" and 1". To serve a variety of application and installation requirements the ST75 is available in three standard configurations as shown below. (Other display options are described in Accessory Remote Digital Display section.)



To provide convenient and easy access for wire-up and signal isolation the instrument's enclosure features dual conduit ports as well as removable front and rear covers. ST75 can be ordered for powering by DC (18-36 V) or AC (85-265 V).

Extensive Outputs Assure Application Compatibility

ST75 provides the most comprehensive selection of outputs in its class. Dual analog outputs, a pulse output and a digital, serial I/O are all standard.

Analog outputs include both a 4-20 mA and a 0-10 Vdc that are field assignable to flow rate and/or temperature. These

Features

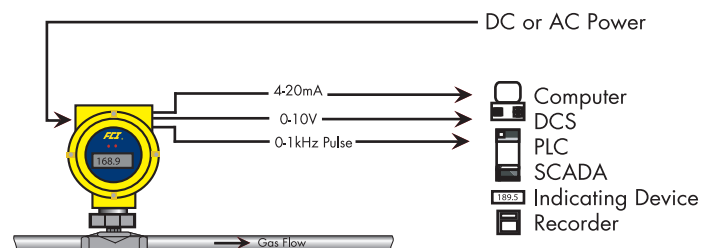
- > Direct mass, standard volumetric or standard velocity flow measurement
- > Triple outputs: flow rate, temperature & total flow
- > Non-clogging, no moving parts
- > Wireless IR communications option
- > 4-digit digital display option
- > Small, compact design
- > Easy installation

outputs are user scalable to the instrument's full calibrated range or any subset. Flow rate is selectable for reading in mass flow or standard volumetric engineering units. Also provided for interface to totalizers is a 0-1000Hz pulse output of flow.

In all models a standard RS232C serial I/O link is provided for instrument configuration, service/troubleshooting data, and measured readings. Also included in all models with the digital display is a wireless IR sensor to enable wireless connectivity to PDA devices.

Designed and Built to Last

ST75 will significantly reduce maintenance costs and time. ST75 is a no moving parts design that virtually eliminates the wear out, clogging and excessive pressure drop associated with other flow metering techniques. The sensor element is all-welded stainless steel with Hastelloy-C tips that provide extra protection against invasive conditions within the pipe. The instrument's electronics are housed in an all-metal, NEMA 4X (IP66) rated enclosure to provide the ruggedness and dust/weather proof protection needed to ensure long-life in industrial and commercial installations.



— NEW —
Sept 2008

Now with dual 4-20 mA
analog outputs and 2 line x 16
characters LCD digital display



Exclusive "Wireless" Communications Option

With FCI's unique new IR link option, any Palm-OS based PDA can be used to communicate with the ST75 without contact. This wireless IR link features a password protected, easy-to-follow menu driven program to access all its features. Parameters include measured readings and totalizer values, configuration settings, calibration downloads, diagnostic service codes and more. This wireless interface is ideal to save cost and time when the ST75 will be mounted in a hard to reach location. To order, specify an ST75 with a digital display configuration (ST75-2 and ST75-3) and order software accessory kit p/n 019819-01.

When adding flow sensing to improve the process or replace high-maintenance mechanical meters, the ST75 provides the accurate, fast response, no-maintenance solution to small line size industrial air and gas flow applications.



Precision Calibration in FCI Flow Laboratory

To ensure optimum accuracy, performance and quality, FCI owns and operates a best-in-class test and NIST traceable calibration laboratory. FCI product developments are subject to rigorous testing and calibration integrity validation using high-speed data acquisition systems and precision flow calibration equipment. Every FCI flowmeter is also extensively tested and then calibrated using actual gases under customer conditions to assure their quality and performance.

- NIST traceability
- Automated data acquisition
- ISO 9001 certified
- Flow, pressure, and temperature calibrations

Accessory Remote Digital Displays

For remote mounted digital readouts of flow, temperature and /or total flow, three types of accessory displays are available.



Model DM10 is a LCD readout meter which can be inserted and located anywhere in the 4-20 mA output loop from the ST75. It requires no separate powering as it derives its power directly from the 4-20 mA loop. The DM10 is user scalable to ± 1999 digits and features oversized, 1" H [25 mm] characters for an easy-to-read display. NEMA 4X rated. FM and CSA certified models optional.

Size: 3.15" H x 5.51" W x 2.56" D [80 mm H x 140 mm W x 65 mm D]

Mounting: Wall. Panel mount or pipe mount kit optional

Wire-Up: Screw terminals via 1/2" conduit hole at bottom of case



Model DM15 is a high accuracy, 1/8 DIN panel mount, AC line powered meter with a bright red LED readout.

