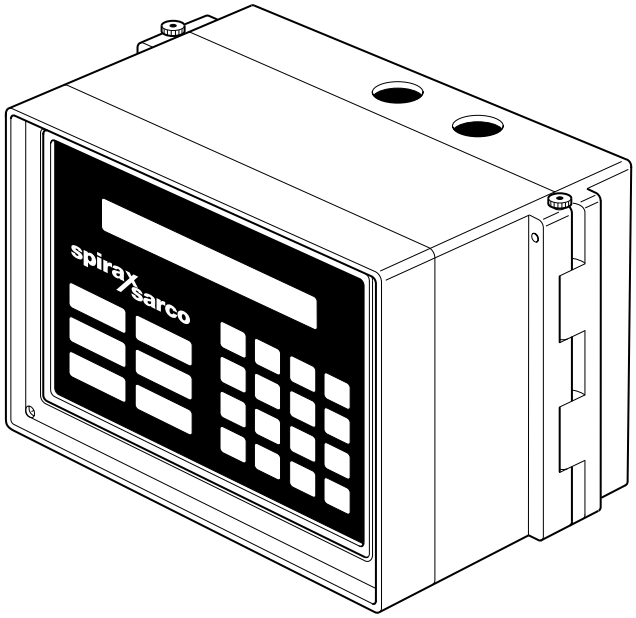
Cert. No. LRQ 0963008

ISO 9001

TI-P333-13
MI Issue 3

M210G
Steam Flow Computer



Description

The steam 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 transducer (Spiraflo). With a suitable input from a pressure transmitter (via the conditioning unit), it can be used on 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: 0 to 500°C
Pressure range: 0 to 99.9 bar g

Display parameters and other features

Languages	English, French, German, Spanish
Totalised flow	kg, lb, MJ or KWH
Flowrate	kg/h, lb/h, Btu/h or kW
Temperature	°C or °F
Pressure	bar g, lbs/in²g
Time	
Date	

Operator settable alarm limits are provided to give a warning when the flowrate, temperature or pressure go above or below specified limits. 2 relay outputs - 24 Vac/dc. 0.5 amp rated high and low limit 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 1 000 kg.
Four independent timers are provided, each capable of being programmed for a single event and to store peak rate and totalised flow for that specific timer. One timer is also capable of repeating the readings for the specified identical period each day, on an 8 day basis until cancelled.
A 4 - 20 mA analogue output channel is provided, for flowrate only in kg / h or kW, programmable from the keypad.
An EIA232C compatible serial communication port is provided. Customer selectable security code is provided to avoid casual tampering. Weatherproof box provided as standard. Panel and wall mounting versions available:-
M211G - Wall mounted
M212G - Panel mounted

Technical data

Supply voltage		230 V, 110 V or 24 V ± 10 % at 50 - 60 Hz
Power consumption		15 watts maximum
Ambient temperature limits		0 - 40°C
Maximum operating relative humidity		80% up to 31°C decreasing linearly to 50% at 40°C
Maximum altitude		2 000 m above sea level
Relay rating	**Maximum voltage**	24 Vac/dc
	Maximum current	0.5 A
	Maximum power	10 W
Enclosure rating		IP65 (with correct cable glands) **Not** panel mounted version
Enclosure colours and materials		Charcoal grey ABS and light grey plastic with steel hinge pins and recessed rubber sealing gaskets.
Battery reserve		Clock 10 years

Associated equipment

M111	Flow transducer	TI-P330-03
EL2211, EL2810 and EL2230	Temperature sensors	TI-P322-01
M322	Conditioning unit	TI-P333-09
EL2600	Pressure transmitter	TI-P322-02

