SIEMENS

INSTRUCTIONS

SITRANS F M MAGFLO
Electromagnetic flowmeter
type MAG 5000 CT & MAG 6000 CT

Contents	1 MAG 6000 CT, incl. connection plate and operating manual. 4 sealing screws, sign plate, 1 set of instructions and 1 hardware key for CT settings.

Introduction

Siemens electromagnetic flowmeters, SITRANS F M MAGFLO, type MAG 5000 CT & MAG 6000 CT are custody-transfer-approved for cold water and other media than water in accordance with OIML R 117 and they are custody-transfer-approved for hot water in accordance with OIML R 75.

All transmitters must be used with sensors MAG 1100 and MAG 3100.

Transmitter MAG 5000 CT and MAG 6000 CT are also pattern approved to OIML R 49 when used together with sensor MAG 5100 W in the sizes DN 50 to DN 300.

Cold-water (DK)

Other media than water
OIML R 117

Hot-water-custody transfer OIML R 75

Cold-water OIML R 49

Depending on application, one of the above certification plates must be mounted on the side of the transmitter.

When the meter is used for billing, installation and sealing must be in accordance with both these instructions and national guidelines.

Specification for OIML R49

The allowable specification for standard products not initially verified from factory is:

Flow rates for MAG 5100 W legal type approved meters for verification [all values in m³/h]

Size	Class 1					Class 2				
	Q4	Q3	Q2	Q1	Q3/Q1	Q4	Q3	Q2	Q1	Q3/Q1
50	78.75	63	1	0.4	160	78.75	63	0.63	0.25	250
65	125	100	1.6	0.63	160	125	100	1	0.4	250
80	200	160	2.5	1	160	200	160	1.6	0.63	250
100	312.5	250	4	1.6	160	312.5	250	2.5	1	250
125	500	400	6.3	2.5	160	500	400	4	1.6	250
150	787.5	630	10	4	160	787.5	630	6.3	2.5	250
200	1250	1000	16	6.3	160	1250	1000	10	4	250
250	2000	1600	25	10	160	2000	1600	16	6.3	250
300	2000	1600	40	16	100	2000	1600	25	10	160

For increased specifications contact factory.

Settings

Setting primary operating parameters such as $Q_{max.}$, low-flow cut-off, units, approvals, etc. is blocked during normal operation. See menu setup.

These settings are made in connection with commissioning or calibration by mounting a hardware key on the transmitter's connection plate. When the key is mounted, there is access to all menu items. When the key is removed, the primary settings are blocked in accordance with the requirements in the authorisation.
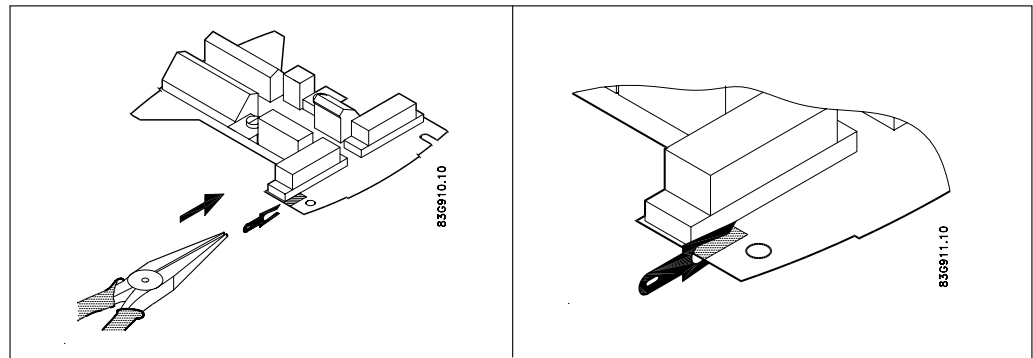
Internal sealing

After setup of settings and calibration of the unit the hardware key is removed again. This locks the menu structure and the selected settings. The transmitter and sensor must then be sealed to prevent unauthorized access. The connection plate is sealed to prevent access to the SENSORPROM memory unit. ℗ indicates locations of sealing.
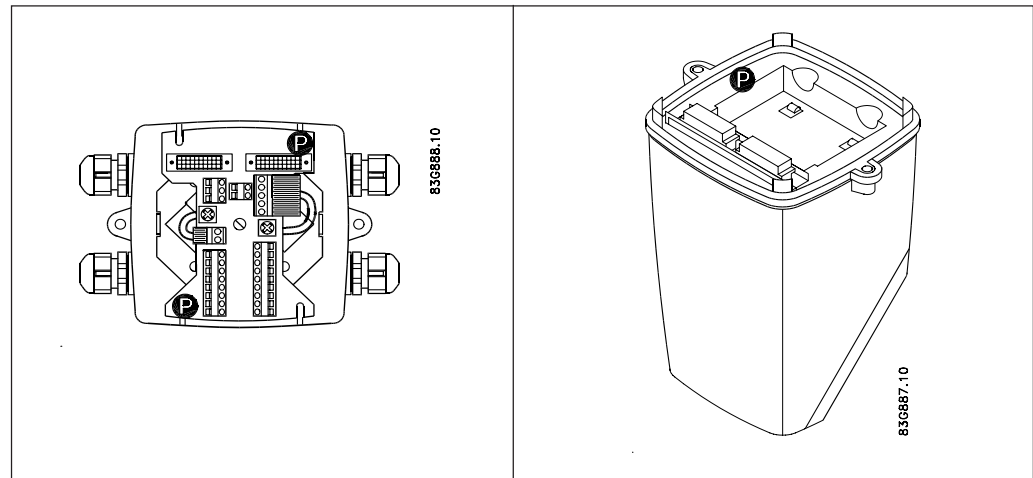
Sealing

MAG 6000 CT is installed as shown in the instructions for a standard MAG 6000, except for the external sealing.

The external sealing is carried out as shown.
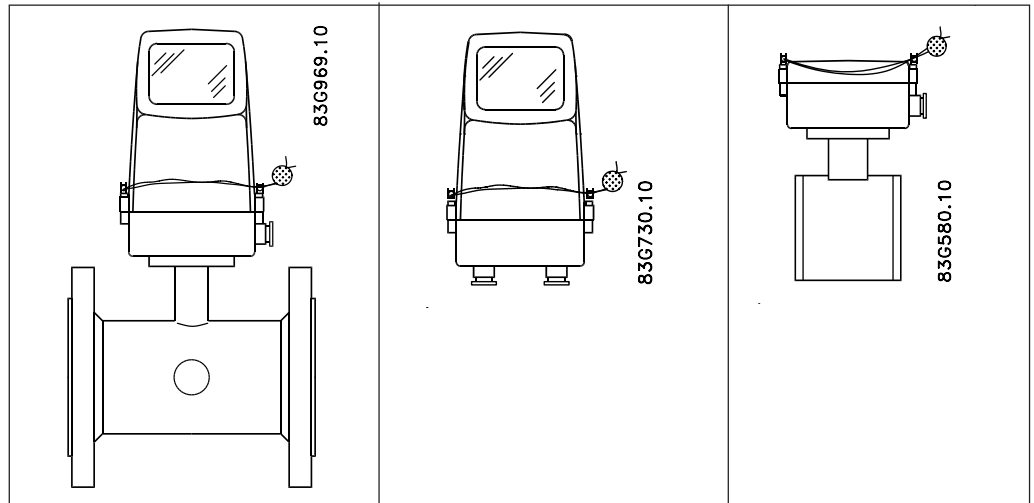

Internal totalizers

Depending on type of approval it is possible to reset the internal totalizers. The type of approval is selected in the reset menu, with the hardware key mounted. It is possible to select between:

- Hot/cold water
- Other media than water

Resetting of totalizers by electrical input are not possible.

Hot/cold water
- Totalizer 1 is allocated to forward flow (cannot be reset).
- Totalizer 2 is allocated to reverse flow (cannot be reset).

Other media than water
Both totalizer 1 and totalizer 2 are pre-selected to measure the net forward flow, i.e. any reverse flow will make the totalizers count backwards.
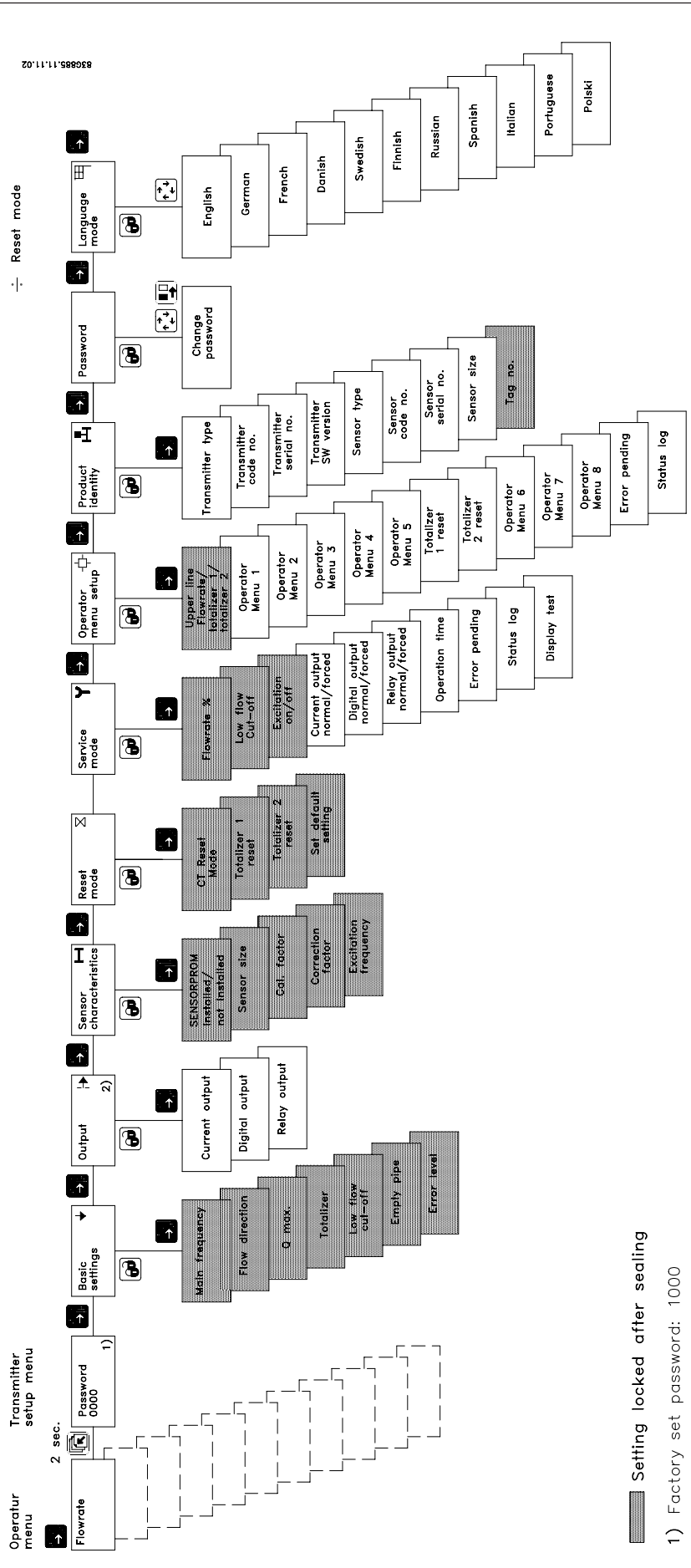
- Totalizer 1 can be reset if the flow rate in the meter pipe is <0.25 m/s. When the totalizer is reset, any pulse output will also be reset.
- Totalizer 2 is consecutive and cannot be reset.

Menu setup

83G885.11.11.02

Key legend:

- **TOP UP KEY** — This key (hold 2 sec.) is used to switch between operator menu and setup menu. In the transmitter setup menu, a short press will cause a return to the previous menu.
- **PAGE FORWARD KEY** — This key is used to step forward through the menus.
- **PAGE BACKWARD KEY** — This key is used to step backward through the menus.
- **CHANGE KEY** — This key changes the settings or numerical values.
- **SELECT KEY** — This key selects the figures to be changed.
- **LOCK/UNLOCK KEY** — This key allows the operator to change settings and gives access to submenus.

The fields are reserved for the following symbols:
- Alarm
- Ready for change
- Value locked
- Access to submenu
- RESET MODE: Zero setting of totalizers and initialization of settings
- Communication mode
- Service mode

Symbols:
- ⊹ Operator menu
- ▮▬ Product identity
- ⊞ Language mode
- → Basic settings
- ↟ Output
- ↥ External input
- I Sensor characteristics
- ⊠ Reset mode
- ∨ Sensor characteristics
- ⊹ Reset mode

Operator menu

Flowrate

Transmitter setup menu (2 sec.)

Password 0000 ¹⁾

Basic settings →
- Main frequency
- Flow direction
- Q max.
- Totalizer
- Low flow cut-off
- Empty pipe
- Error level

Output ↟ ²⁾
- Current output
- Digital output
- Relay output

Sensor characteristics I
- SENSORPROM installed / not installed
- Sensor size
- Cal. factor
- Correction factor
- Excitation frequency

Reset mode ⊠
- CT Reset Mode
- Totalizer 1 reset
- Totalizer 2 reset
- Set default setting

Service mode ