

# Flow Measurement SITRANS F US Inline

## Flowmeter SITRANS FUS380 standard

Selection and Ordering data		Article-No.	Order code
Flowmeter SITRANS FUS380 (standard)		7ME3400-	
		0 - A	
Diameter	Flow setting [m <sup>3</sup> /h] Q <sub>p</sub> (Q <sub>n</sub> ) <sup>1</sup> Q <sub>s</sub>		
DN 50 (2") <sup>2</sup>	15 15	1 A	
DN 50 (2") <sup>2</sup>	15 45	1 C	
DN 50 (2") <sup>2</sup>	30 45	1 D	
DN 65 (2½") <sup>2</sup>	25 25	1 E	
DN 65 (2½") <sup>2</sup>	25 72	1 G	
DN 65 (2½") <sup>2</sup>	50 72	1 H	
DN 80 (3") <sup>2</sup>	40 40	1 J	
DN 80 (3") <sup>2</sup>	40 120	1 L	
DN 80 (3") <sup>2</sup>	80 120	1 M	
DN 100 (4")	60 60	1 N	
DN 100 (4")	60 180	1 Q	
DN 100 (4")	120 240	1 R	
DN 125 (5")	100 100	1 S	
DN 125 (5")	100 280	1 U	
DN 125 (5")	200 400	1 V	
DN 150 (6")	150 150	2 A	
DN 150 (6")	150 420	2 C	
DN 150 (6")	300 560	2 D	
DN 200 (8")	250 250	2 E	
DN 200 (8")	250 700	2 G	
DN 200 (8")	500 900	2 H	
DN 250 (10")	400 400	2 J	
DN 250 (10")	400 1120	2 L	
DN 250 (10")	800 1400	2 M	
DN 300 (12")	560 560	2 N	
DN 300 (12")	560 1560	2 Q	
DN 300 (12")	1120 2100	2 R	
DN 350 (14")	750 750	2 S	
DN 350 (14")	750 2100	2 U	
DN 350 (14")	1500 2800	2 V	
DN 400 (16")	950 950	3 A	
DN 400 (16")	950 2660	3 C	
DN 400 (16")	1900 3600	3 D	
DN 500 (20")	1475 1475	3 J	
DN 500 (20")	1475 4130	3 L	
DN 500 (20")	2950 5500	3 M	
DN 600 (24")	2150 2150	3 S	
DN 600 (24")	2150 6020	3 U	
DN 600 (24")	4300 8000	3 V	
DN 700 (28")	2900 2900	4 E	
DN 700 (28")	2900 8120	4 G	
DN 700 (28")	5800 10 800	4 H	
DN 800 (32")	3800 3800	4 N	
DN 800 (32")	3800 10 640	4 Q	
DN 800 (32")	7600 14 200	4 R	
DN 900 (36")	5000 5000	5 A	
DN 900 (36")	5000 14 000	5 C	
DN 900 (36")	10000 20 000	5 D	
DN 1000 (40")	6000 6000	5 J	
DN 1000 (40")	6000 16 800	5 L	
DN 1000 (40")	12 000 24 000	5 M	
DN 1200 (48")	9000 9000	5 S	
DN 1200 (48")	9000 25 200	5 U	
DN 1200 (48")	18 000 36 000	5 V	

This device is shipped with a Quick Start guide and the SITRANS F manual CD containing the complete manual library. Printed Operating Instructions are available for purchase via PMD.