It features a user scalable, ± 9999 digit display and will accept both the 4-20 mA or 0-10 Vdc signals from the ST75. Optionally available with DM15 is a user programmable alarm setpoint with a Form C relay output.

Size: 1.89" H x 3.78" W x 5.35" D [48 mm H x 96 mm W x 136 mm D]

Mounting: Panel. Standard 1/8 DIN, 45 mm H x 92 mm W cutout

Wire-Up: Screw terminals at rear of instrument



Model DM20 is a miniature sized, totalizer counter that accepts the pulse output from the ST75. It features an 8-digit (0 to 99999999 counts) LCD that can be reset via its front-panel push-button. It is a panel-mount style that can be located in the field, in a separate enclosure or in the control room. It is self-powered by a lithium battery (included, 10 year life).

Size: 0.944" H x 1.89" W x 1.20" D [24 mm H x 48 mm W x 30.5 mm D]

Mounting: Panel. 22.5 mm H x 45 mm W cutout

Wire-Up: Screw-terminals at rear of instrument

ST75 Specifications – Effective September 2008

Specifications

Media Compatibility: Air, compressed air, nitrogen, oxygen, argon, CO₂, ozone, other inert gases, natural gas, and other hydrocarbon gases

Pipe/Line Size Compatibility: 1/4" to 2" [6 mm to 51 mm]

Instrument

Range:*

NPT Line Size	1/4"	1/2"	3/4"	1"	1 1/2"	2"
Min. SCFM	0.04	0.13	0.22	0.35	0.85	1.40
Min. [NCMH]	[0.07]	[0.22]	[0.38]	[0.59]	[1.44]	[2.38]
Max. SCFM	17.34	50.64	88.88	139.95	339.31	559.27
Max. [NCMH]	[29.47]	[86.04]	[151.00]	[237.78]	[576.48]	[950.20]

Tubing Line Size	1/4"	1/2"	1"
Min. SCFM	0.01	0.05	0.25
Min. [NCMH]	[0.01]	[0.09]	[0.42]
Max. SCFM	3.02	21.15	99.08
Max. [NCMH]	[5.14]	[35.94]	[168.33]

* actual range subject to gas type and specific conditions.

Accuracy: Standard: ± 2% of reading, ± 0.5% of full scale
Optional: ± 1% of reading, ± 0.5% of full scale

Repeatability: ± 0.5% of reading

Temperature Compensation:

Standard: 40 °F to 100 °F [4 °C to 38 °C]

Optional: 0 °F to 250 °F [-18 °C to 121 °C]

Turndown Ratio: 10:1 to 100:1

Agency Approvals:

FM/CSA: Class 1, Div. 1, Groups B,C,D; Class 1, Div. 2, Groups A-D

ATEX/IECEX: Zone 1, II 2 G Ex d IIC T6...T3;

II 2 D Ex tD A21, IP67 T90...T300°

Warranty: One year

Flow Element

Installation: In-line "T", NPT or tube

Type: Thermal dispersion

Material of Construction: All-welded 316 stainless steel probe element with Hastelloy-C thermowells; 316 stainless steel NPT and tube fittings

Maximum Operating Pressure:

T-fitting [NPT female]: 240 psi [16.5 barg]

Tube: 600 psi [41 barg]

Temperature: Operating: 0 °F to 250 °F [-18 °C to 121 °C]

Process Connection:

T-fitting [NPT female]: 1/4", 1/2", 3/4", 1", 1 1/2" or 2"

Tubing: 1/4", 1/2" or 1"

Transmitter

Enclosure: NEMA 4X [IP67], aluminum, dual conduit ports with either 1/2 inch NPT or M20x1.5 entries. Epoxy coated.

Output Signals:

Standard: (2) 4-20 mA, user assignable to flow rate and/or temperature

(1) 0 to 1000 Hz pulse for total flow

Communication Port: RS232C standard. Optional wireless IR to PDA with digital display models

Input Power:

DC: 18 to 36 Vdc (6 watt maximum)

AC: 85 to 265 Vac (12 watt maximum) (CE mark approval from 100 to 240 Vac)

Operating Temperature Range: 0 °F to 140 °F [-18 °C to 60 °C]

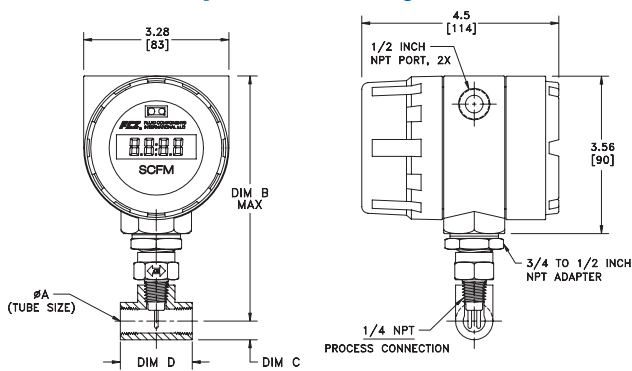
Digital Display: (Optional)

Two-line x 16 characters LCD. Displays measured value and engineering units. Top line assigned to flow rate. Second line is user assignable to temperature reading, as flow totalizer or alternating. Display can be rotated in 90° increments for optimum viewing orientation.

