

# Solartron

## Type 7835 densitometer

Data sheet  
B1016

### Description

The 7835 is designed for the fiscal metering of crude and refined hydrocarbons or non-aggressive process liquids, it offers the highest accuracy with excellent repeatability under pipeline operating conditions. The vibrating element is manufactured from Ni-Span-C for excellent long term and temperature stability, all other wetted parts being AISI 316L stainless steel.

### Specification

Parameter	Type 7835
Accuracy	0.00015 g/cc** Range 0.3-1.1g/cc
Density range	0-3 g/cc
Repeatability	0.00002 g/cc
Temperature effect (Corrected)	+/-0.000005 g/cc/°C +/-0.0003 g/cc/100°C
Pressure effect (Corrected)	+/-0.000003 g/cc/bar +/-0.0002 g/cc/1000psi
Max. operating pressure	150bar (2175psi) or flange limit
Test pressure	1.5 x flange rating
Temperature range	-50° to +110°C (-58° to +230°F)
<b>Mechanical features</b>	
Wetted parts	Ni-Span-C and Stainless steel 316L
Case finish	Stainless steel 316
Flange materials	Stainless steel 316L
Weight	22kg (48lb)
Material traceability	Contact sales office for further information
<b>Electrical features</b>	
Temp. measurement	100ohm PRT 4 wire
Power supply	16 to 28V dc at 17mA max
Signal output	Current modulation on power supply line
Electrical connectors	Screw terminals housing BS5490 IP65 enclosure
Safety approval	ATEX EEx ia IIC T6

### Features

- ▶ Pipeline quality - all welded construction
- ▶ IP65 Weatherproof
- ▶ Straight-through flow path
- ▶ Continuous high accuracy measurement
- ▶ Insensitive to mounting position, plant vibration, flow rate and pressure
- ▶ Intrinsically safe design
- ▶ Zero maintenance



\*\* Accuracy of 0.0001 g/cc available on densitometers with UKAS calibration or water check

## System capabilities

The 7835 is best used with 795x Series signal converters, which offer the following facilities:

Model		7950	7951	Option
<b>Mounting</b>		<b>Wall</b>	<b>Panel</b>	
<b>Inputs</b>	Density 7835	1	1	
	Temperature (PRT) 4 wire	4	4	
	Analogue 0-4-20mA	4	4	+4/+6
	Digital/status	8	8 or 18	
<b>Outputs</b>	Analogue 0-4-20mA	4	4	+4
	Digital/status	8	8 or 16	
<b>Comms.</b>	RS232/RS485	3	3	+2 HART
<b>Calculations</b> Line and base density (API or Matrix referral) Derived parameters (%volume, %mass, °Brix, °API, SG, SSU)				

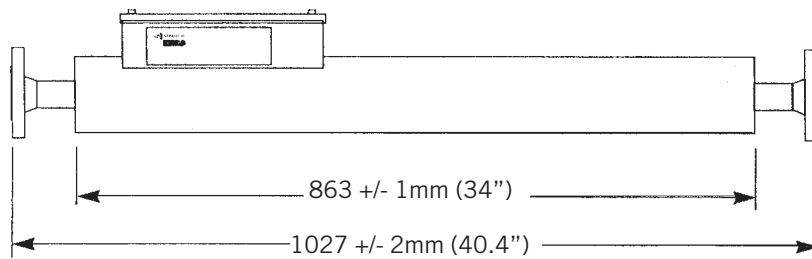
For more details see 795x signal converter data sheet B1251

## Flange options

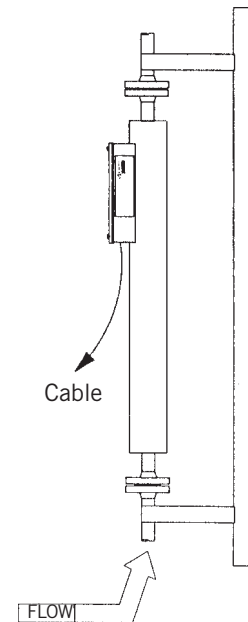
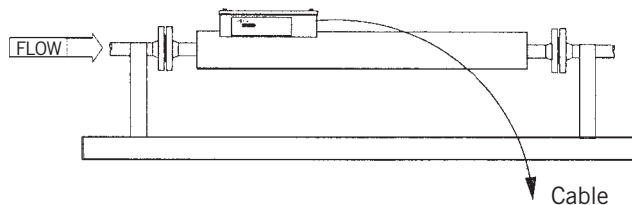
7835A	1" ANSI 900 RF
7835B	1" ANSI 600 RF
7835D	1" ANSI 600 RTJ
7835E	1" ANSI 900 RTJ
7835F	1" ANSI 600 RF
	Smooth face
7835H	25mm DIN2635
	RF DN25/PN40
7835J	25mm DIN
	2635/2512 GVD
	DN25/PN40
7835L	25MM DIN 2637
	RF DN25/PN100

Contact Solartron Mobrey for full Part Number.

## Dimensional drawing



## Installation drawing



Flow rate should be kept high to prevent gas bubbles and sediment from forming on the resonant tube.

For best performance rigidly install 0.6g vibration max.

Preferred installation is vertical with flow upwards. For slurries flowrate should be reversed.

Typical flowrates are 4000ltr/hr.

Maximum flowrate is 15000ltr/hr.

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