Selection and Ordering data		Article-No.	Order code
Flowmeter SITRANS FUS380 (standard)		7ME3400-	
		0 - A	
Flange norm and pressure rating			
System without sensor - only a transmitter FUS080 as spare part - settings as defined with this Article No.		A	
EN 1092-1 Flanges			
• PN 16 (DN 100 ... DN 1200)		C	
• PN 25 (DN 200 ... DN 1000)		D	
• PN 40 (DN 50 ... DN 250) <sup>3</sup>		E	
Compact/remote connection			
Compact version, max. 120 °C (248 °F)		0	
Remote version, max. 150/200 °C (302/392 °F)			
• 5 m (16.4 ft)		2	
• 10 m (32.8 ft)		3	
• 20 m (65.6 ft)		4	
• 30 m (98.4 ft)		5	
Pulse output value setup <sup>5</sup>			
0.1 l/p		1	
1 l/p		2	
2.5 l/p		3	
10 l/p		4	
50 l/p		5	
100 l/p		6	
250 l/pulse		7	
1 m <sup>3</sup> /pulse		8	
0.25 l/pulse		9	NOA
0.5 l/pulse		9	NOB
5 l/pulse		9	NOC
25 l/pulse		9	NO D
500 l/pulse		9	NO E
2.5 m <sup>3</sup> /pulse		9	NO F
5 m <sup>3</sup> /pulse		9	NO G
10 m <sup>3</sup> /pulse		9	NO H
25 m <sup>3</sup> /pulse		9	NO J
50 m <sup>3</sup> /pulse		9	NO K
100 m <sup>3</sup> /pulse		9	NO L
250 m <sup>3</sup> /pulse		9	NOM
500 m <sup>3</sup> /pulse		9	NON
1000 m <sup>3</sup> /pulse		9	NOP
Transmitter version of SITRANS FUS080			
IP67/NEMA 4X/6 115 ... 230 V AC		B	
IP67/NEMA 4X/6 3.6 V battery version, incl. dual battery pack <sup>4</sup>		D	
IP67/NEMA 4X/6 115 ... 230 V AC, including 3.6 V single battery backup <sup>4</sup>		E	
IP67/NEMA 4X/6 3.6 V battery version (no battery pack included)		G	
Pulse width setup			
5 ms (standard)		2	
10 ms		3	
20 ms		4	
50 ms		5	
100 ms		6	
200 ms		7	
500 ms		8	

- Q<sub>p</sub> (Q<sub>n</sub>) is the normal or typical flow. Q<sub>p</sub> and Q<sub>s</sub> is shown on the system label.
- Pipe material bronze brass.
- PN 40 standard for DN 50 ... DN 80 die-cast bronze pipes.
- Lithium batteries are subject to special transportation regulations according to United Nations "Regulation of Dangerous Goods, UN 3090 and UN 3091". Special transport documentation is required to observe these regulations. This may influence both transport time and costs.
- To get optimal benefit of the pulses the pulse value and pulse length shall be selected as low as possible. The following calculation formula can be used for determining the shortest pulse value at a pulse length of 5 ms:  

$$L/\text{pulse} > Q_s (\text{m}^3/\text{h}) / 360$$
 For example Q<sub>s</sub> = 300 m<sup>3</sup>/h; L/pulse > 300/360;  
 L/pulse > 0.83; therefore the pulse value must be 1 l/pulse

# Flow Measurement

## SITRANS F US Inline

### Flowmeter SITRANS FUS380 standard

#### Selection and Ordering data

##### Additional information

Please add „-Z“ to Article No. and following add-on code(s) with plain text.

##### Calibration/certificate FUS380

Production calibration for DN 50 ... DN 1200 with  $Q_n$  as selected in diameter. Incl. Calibration protocol: 2 x 3 points,  $Q_1$ , 10 %,  $Q_p$  and  $Q_p$  (max. 8000 m<sup>3</sup>/h).

**Included**

Accredited Siemens ISO/IEC 17025 calibration for DN 50 ... DN 200 with  $Q_n$  as selected in diameter. Certificate: 2 x 5 points,  $Q_1$ , 5 %, 10 %, 50 % and 100 % of  $Q_p$  (max. 630 m<sup>3</sup>/h).

**D20**

Accredited Siemens ISO/IEC 17025 calibration for DN 250 ... DN 600 with  $Q_n$  as selected in diameter. Certificate: 2 x 5 points,  $Q_1$ , 5 %, 10 %, 50 % and 100 % of  $Q_p$  (max. 2800 m<sup>3</sup>/h).

**D21**

Accredited Siemens ISO/IEC 17025 calibration, DN 500 ... DN 1200 with  $Q_n$  as selected in diameter. Certificate: 2 x 5 points,  $Q_1$ , 5 %, 10 %, 50 % and 100 % of  $Q_p$  (max. 8000 m<sup>3</sup>/h).

**D22**

Output B as reverse flow pulses. No calibration/verification of this function.

**E21**

##### Material certificate

EN 10204-3.1 (pipe material)

**F10**

##### Tag name plate

Stainless steel TAG plate (1 x 24 x 80 mm), wire fixed. Font size depends on text length: 8 mm for 1 ... 10 characters, 4 mm for 11 ... 20 characters (specify in plain text).

**Y17**

#### Flowmeter SITRANS FUS380 operating instructions, accessories and spare parts

##### Operating instructions

Description	Article No.
• English	<b>A5E00730100</b>
• German	<b>A5E00740611</b>
• Spanish	<b>A5E00754188</b>
• French	<b>A5E00754173</b>

This device is shipped with a Quick Start guide and a CD containing further SITRANS F US literature.