At reference operating conditions of 70 °F, 14.7psia [21.1 °C, 1.013 bara] and straight pipe run 20d upstream, 10d downstream. (For lesser straight pipe runs or obstructed runs, consult FCI factory.) FCI is a continuous improvement company. Specifications subject to change without notice.

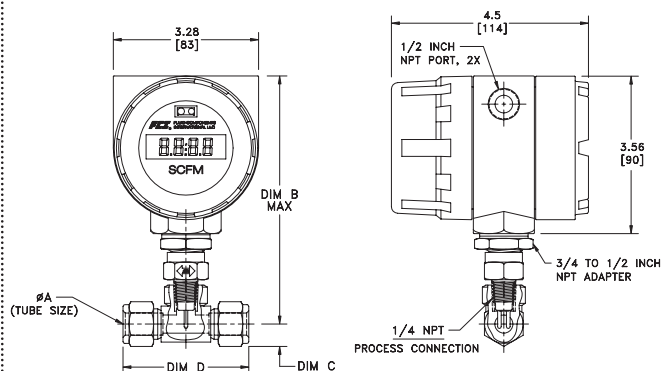
ST75 Dimension Drawing

Pipe (NPT) Tee Configuration



1. DIMENSIONS IN INCHES, BRACKETS [] ARE IN mm.
2. REDUCERS USED ON LARGER PIPE TEES (NOT SHOWN) ALLOW FOR MAX B DIMENSION.
3. PIPE TEES ARE 150 # CLASS.

