

## Abrasion Resistant Electromagnetic Flow Meter

- Special wetted liner for high abrasion resistance
- Even for liquids containing particulate such as stones and rocks
- Bi-directional flow measurement
- No pressure loss during operation
- Works with conductive liquids (>5  $\mu\text{S}/\text{cm}$ )
- 4...20mA, HART, RS485 Modbus and pulse output signals
- Galvanically isolated switching relays
- ANSI flanges 10" to 20"
- EN flanges DN250 to DN500
- CIP clean in-place



### About

The P395 electromagnetic flow meter was designed to withstand severe application requirements. Its proprietary developed internally wetted liner can handle highly corrosive media even when containing significant amounts of solids and slurries. Designed for conductive fluids, it features bi-directional flow detection, no pressure loss, and advanced diagnostics. Its versatile configurations, from integrated to remote sensor designs, ensure optimal performance.

### Applications

- ✓ Mining
- ✓ Chemical Processing
- ✓ Oil and Gas
- ✓ Heavy-Duty Manufacturing
- ✓ Pulp and Paper
- ✓ Ceramics Production
- ✓ Brick Production
- ✓ Leachate
- ✓ All Liquids Containing Particulate

# Flow Ranges

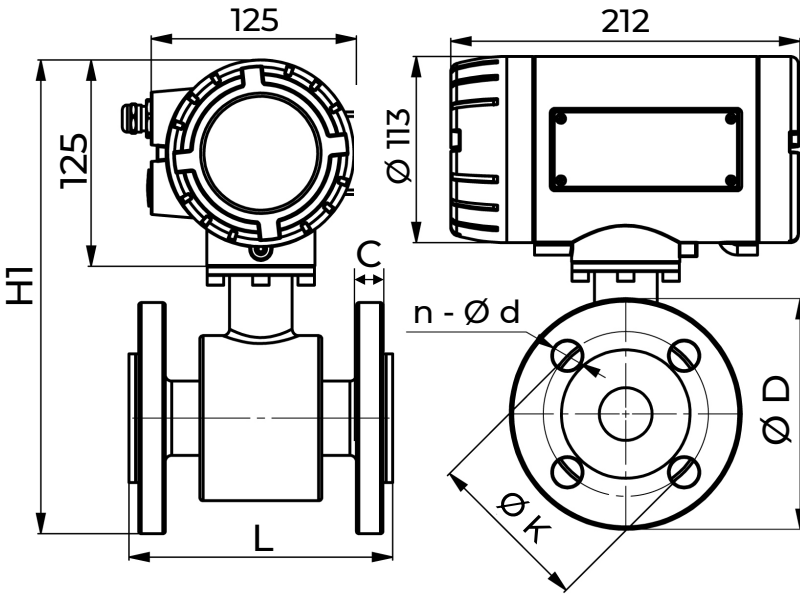
Flow Ranges		Pipe Nominal Diameter	
Measuring Range		Inches	mm
Gallons/minute	m <sup>3</sup> /h		
78...9232	17.7...2119	10"	DN250
112...13428	25.5...3052	12"	DN300
153...18277	34.6...4154	14"	DN350
199...23870	45.3...5425	16"	DN400
311...37303	71...8478	20"	DN500