All literature is also available for free at:  
<http://www.siemens.com/flowdocumentation>

**For accessories and spare parts see chapter of transmitter SITRANS FUS080/FUE080 on page 3/243.**

Please use online Product selector to get latest updates. Product selector link:

[www.pia-selector.automation.siemens.com](http://www.pia-selector.automation.siemens.com)



# Flow Measurement

## SITRANS F US Inline

### Flowmeter SITRANS FUE380 with CT approval

Selection and Ordering data			Article No.	Order code	Selection and Ordering data			Article No.	Order code
<b>Flowmeter SITRANS FUE380 (type-approved)</b>			<b>7ME 3 4 1 0 -</b>		<b>Flowmeter SITRANS FUE380 (type-approved)</b>			<b>7ME 3 4 1 0 -</b>	
<b>Diameter</b>	<b>Flow setting [m<sup>3</sup>/h]</b> <b>Qp[m<sup>3</sup>/h]<sup>1)</sup> Qs [m<sup>3</sup>/h]</b>				<b>Flange norm and pressure rating</b>				
DN 50 (2") <sup>2)</sup>	15 <sup>3)</sup>	30	<b>1 B</b>		System without sensor - only a transmitter				
DN 50 (2") <sup>2)</sup>	15 <sup>3)</sup>	45	<b>1 C</b>		EN 1092-1				
DN 50 (2") <sup>2)</sup>	30 <sup>4)</sup>	45	<b>1 D</b>		PN 16 (DN 100 ... DN 1200)	<b>C</b>			
DN 65 (2½") <sup>2)</sup>	25 <sup>3)</sup>	50	<b>1 F</b>		PN 25 (DN 200 ... DN 1000)	<b>D</b>			
DN 65 (2½") <sup>2)</sup>	25 <sup>3)</sup>	72	<b>1 G</b>		PN 40 (DN 50 ... DN 250) <sup>5)</sup>	<b>E</b>			
DN 65 (2½") <sup>2)</sup>	50 <sup>4)</sup>	72	<b>1 H</b>		<b>Compact/remote connection</b>				
DN 80 (3") <sup>2)</sup>	40 <sup>3)</sup>	80	<b>1 K</b>		Compact version, max. 120 °C (248 °F)	<b>0</b>			
DN 80 (3") <sup>2)</sup>	40 <sup>3)</sup>	120	<b>1 L</b>		Remote version, max. 150/200 °C (302/392 °F)				
DN 80 (3") <sup>2)</sup>	80 <sup>4)</sup>	120	<b>1 M</b>		5 m (16.4 ft)	<b>2</b>			
DN 100 (4")	60 <sup>3)</sup>	120	<b>1 P</b>		10 m (32.8 ft)	<b>3</b>			
DN 100 (4")	60 <sup>3)</sup>	180	<b>1 Q</b>		20 m (65.6 ft)	<b>4</b>			
DN 100 (4")	120 <sup>4)</sup>	180	<b>1 R</b>		30 m (98.4 ft)	<b>5</b>			
DN 125 (5")	100 <sup>3)</sup>	200	<b>1 T</b>		<b>Approvals/pulse output</b>				
DN 125 (5")	100 <sup>3)</sup>	280	<b>1 U</b>		Without approval (neutral)	<b>0</b>			
DN 125 (5")	200 <sup>4)</sup>	280	<b>1 V</b>		Selectable pulse output				
DN 150 (6")	150 <sup>3)</sup>	300	<b>2 B</b>		With approval marks	<b>1</b>			
DN 150 (6")	150 <sup>3)</sup>	420	<b>2 C</b>		Selectable pulse output				
DN 150 (6")	300 <sup>4)</sup>	420	<b>2 D</b>		With approval marks and seal	<b>2</b>			
DN 200 (8")	250 <sup>3)</sup>	500	<b>2 F</b>		Selectable pulse output				
DN 200 (8")	250 <sup>3)</sup>	700	<b>2 G</b>		<b>Pulse output value setup<sup>8)</sup></b>				