Tube Tee Configuration



1. DIMENSIONS IN INCHES, BRACKETS [] ARE IN mm.
2. COMPRESSION FITTING FERRULES 316 SST.

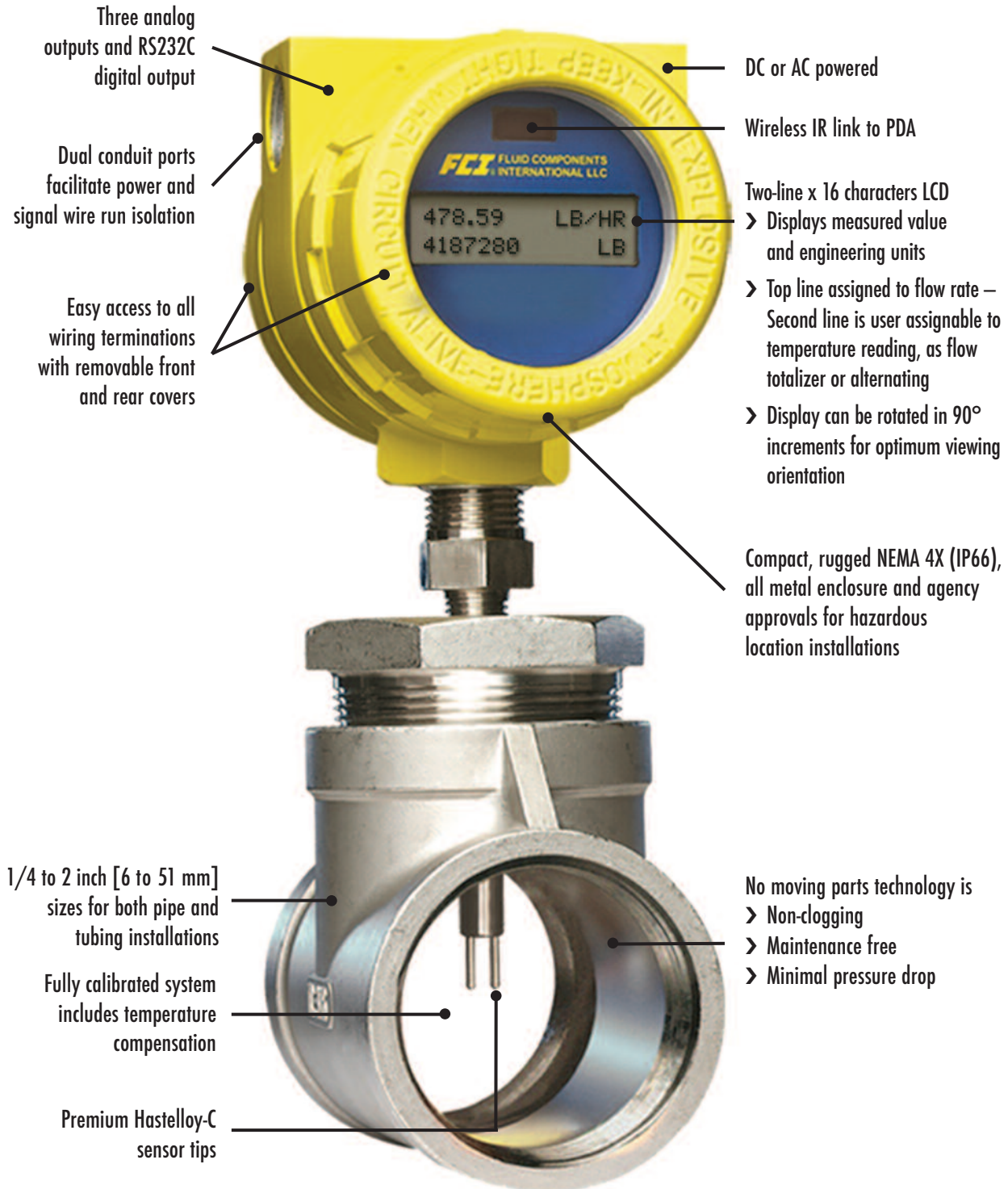
Configuration	DIM A Pipe Size	DIM B Top to flow CL	DIM C Flow CL to Bottom	DIM D Tee Length
ST75-XXXAXX	1/4" pipe	6.0 [152.4] Max	.38 [9.65]	1.54 [39.12]
ST75-XXXBXX	1/2" pipe	6.5 [165.1] Max	.56 [14.22]	2.28 [57.91]
ST75-XXXCXX	3/4" pipe	7.0 [177.8] Max	.68 [17.27]	2.56 [65.02]
ST75-XXXDXX	1" pipe	7.3 [185.4] Max	.86 [21.84]	2.92 [74.17]
ST75-XXXEXX	1 1/2" pipe	7.8 [198.1] Max	1.17 [29.72]	3.82 [97.03]
ST75-XXXFXX	2" pipe	8.0 [203.2] Max	1.42 [36.07]	4.66 [118.40]

Configuration	DIM A Pipe Size	DIM B Top to flow CL	DIM C Flow CL to Bottom	DIM D Tee Length
ST75-XXXGXX	1/4" pipe	5.7 [144.8] Max	.33 [8.39]	2.34 [59.44]
ST75-XXXHXX	1/2" pipe	5.9 [149.9] Max	.53 [13.46]	2.84 [72.14]
ST75-XXXJXX	1" pipe	7.8 [198.1] Max	.87 [22.10]	3.86 [98.04]

ST75 Flowmeter

In-line, Mass Flow Measurement

With premium components and attention to detail, FCI's ST75 series provides long-lasting flowmeter quality and value. Its features and functions ensure application compatibility, maximum installation convenience, superior industrial durability and lowest maintenance.



Ordering Guide

Block No. 1 2 3 4 5 6 7
MODEL ST75-

Code	Base Unit, Enclosure Style (Block No. 1) (Enclosures: all aluminum, NEMA 4X/IP67 rated, epoxy coated)	
1	Blind, Integral Transmitter, w/ two 1/2" FNPT cable entries	
2	Integral Transmitter with Local Digital Display, w/ two 1/2" FNPT cable entries	
4	Remote Transmitter w/ two 1/2" FNPT cable entries and w/Digital Display. (specify cable length in block 7)	
A	Blind, Integral Transmitter, w/ two M20x1.5 cable entries	
B	Integral Transmitter with Local Digital Display, w/ two M20x1.5 cable entries	
C	Remote Transmitter w/ two M20x1.5 cable entries and w/Digital Display. (specify cable length in block 7)	
Code	Pipe Installation-Flow Direction (Block No. 2)	
A	Horizontal pipe w/flow right-to-left or vertical pipe w/flow up	
B	Horizontal pipe w/flow left-to-right or vertical pipe w/flow down	
Code	Power Supply (Block No. 3)	
1	DC; 18 - 36V	
2	AC; 85 - 265V, 50/60Hz	
Code	Line Size and Process Connection (Block No. 4)	(Tee body length)
A	1/4" FNPT, 150 lb pipe tee	1.54" [39.12mm]
B	1/2" FNPT, 150 lb pipe tee	2.28" [57.91mm]
C	3/4" FNPT, 150 lb pipe tee	2.56" [65.02mm]
D	1" FNPT, 150 lb pipe tee	2.92" [74.17mm]
E	1 1/2" FNPT, 150 lb pipe tee	3.82" [97.03mm]
F	2" FNPT, 150 lb pipe tee	4.66" [118.40mm]
G	1/4" Tubing Tee with Compression Fittings for use with 1/4" Tubing	2.34" [59.44mm]
H	1/2" Tubing Tee with Compression Fittings for use with 1/2" Tubing	2.84" [72.14mm]
J	1" Tubing Tee with Compression Fittings for use with 1" Tubing	3.86" [98.04mm]
Code	Gas Medium and System Calibration in Actual Tee Fitting*2 (Block No. 5)	
B	Air	
C	Air Equivalence (Oxygen, Chlorine, Ammonia, etc.)	
E	Nitrogen, Helium, Argon, CO2, Compressed Air	
F	Hydrocarbons (e.g. Natural Gas, Ethane, Methane, Propane, Ethylene, Propylene, Mixed)	
H	Air, Compressed Air	
J	Air Equivalence (e.g. Oxygen, Chlorine, Ammonia, etc.)	
K	Nitrogen, Argon	
L	CO2, Ethylene, Ethane	
M	Propane, Propylene	
N	Butane, Pentane	
P	Methane, Helium, Natural Gas	
Code	Calibration*3 and Calibration Temperature Conditions (Block No. 6)	
O	Standard 2% Calibration and Conditions +40 °F to 100 °F [4 °C to 38 °C]	
A	Standard 2% Calibration and Extended Temperature Compensation 0 °F to 250 °F [-18 °C to 121 °C]	
M	High Accuracy 1% Calibration and Standard Conditions +40 °F to 100 °F [+4 °C to 38 °C]	
N	High Accuracy 1% Calibration and Extended Temperature Compensation 0 °F to 250 °F [-18 °F to 121 °C]	
Code	Interconnecting Cable Length for Remote Configurations*4 (Block No. 7)	
O	Not required (specify with integral configurations)	
A	10 feet [3 meters]	
B	25 feet [7.6 meters]	
C	50 feet [15 meters]	
W	Custom length. [Cannot exceed 50 feet (15 meters)]	

Example: ST75-2A2BP00 = Model ST75 flow transmitter, integral, with local digital display, right-to-left flow, 115Vac powered, flowing Methane gas, with standard calibration and temperature compensation.

*2: Must use FCI's AVAL program to determine letter code. AVAL is a custom flowmeter optimizer program which considers gas medium, flow range, pipe size and other conditions to determine best calibration and supplies FCI letter code to be used here. AVAL is available on-line at www.fluidcomponents.com or consult local FCI representative/distributor.

*3: Calibration accuracy is ±% of reading, ±0.5% of full scale.

*4: Fixed cable length with instrument calibrated together as a matched set. Cable may be coiled but not cut.

Options and Accessories

Part Number	Description
019819-01	Software Interface Package for PDA/PalmOS
020802-01	PDA, Palm® model Tungsten™ E2
FC88	Portable Hand-held Communicator
014108-02	PC Interface Communications Kit, For RS232 serial port connection
DM10-N	Digital Display/Readout, LCD, 4-20mA loop powered
DM10-FC	DM10 with FM and CSA approvals

Part Number	Description
DM10-KIT1	Panel Mount Kit for DM10
DM10-KIT2	2 inch (52 mm) Pipe Mount Kit for DM10 (Stainless Steel)
DM15	Digital Display/Readout, LED 115/230 Vac powered
DM15-ALM	Same as DM-15 with user programmable alarm limit, relay output
DM20	Digital Display Readout, 8-digit LCD Pulse totalizer/counter

Locally represented by:

FCI FLUID COMPONENTS INTERNATIONAL LLC

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1755 La Costa Meadows Drive, San Marcos, California 92078 USA

Phone: 760-744-6950 | Toll free: 800-854-1993 | Fax: 760-736-6250

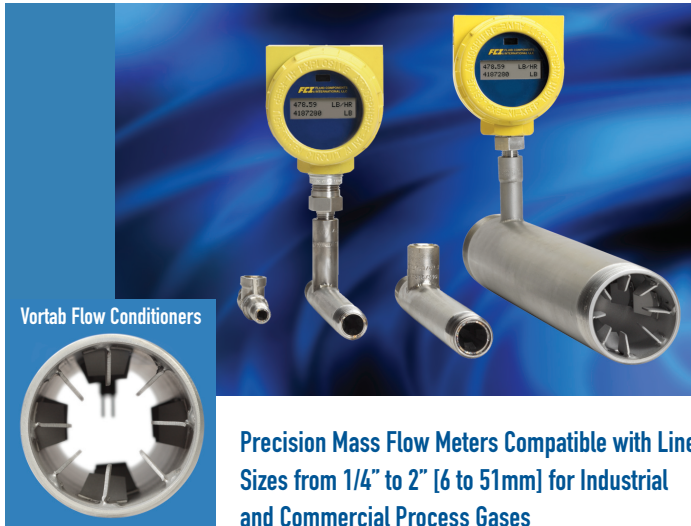
European Office: Persephonestraat 3-01 5047 TT Tilburg, The Netherlands

