

spirax sarco®

Steam Meter - M210G Series Computer

Description

The Flow Computer receives signals from the M322 Conditioning Unit and converts them to display flowrate, total flow temperature and pressure. It can handle inputs from a single M111 Spiraflo Transducer. With suitable inputs from pressure and/or temperature transmitter (via the Conditioning Unit), it can be used on saturated or superheated steam. It can also be configured to operate as a heat meter on saturated steam systems using an additional temperature transmitter in the condensate return line.

Temperature range: 32-932°F (0-500°C)

Pressure range: 0-1449 psig (0-99.9 barg)

Display parameters and other features

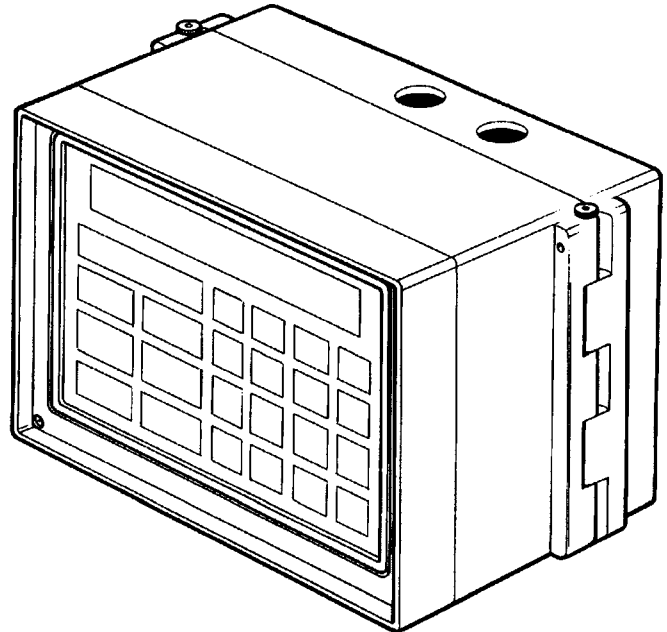
Languages	English, French, German, Spanish
Totalized Flow	lb, kg, MJ or KWH
Flow Rate	lb/h, kg/h, Btu/h or KW
Temperature	degrees F or C
Pressure	psig, barg,
Time	
Date	

Operator settable alarm limits are provided to give warning when the flow rate, temperature and/or pressure go above or below specified limits. Two relay outputs - 24V ac/dc 0.5 amp rated high and low alarms are provided. The low limit alarm can be programmed to give a pulsed/digital output, pulse duration 20-260 ms, each pulse equivalent to 1, 10, 100 or 1000 kg.

Four independent timers are provided, each capable of being programmed for a single event and to store peak rate and totalized flow for that specific timer. One timer is also capable of repeating the reading for the specified identical period each day, on an 8 day basis until cancelled.

A 4-20 mA analog output channel is provided, for flow rate only in kg/h programmable from the keypad.

An RS232C compatible serial communication port is provided. Security levels are provided by keypad codes to avoid casual tampering. Weatherproof box provided as a standard. Panel and Wall Mounting version available:
M211G - Wall Mounted, M212G - Panel Mounted



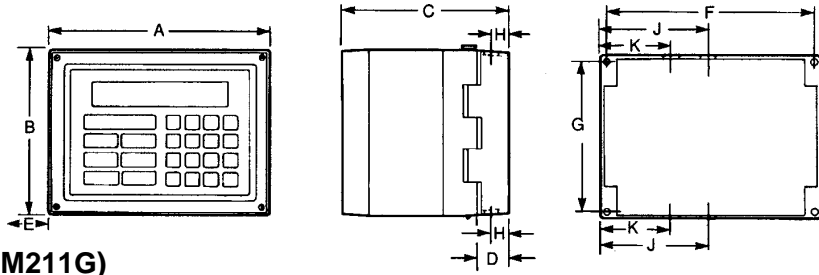
Technical data

Supply voltage	230V, 110V or 24V +/- 10% at 50/60Hz
Power Consumption	15 Watts maximum
Ambient Temperature Limits	32 - 122°F (0-40°C)
Maximum Operating Relative Humidity	80% up to 88°F (31°C) decreasing linearly to 50% at 104°F (40°C)
Maximum Altitude	2000 m above sea level
Relay Rating	Maximum voltage 24 Vac / dc Maximum current 0.5 A Maximum Power 10 W
Enclosure Rating	NEMA4 (IP65) with correct cable glands. (Not panel mounted version)
Enclosure Colors and Materials	Charcoal grey ABS and light grey plastic with steel hinge pins and recessed rubber sealing gaskets.
Battery Reserve	Clock 2 weeks Memory (RAM) 6 months