DN 200 (8")	500 <sup>4)</sup>	700	<b>2 H</b>		0.1 l/p	<b>1</b>			
DN 250 (10")	400 <sup>3)</sup>	800	<b>2 K</b>		1 l/p	<b>2</b>			
DN 250 (10")	400 <sup>3)</sup>	1120	<b>2 L</b>		2.5 l/p	<b>3</b>			
DN 250 (10")	800 <sup>4)</sup>	1120	<b>2 M</b>		10 l/p	<b>4</b>			
DN 300 (12")	560 <sup>3)</sup>	1120	<b>2 P</b>		50 l/p	<b>5</b>			
DN 300 (12")	560 <sup>3)</sup>	1560	<b>2 Q</b>		100 l/p	<b>6</b>			
DN 300 (12")	1120 <sup>4)</sup>	1560	<b>2 R</b>		250 l/pulse	<b>7</b>			
DN 350 (14")	750 <sup>3)</sup>	1500	<b>2 T</b>		1 m <sup>3</sup> /pulse	<b>8</b>			
DN 350 (14")	750 <sup>3)</sup>	2100	<b>2 U</b>		0.25 l/pulse	<b>9</b>			<b>NOA</b>
DN 350 (14")	1500 <sup>4)</sup>	2100	<b>2 V</b>		0.5 l/pulse	<b>9</b>			<b>NOB</b>
DN 400 (16")	950 <sup>3)</sup>	1900	<b>3 B</b>		5 l/pulse	<b>9</b>			<b>NOC</b>
DN 400 (16")	950 <sup>3)</sup>	2660	<b>3 C</b>		25 l/pulse	<b>9</b>			<b>NOD</b>
DN 400 (16")	1900 <sup>4)</sup>	2660	<b>3 D</b>		500 l/pulse	<b>9</b>			<b>NOE</b>
DN 500 (20")	1475 <sup>3)</sup>	2950	<b>3 K</b>		2.5 m <sup>3</sup> /pulse	<b>9</b>			<b>NOF</b>
DN 500 (20")	1475 <sup>3)</sup>	4130	<b>3 L</b>		5 m <sup>3</sup> /pulse	<b>9</b>			<b>NOG</b>
DN 500 (20")	2950 <sup>4)</sup>	4130	<b>3 M</b>		10 m <sup>3</sup> /pulse	<b>9</b>			<b>NOH</b>
DN 600 (24")	2150 <sup>3)</sup>	4300	<b>3 T</b>		25 m <sup>3</sup> /pulse	<b>9</b>			<b>NOJ</b>
DN 600 (24")	2150 <sup>3)</sup>	6020	<b>3 U</b>		50 m <sup>3</sup> /pulse	<b>9</b>			<b>NOK</b>
DN 600 (24")	4300 <sup>4)</sup>	6020	<b>3 V</b>		100 m <sup>3</sup> /pulse	<b>9</b>			<b>NOL</b>
DN 700 (28")	2900 <sup>3)</sup>	5800	<b>4 F</b>		250 m <sup>3</sup> /pulse	<b>9</b>			<b>NOM</b>
DN 700 (28")	2900 <sup>3)</sup>	8120	<b>4 G</b>		500 m <sup>3</sup> /pulse	<b>9</b>			<b>NON</b>
DN 700 (28")	5800 <sup>4)</sup>	8120	<b>4 H</b>		1000 m <sup>3</sup> /pulse	<b>9</b>			<b>NOP</b>
DN 800 (32")	3800 <sup>3)</sup>	7600	<b>4 P</b>						
DN 800 (32")	3800 <sup>3)</sup>	10 640	<b>4 Q</b>						
DN 800 (32")	7600 <sup>4)</sup>	10 640	<b>4 R</b>						
DN 900 (36")	5000 <sup>3)</sup>	10 000	<b>5 B</b>						
DN 900 (36")	5000 <sup>3)</sup>	14 000	<b>5 C</b>						
DN 900 (36")	10 000 <sup>4)</sup>	14 000	<b>5 D</b>						
DN 1000 (40")	6000 <sup>3)</sup>	12 000	<b>5 K</b>						
DN 1000 (40")	6000 <sup>3)</sup>	16 800	<b>5 L</b>						
DN 1000 (40")	12 000 <sup>4)</sup>	16 800	<b>5 M</b>						
DN 1200 (48")	9000 <sup>3)</sup>	18 000	<b>5 T</b>						
DN 1200 (48")	9000 <sup>3)</sup>	25 200	<b>5 U</b>						
DN 1200 (48")	18 000 <sup>4)</sup>	25 200	<b>5 V</b>						