Phone: 31-13-5159989 | Fax: 31-13-5799036

FCI is ISO 9001:2000 and AS9100 certified

ST75V Mass Flow Meter

with Vortab® Flow Conditioners



For installations with inadequate straight-run or obstructed flows that prevent a fully developed profile for accurate flow measurement with the standard ST75, the Model ST75"V" provides the solution. FCI's Model ST75V includes all of the features and functionality of the ST75 plus built-in Vortab flow conditioning. Vortab flow conditioners are the flow conditioning technology proven and recommended by flow measurement experts to eliminate both swirl and velocity profile distortions to ensure accurate flow measurement.

Vortab flow conditioners also are the lowest pressure loss solution of all flow conditioning techniques. FCI is the exclusive provider of Vortab flow conditioners for use with thermal mass flow meters such as the ST75V.

In applications with limited space for pipe straight-run or when obstructors such as valves, bends, couplings or any other disturber which alters the flow profile are present, the ST75V is the solution to ensure the highest accuracy and repeatability.

ST75V Specifications

Process Connections: Choice of Female NPT, Male NPT, ANSI flanges, DIN flanges

Media Compatibility: Air, compressed air, nitrogen, oxygen, argon, CO₂, ozone, other inert gases, natural gas and other hydrocarbon gases, hydrogen.

Accuracy: ±1% of reading, ±0.5% full scale

Repeatability: ±0.5%

Temperature Compensation:

Standard: 40 °F to 100 °F [4 °C to 38 °C]

Optional: 0 °F to 250 °F [-18 °C to 121 °C]

Turndown Ratio: 10:1 to 100:1

Agency Approvals:

FM/CSA: Class 1, Div. 1, Groups B,C,D; Class 1, Div. 2, Groups A-D

ATEX/IECEx: Zone 1, II 2 G Ex d IIC T6...T3; II 2 D Ex tD A21, IP67 T90...T300°

Element Materials of Construction: All-welded 316 Stainless Steel with Hastelloy-C thermowells.

Enclosure: NEMA 4X [IP67], aluminum, dual conduit ports with either 1/2 inch NPT or M20x1.5 entries. Epoxy coated.

Output Signal:

Standard: (2) 4-20 mA, user assignable to flow rate and/or temperature

(1) 0 to 1000 Hz pulse for total flow

Maximum Operating Pressure: 240 psi [16.5 bar(g)]

Input Power:

DC: 18 Vdc to 36 Vdc (6 watts maximum)

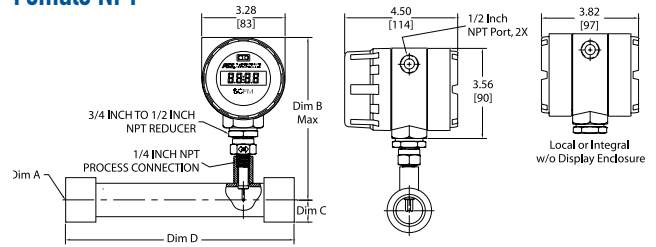
AC: 85 Vdc to 265 Vac 85 to 265 Vac (12 Watts maximum) (CE approval for 100 Vac to 240 Vac)

Operating Temperature Range: 0 °F to 140 °F [-18 °C to 60 °C]

Digital Display (Optional): Two-line x 16 characters LCD. Displays measured value and engineering units. Top line assigned to flow rate. Second line is user assignable to temperature reading, as flow totalizer or alternating. Display can be rotated in 90° increments for optimum viewing orientation.