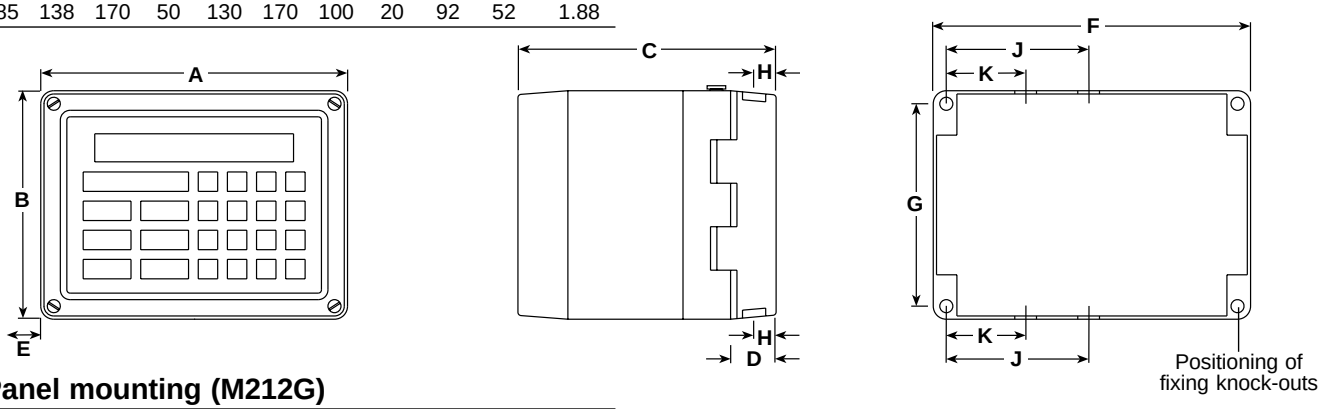
For a general description of Spirax Sarco M240G steam metering systems, see other literature.

Local regulations may restrict the use of this product to below the conditions quoted.
In the interests of development and improvement of the product, we reserve the right to change the specification.

Dimensions/weights (approximate in mm and kg

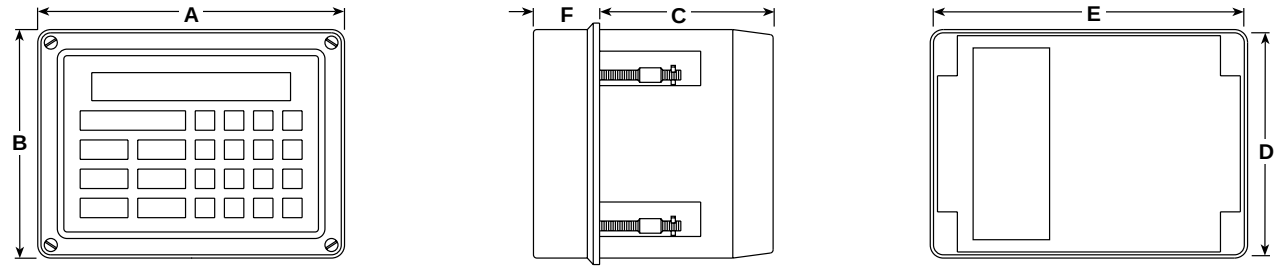
Wall mounting (M211G)

A	B	C	D	E	F	G	H	J	K	Weight
185	138	170	50	130	170	100	20	92	52	1.88



Panel mounting (M212G)

A	B	C	D	E	F	Weight
192	144	156	140	186	40	1.66



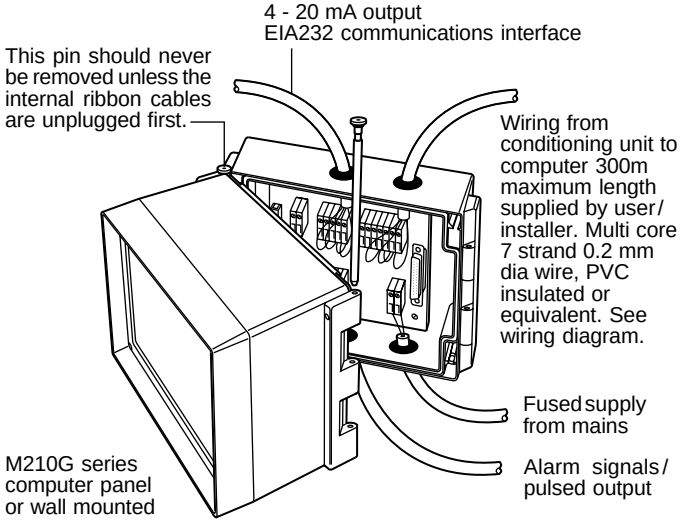
Installation

Wall mounting	4 x 5 mm key hole shaped knock-outs, 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 connecting wire between M210G series computer and M322?M522 conditioning unit must not exceed 400 m. Cable (supplied by installer) 7 strand 0.2 mm dia wire. (see wiring diagram) or equivalent.

Full Installation and Maintenance Instructions are supplied with each unit.

Maintenance

There are no user serviceable parts.



How to order

Example: 1 off Spirax Sarco steam flow computer set for 230 Vac 50/60 Hz supply. M211G wall mountable.

Wiring diagram

Note: These connections are shown for guidance only. See Installation and Maintenance Instructions that accompanies product for full details

M211G/M212G Computer