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For notes 1) to 8) see next page

### Flowmeter SITRANS FUE380 with CT approval

Selection and Ordering data	Article No.	Order code
<b>Flowmeter SITRANS FUE380 (type-approved)</b>	<b>7ME 3 4 1 0 -</b>	
<b>Transmitter SITRANS FUE080</b>		
IP67/NEMA 4X/6 115 ... 230 V AC	B	
IP67/NEMA 4X/6 3.6 V battery version, incl. dual battery pack <sup>6)</sup>	D	
IP67/NEMA 4X/6 115 ... 230 V AC, including 3.6 V single battery backup <sup>6)</sup>	E	
IP67/NEMA 4X/6 3.6 V battery version (no battery pack included)	G	
<b>Country/approval type<sup>7)</sup></b>		
Neutral, no approval mark	A	
China	C	
Russia, EN 1434/OIML R 75	M	
MID-Approval, (EN 1434/OIML R 75), English	R	
MID-Approval, (EN 1434/OIML R 75), German	S	
MID-Approval, (EN 1434/OIML R 75), Polish	T	
MID-Approval, (EN 1434/OIML R 75), French	U	
<b>Pulse width setup</b>		
5 ms (standard)	2	
10 ms	3	
20 ms	4	
50 ms	5	
100 ms	6	
200 ms	7	
500 ms	8	

- <sup>1)</sup>  $Q_p$  ( $Q_n$ ) is the normal flow according to the approval requirements.  $Q_p$  and  $Q_s$  is shown on the system label.
- <sup>2)</sup> Pipe material bronze brass
- <sup>3)</sup> EN 1434 flow values. The minimum flow ( $Q_i$ ) should be checked in the PIA-selector or product master data base (PMD).
- <sup>4)</sup> OIML R 75/EN1434 flow values without PTB approval
- <sup>5)</sup> PN 40 standard for DN 50 ... DN 80 die-cast bronze pipes
- <sup>6)</sup> Lithium batteries are subject to special transportation regulations according to United Nations "Regulation of Dangerous Goods, UN 3090 and UN 3091". Special transport documentation is required to observe these regulations. This may influence both transport time and costs.
- <sup>7)</sup> Other countries in progress
- <sup>8)</sup> To get optimal benefit of the pulses the pulse value and pulse length shall be selected as low as possible. The following calculation formula can be used for determining the shortest pulse value at a pulse length of 5 ms:  
 $L/pulse > Q_s (m^3/h) / 360$   
 For example  $Q_s = 300 m^3/h$ ;  $L/pulse > 300/360$ ;  $L/pulse > 0.83$ ; therefore the pulse value must be 1 l/pulse

Selection and Ordering data	Order code
<b>Additional information</b>	
Please add „-Z“ to Article No. and following add-on code(s) with plain text.	
<b>Calibration/certificate FUE380</b>	
Approval, verification and approval sealing as defined with the article number. See Order code.	
Production calibration for DN 50 ... DN 1200 with $Q_n$ as selected in diameter Incl. Calibration protocol: 2 x 3 points, $Q_i$ , 10 % $Q_p$ and $Q_p$ (max. 8000 m <sup>3</sup> /h).	<b>Included</b>
Accredited Siemens ISO/IEC 17025 calibration for DN 50 ... DN 200 with $Q_n$ as selected in diameter. Certificate: 2 x 5 points, $Q_i$ , 5 %, 10 %, 25 %, 50 % and 100 % of $Q_p$ (max. 630 m <sup>3</sup> /h).	<b>D20</b>
Accredited Siemens ISO/IEC 17025 calibration for DN 250 ... DN 600 with $Q_n$ as selected in diameter. Certificate: 2 x 5 points, $Q_i$ , 5 %, 10 %, 25 %, 50 % and 100 % of $Q_p$ (max. 2800 m <sup>3</sup> /h).	<b>D21</b>
Accredited Siemens ISO/IEC 17025 calibration, DN 500 ... DN 1200 with $Q_n$ as selected in diameter. Certificate: 2 x 5 points, $Q_i$ , 5 %, 10 %, 25 %, 50 % and 100 % of $Q_p$ (max. 8000 m <sup>3</sup> /h).	<b>D22</b>
Output B as reverse flow pulses. No calibration/verification of this function.	<b>E21</b>
<b>Material certificate</b>	
EN 10204-3.1 (pipe material)	<b>F10</b>
<b>Tag name plate</b>	
Stainless steel TAG plate (1 x 24 x 80 mm), wire fixed. Font size depends on text length: 8 mm for 1 ... 10 characters, 4 mm for 11 ... 20 characters (specify in plain text).	<b>Y17</b>

### Flowmeter SITRANS FUE380 operating instructions, accessories and spare parts

#### Operating instructions

Description	Article No.
• English	<b>A5E00730100</b>
• German	<b>A5E00740611</b>
• Spanish	<b>A5E00754188</b>
• French	<b>A5E00754173</b>

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**For accessories and spare parts on page 3/243 see chapter of transmitter FUS080/FUE080.**



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