ST75V Specifications

Female NPT

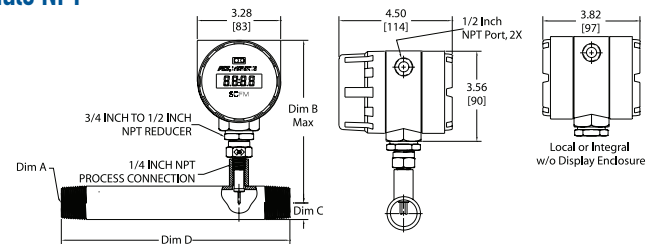


1. Dimensions are in INCHES; brackets [] are in MILLIMETERS.

Female NPT Configuration

Configuration	DIM A Pipe Size	DIM B Top to Flow CL	DIM C Flow CL to Bottom	DIM D VMR Length
ST75V-XXXCE	1/4"	5.50 [140]	0.38 [9,5]	5.00 [127]
ST75V-XXXEE	1/2"	5.69 [144,5]	0.57 [14]	7.50 [190,5]
ST75V-XXXFE	3/4"	6.45 [164]	0.69 [17,5]	9.00 [229]
ST75V-XXXGE	1"	6.44 [163,5]	0.88 [22]	9.00 [229]
ST75V-XXXHE	1 1/2"	6.42 [163]	1.25 [32]	13.50 [343]
ST75V-XXXJE	2"	6.43 [163]	1.50 [38]	18.00 [457]

Male NPT

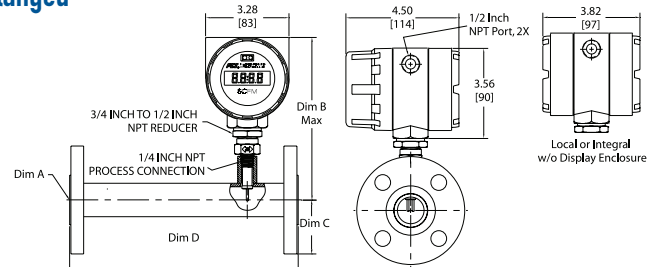


1. Dimensions are in INCHES; brackets [] are in MILLIMETERS.

Male NPT Configuration

Configuration	DIM A Pipe Size	DIM B Top to Flow CL	DIM C Flow CL to Bottom	DIM D Tee Length
ST75V-XXXCN	1/4"	5.50 [140]	0.38 [9,5]	5.00 [127]
ST75V-XXXEN	1/2"	5.69 [144,5]	0.42 [10,6]	7.50 [190,5]
ST75V-XXXFN	3/4"	6.45 [164]	0.51 [13]	9.00 [229]
ST75V-XXXGN	1"	6.44 [163,5]	0.65 [16,5]	9.00 [229]
ST75V-XXXHN	1 1/2"	6.42 [163]	.95 [24]	13.50 [343]
ST75V-XXXJN	2"	6.43 [163]	1.19 [30]	18.00 [457]

Flanged



1. Dimensions are in INCHES; brackets [] are in MILLIMETERS.
2. Flanges are 150# Class.

Flanged Configuration

Configuration	DIM A Pipe Size	DIM B Top to Flow CL	DIM C Flow CL to Bottom	DIM D Tee Length
ST75V-XXXCF	1/4"	n/a	n/a	n/a
ST75V-XXXEF	1/2"	5.69 [144,5]	1.75 [45]	7.50 [190,5]
ST75V-XXXFF	3/4"	6.45 [164]	1.94 [49]	9.00 [229]
ST75V-XXXGF	1"	6.44 [163,5]	2.12 [54]	9.00 [229]
ST75V-XXXHF	1 1/2"	6.42 [163]	2.50 [64]	13.50 [343]
ST75V-XXXJF	2"	6.43 [163]	3.00 [76]	18.00 [457]