# ANSI Class 150 Dimensions

ANSI Class 150 Flange, ASME B16.5 with Integrated Transmitter

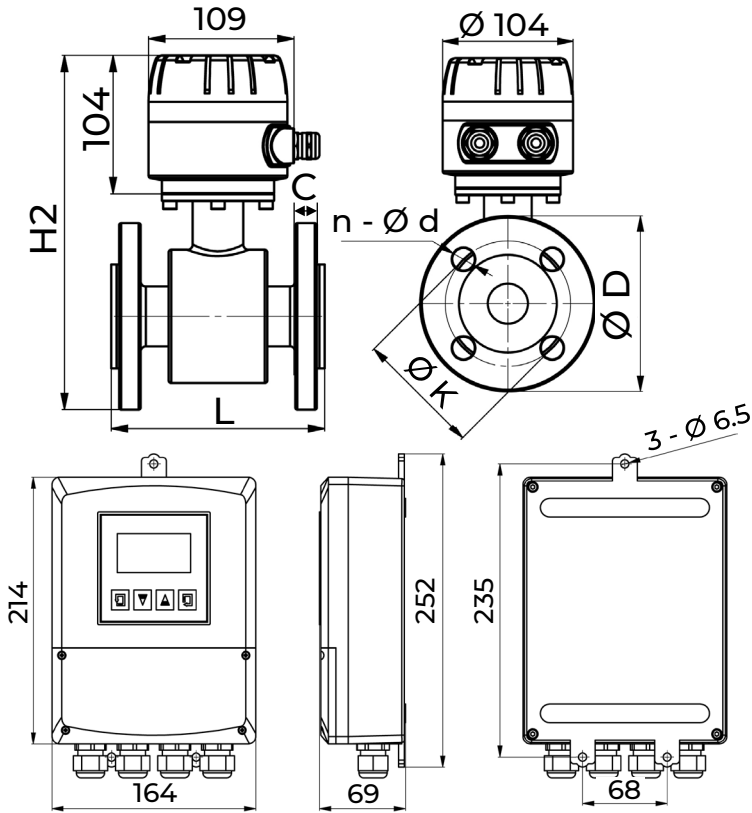
Dimensions (mm)



Size	L	H1	D	K	n - Ø d	C	Pressure Rating
10"	450	573	405	362	12 - Ø 26	30.5	Class 150
12"	500	643	485	432	12 - Ø 26	32	
14"	550	693	535	476	12 - Ø 29.5	35	
16"	600	750	600	540	16 - Ø 29.5	37	
20"	650	861	700	635	20 - Ø 32.5	43	

ANSI Class 150 Flange, ASME B16.5 with Remote Transmitter

Dimensions (mm)

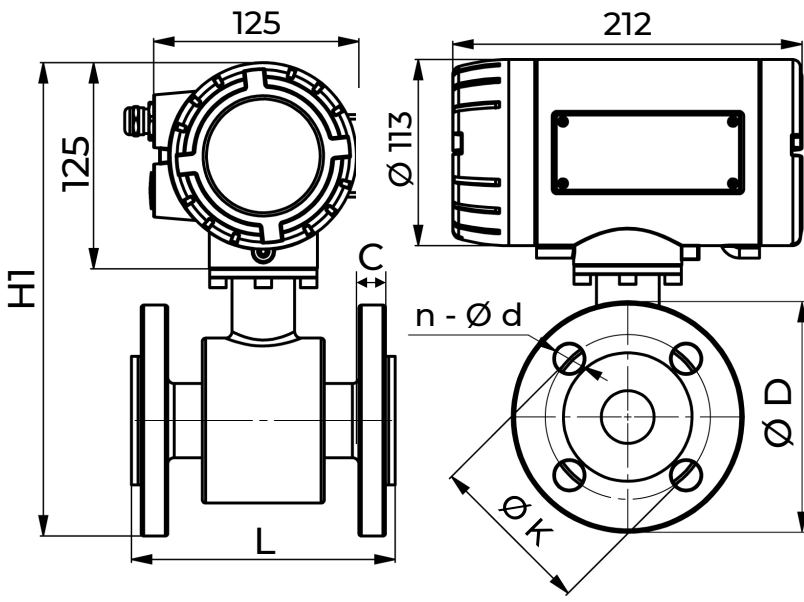


Size	L	H2	D	K	n - Ø d	C	Pressure Rating
10"	450	548	405	362	12 - Ø 26	30.5	Class 150
12"	500	612	485	432	12 - Ø 26	32	
14"	550	669	535	476	12 - Ø 29.5	35	
16"	600	726	600	540	16 - Ø 29.5	37	
20"	650	836	700	635	20 - Ø 32.5	43	