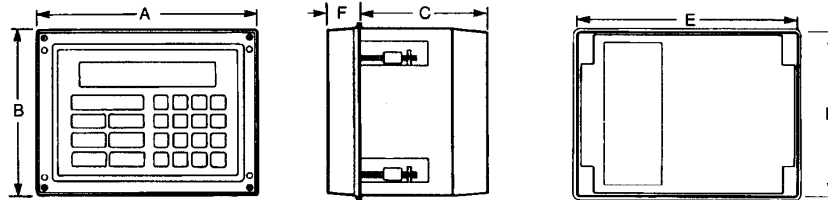
Associated equipment

M111	Flow Transducer	TIS 8.100
M322	Conditioning Unit	TIS 8.101
EL2600	Pressure Transmitter	TIS 8.403

Steam Meter - M210G Series Computer



Wall Mounting (M211G)



Panel Mounting (M212G)

Dimensions (approximate) in inches

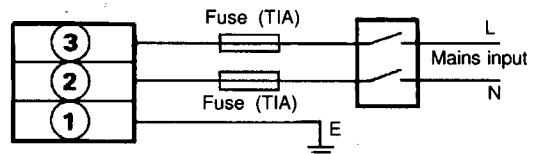
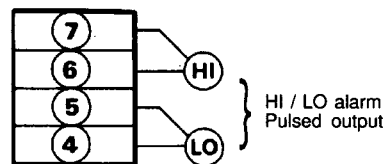
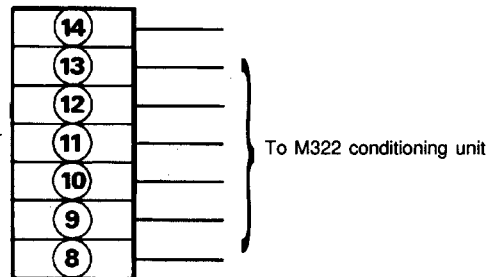
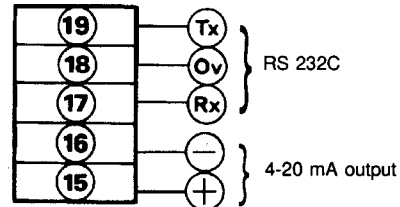
Wall Mounting

A	B	C	D	E	F	G	H	J	K	Weight
7.3	5.4	6.7	2	5.1	6.7	3.9	0.8	3.6	2	4.4 lb.

Panel Mounting

A	B	C	D	E	F	Weight
7.6	5.7	6.7	5.5	7.3	1.6	4.4 lb.

M211G / 212G computer



Maintenance

There are no user servicable parts.

Installation

Wall mounting: 4x5mm (0.2") key hole shaped knock-outs, one in each corner of base.

Panel mounting: Panel mounting in-fill piece with back clips.

Cable entries: Drilled in positions shown on instructions. Cable entry fittings and seals to suit appropriate regulations and IP rating supplied by customer. Total length of connecting wire between M210G series computer and M322 / M522 conditioning unit must not exceed 1640 ft. Cable (supplied by installer) 7 strand 0.2 mm dia. (24 awg) wire. (See wiring diagram) or equivalent.

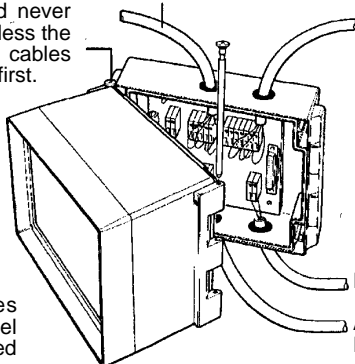
Full installation, operating and commissioning instructions are supplied with each unit.

How to specify

- 1 - Spirax Sarco steam meter computer 110V 50 / 60 hz. supply. M211G Wall mounting.

4-20 mA output
RS 232 communication interface

This pin should never be removed unless the internal ribbon cables are unplugged first.



Wiring from conditioning unit to computer 1640 ft. maximum length supplied by user/installer. Multi core 7 strand 0.2mm dia. (24 awg) wire, PVC insulated or equivalent. See wiring diagram.

Fused supply from mains

Alarm signals/
Pulsed output

M210G series computer panel or wall mounted

Note: These connections are shown for guidance only. See technical literature that accomanies product for full details.