ORDERING GUIDE: ST75V Mass Flow Meter with Vortab® Flow Conditioners

Block No.	1	2	3	4	5	6	7	8	9	10
Model ST75V-										

Base Unit, Enclosure Style (Block 1) <i>Enclosures: All Aluminum, NEMA 4X/IP67 rated, epoxy coated</i>	Code
Blind, Integral Transmitter, with two 1/2 inch FNPT cable entries	1
Integral Transmitter with Local Digital Display, with two 1/2 inch FNPT cable entries	2
Remote Transmitter w/ two 1/2" FNPT cable entries and w/Digital Display. <i>(Specify cable length in Block 10)</i>	4
Blind, Integral Transmitter, w/ two M20x1.5 cable entries	A
Integral Transmitter with Local Digital Display, w/ two M20x1.5 cable entries	B
Remote Transmitter w/ two M20x1.5 cable entries and w/Digital Display. <i>(Specify cable length in Block 10)</i>	C
Pipe Installation-Flow Direction (Block 2)	Code
Horizontal pipe w/flow right-to-left or Vertical pipe w/flow up	A
Horizontal pipe w/flow left-to-right or Vertical pipe w/flow down	B
Power Supply (Block 3)	Code
DC; 18 - 36V	1
AC; 85 - 265V, 50/60Hz	2
Line Size (Block 4)	Code
1/4 inch <i>(Available only with NPT, Block 5 must be Code E or N)</i>	C
1/2 inch	E
3/4 inch	F
1 inch	G
1-1/2 inch	H
2 inch	J
Process Connection Type (Block 5)	Code
Female NPT	E
Male NPT	N
Flanged, #150 CLASS	F
Other; agency approved, customer specified <i>(If selected, Block 6 and 7 which follow must also be Code WW only)</i>	W
Process Connection Size, Material, Rating, Finish Details (Block 6 & 7)	Code
1/4 inch NPT (must be selected if Block 4 is Code C)	Q0
1/2 inch NPT	H0
3/4 inch NPT	T0
1 inch NPT	10
1-1/2 inch NPT	B0
2 inch NPT	20
1/2 inch ANSI flanged 150 lb RF ANSI 16.5, 316L Stainless steel	HG
3/4 inch ANSI flanged 150 lb RF ANSI 16.5, 316L Stainless steel	TG
1 inch ANSI flanged 150 lb RF ANSI 16.5, 316L Stainless steel	1G
1-1/2 inch ANSI flanged 150 lb RF ANSI 16.5, 316L Stainless steel	BG
2 inch ANSI flanged 150 lb RF ANSI 16.5, 316L Stainless steel	2G
DN15 DIN flanged PN40, Form C per DIN2526 or Form B1 per DIN EN1092-1 in 316L ss	D2
DN25 DIN flanged PN40, Form C per DIN2526 or Form B1 per DIN EN1092-1 in 316L ss	E2
DN40 DIN flanged PN40, Form C per DIN2526 or Form B1 per DIN EN1092-1 in 316L ss	G2
DN50 DIN flanged PN16, Form C per DIN2526 or Form B1 per DIN EN1092-1 in 316L ss	J2
Other; agency approved, customer specified	WW

Gas Medium and System Calibration ² (Block 8)	Code
Air	B
Air Equivalence (Oxygen, Chlorine, Ammonia, etc.)	C
Nitrogen, Helium, Argon, CO ₂ , Compressed Air	E
Hydrocarbons (e.g. Natural Gas, Ethane, Methane, Propane, Ethylene, Propylene, Mixed)	F
Hydrogen or hydrogen mixture	G
Air, Compressed Air	H
Air Equivalence (e.g. Oxygen, Chlorine, Ammonia, etc.)	J
Nitrogen, Argon	K
CO ₂ , Ethylene, Ethane	L
Propane, Propylene	M
Butane, Pentane	N
Methane, Helium, Natural Gas	P
Hydrogen	R

Calibration ³ and Calibration Temperature Conditions (Block 9)	Code
High Accuracy 1% Calibration and Standard Conditions +40 to 100°F [+4 to 38°C] w/Vortab	Q
High Accuracy 1% Calibration and Extended Temperature Compensation 0°F to 250°F [-18 to 121°C] w/Vortab	T
Other, Agency approved, customer specified	W
Interconnecting Cable Length for Remote Configurations ⁴ (Block 10)	Code
Not required <i>(Specify with integral configurations)</i>	0
10 feet [3 meters]	A
25 feet [7.6 meters]	B
50 feet [15 meters]	C
Custom length <i>(Cannot exceed 50 feet [15 meters])</i>	W

Optional Accessories	
Part Number	Description
019819-01	Software Interface Package for PDA/PalmOS
020802-01	PDA, Palm® model Tungsten™ E2
FC88	Portable Hand-held Communicator
014108-02	PC Interface Communications Kit, For RS232 serial port connection
DM10-N	Digital Display/Readout, LCD, 4-20mA loop pow
DM10-FC	DM10 with FM and CSA approvals
DM10-KIT1	Panel Mount Kit for DM10
DM10-KIT2	2 inch (52 mm) Pipe Mount Kit for DM10 <i>(Stainless steel)</i>
DM15	Digital Display/Readout, LED 115/230 Vac powered
DM15-ALM	Same as DM-15 with user programmable alarm limit, relay output
DM20	Digital Display Readout, 8-digit LCD Pulse totalizer/counter

Notes

- Must use FCI's AVAL program to determine letter code. AVAL is a custom flow meter optimizer program which considers gas medium, flow range, pipe size and other conditions to determine best calibration and supplies FCI letter code to be used here. AVAL is available on-line at www.fluidcomponents.com or consult local FCI representative/distributor.
- Calibration accuracy is ±% of reading, ±0.5% of full scale.
- Fixed cable length with instrument calibrated together as a matched set. Cable may be coiled, but not cut.



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FCI is ISO 9001:2000 and AS9100 Certified

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