# ANSI Class 300 Dimensions

ANSI Class 300 Flange, ASME B16.5 with Integrated Transmitter

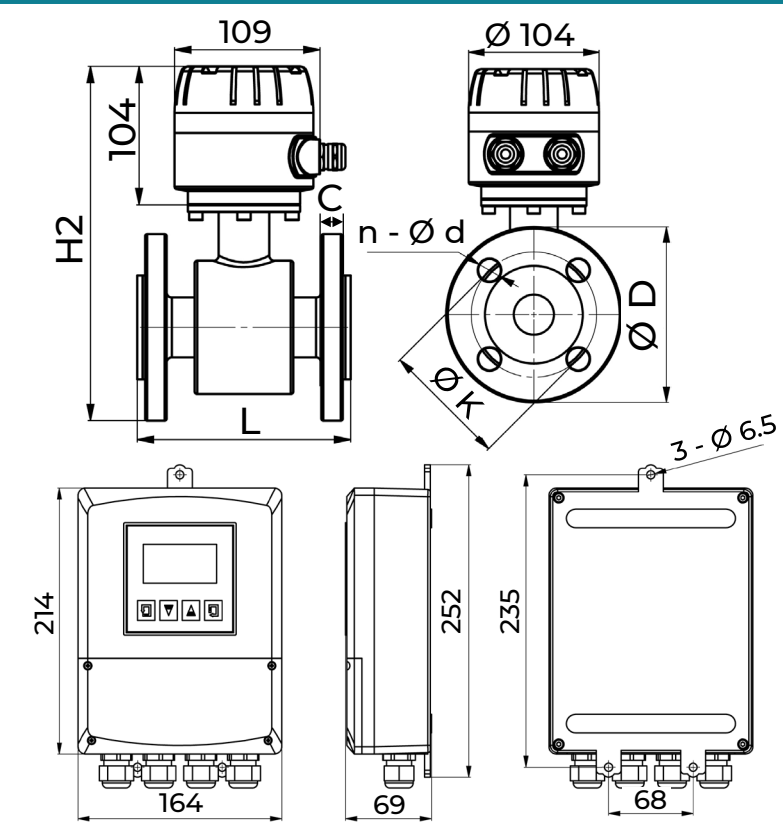
Dimensions (mm)



Size	L	H1	D	K	n - Ø d	C	Pressure Rating
10"	450	593	445	387.5	16 - Ø 29.5	48	Class 300
12"	500	660	520	451	16 - Ø 32.5	51	
14"	550	718	585	514.5	20 - Ø 32.5	54	
16"	600	775	650	571.5	20 - Ø 35.5	57.5	
20"	650	898	775	686	24 - Ø 35.5	63.5	

ANSI Class 300 Flange, ASME B16.5 with Remote Transmitter

Dimensions (mm)

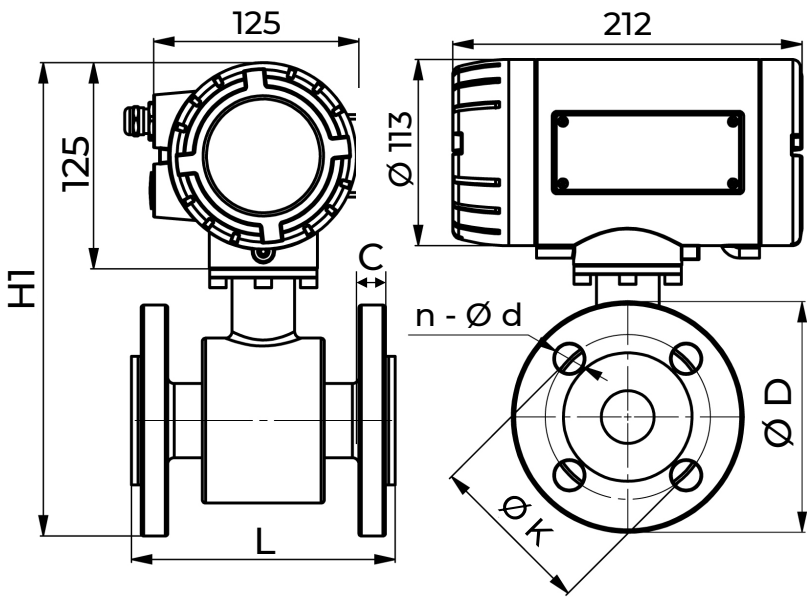


Size	L	H2	D	K	n - Ø d	C	Pressure Rating
10"	450	568	445	387.5	16 - Ø 29.5	48	Class 300
12"	500	636	520	451	16 - Ø 32.5	51	
14"	550	694	585	514.5	20 - Ø 32.5	54	
16"	600	751	650	571.5	20 - Ø 35.5	57.5	
20"	650	873	775	686	24 - Ø 35.5	63.5	

# EN 1092-1 Flange Dimensions

## EN 1092-1 Flange PN16 with Integrated Transmitter

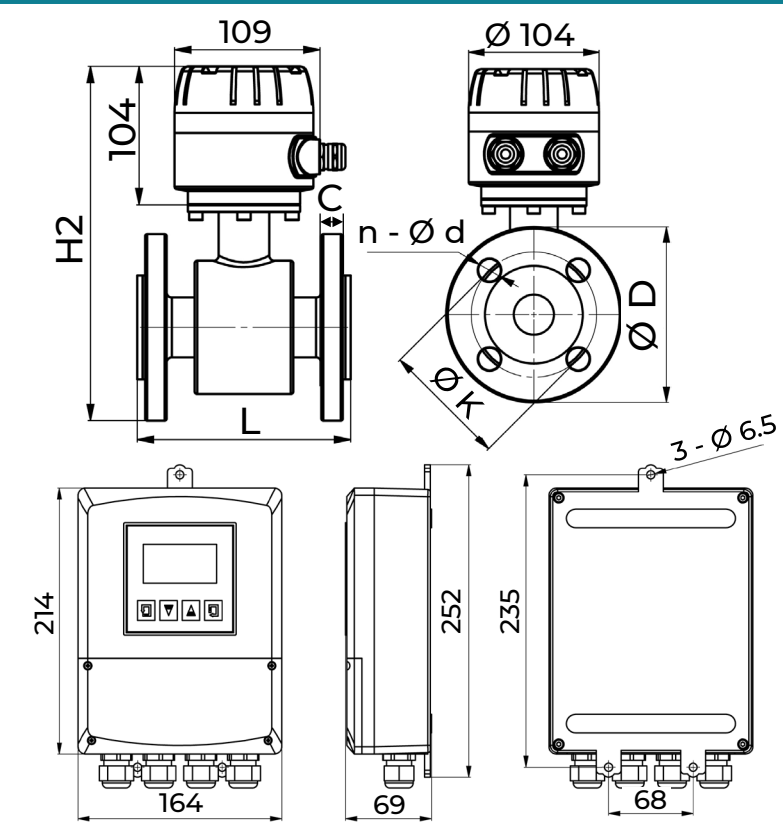
### Dimensions (mm)



Size	L	H1	D	K	n - Ø d	C	Pressure Rating
250	450	573	405	355	12 - Ø 26		PN16 (232 PSI)
300	500	630	460	410	12 - Ø 26		
350	550	685	520	470	16 - Ø 26		
400	600	740	580	525	16 - Ø 30		
500	650	868	715	650	20 - Ø 33		

## EN 1092-1 Flange PN16 with Remote Transmitter

### Dimensions (mm)



Size	L	H2	D	K	n - Ø d	C	Pressure Rating
250	450	548	405	355	12 - Ø 26		PN16 (232 PSI)
300	500	606	460	410	12 - Ø 26		
350	550	661	520	470	16 - Ø 26		
400	600	716	580	525	16 - Ø 30		
500	650	843	715	650	20 - Ø 33		

# Build Your Part Number

## Series P395

Example: P395BS2F1P53SS41DE1NH5R

<b>Series</b>	
P395	

<b>Output Signal - select one</b>	
A	4 ... 20mA + pulse frequency 0...5KHz
B	4...20mA with HART + pulse frequency 0...5KHz
M	RS485 Modbus

<b>Flow Relays - select one</b>	
S1	Without
S2	With 2 galvanically isolated user adjustable relays (30VDC / 3A, 250VDC / 3A)

<b>Accuracy - select one</b>	
F1	1% (standard) (may take time for accuracy stabilization depending on particulate content & size)
F2	0.5% (may take time for accuracy stabilization depending on particulate content & size)

<b>Protection Class - select one</b>	
P5	IP65
P8	IP68 (for remote transmitter only)

<b>Wetted Electrode Material - select one</b>	
3S	Tungsten Carbide (standard)
3X	Other materials available upon request

<b>Wetted Liner Material - select one</b>	
S	Mixed material

<b>Process Connection Material - select one</b>	
41	Carbon Steel (standard)
42	304 Stainless Steel
43	316L Stainless Steel

<b>Power Supply - select one</b>	
D	24 VDC
A	85...265 VAC

<b>Electrical Connection - select one</b>	
E1	NPT ½" Threaded hub
E2	M20 x 1.5 Cable gland

<b>Connectivity from Sensor to Remote Transmitter - select one</b> (note: select only for remote transmitter configurations)	
CN	Without
CY	32.81 ft Cable Length (10m)
CZ	Custom cable length (please inform length preference)

<b>Ex-Proof - select one</b>	
NH	Without
HA	Exd [ia Ga] qllc T5 Gb

# Build Your Part Number

## Series P395

Example: P395BS2F1P53SS41DE1NH5R

### Process Connections & Transmitter - *select one*

#### ANSI Flange Class 150, ASME B16.5 with Integrated Transmitter – *see page 3*

5P	10"
5Q	12"
5R	14"
5S	16"
5U	20"

#### ANSI Flange Class 150, ASME B16.5 with Remote Transmitter – *see page 3*

6K	10"
6L	12"
6M	14"
6N	16"
6Q	20"

#### ANSI Flange Class 300, ASME B16.5 with Integrated Transmitter – *see page 4*

7F	10"
7G	12"
7H	14"
7J	16"
7L	20"

#### ANSI Flange Class 300, ASME B16.5 with Remote Transmitter – *see page 4*

8B	10"
8C	12"
8D	14"
8E	16"
8G	20"

#### EN1092-1 Flange with Integrated Transmitter – *see page 5*

1W	DN250	PN16
1X	DN300	PN16
1Y	DN350	PN16
1Z	DN400	PN16
2B	DN500	PN16

#### EN1092-1 Flange with Remote Transmitter – *see page 5*

2S	DN250	PN16
2T	DN300	PN16
2U	DN350	PN16
2V	DN400	PN16
2X	DN500	PN16

# Technical Parameters

Technical Parameters		
<b>Measuring</b>	Measuring Range	See flow range table page 2 for complete details
	Applicable Medium	All liquids with conductivity > 5µs/cm
	Accuracy	1% (may take time for accuracy stabilization depending on particulate content & size) 0.5% (may take time for accuracy stabilization depending on particulate content & size)
	Repeatability	±0.15% of Reading
<b>Electrical</b>	Output Signal	4...20mA + Pulse Frequency 0...5KHz 4...20mA with HART + Pulse Frequency 0...5KHz RS485 Modbus 2 galvanically isolated user adjustable switching relays 30VDC / 3A, 250VDC / 3A
	Operating Voltage	85...265 VAC ± 10% 24 VDC ± 10%
	Power Consumption	Less than 20W
	Electrical Connection	M20 x 1.5 cable gland ½" NPT threaded hub Optional 10 meter cable for connecting sensor body to transmitter body
<b>Environmental</b>	Ambient Temperature	Transmitter Housing: -22...140°F (-30...60°C)
	Ambient Humidity	≤ 85% Relative Humidity (68°F / 20°C)
	Medium Temperature	-4...212 / -20...100°C
	Protection Class	Integrated Transmitter: IP65 Remote Transmitter: IP68
	Optional Ex proof	Exd [ia Ga] qllc T5 Gb
<b>Materials</b>	Electrode	Tungsten Carbide
	Liner	Mixed material for high abrasion resistance
	Body/Flange	Carbon Steel 304 Stainless Steel 316L Stainless Steel
	Visual Display	Yes
	Process Connection	ANSI Flanges 10", 12", 14", 16", 20" EN Flanges DN250, DN300, DN350, DN400, DN500

Features	
Auto "ZERO" Calibration	See manual for details
Self-Monitoring and Diagnostic	Monitor Citation Circuit, Electrode, and Transmitter Malfunction
Empty and Full Pipe Detection	Detect empty or full pipeline
Change Flow Direction in Real Time	See Manual for Details
Bi-Directional Measurement	Measuring both forward and reverse flow
Selectable Flow Rate Unit of Measurement	Gal/h, Gal/min, m³/h, m³/min, L/h, L/m and more
Low Flow Cut Off	Adjustable in 0...10%, no pulse output for any signal less than settings
Outputs Selectable	4...20mA, 0-5KHz, pulse
Display	Instantaneous flow rate in percentage, instantaneous flow rate, and total flow rate
Totalizer Reset	See manual for details



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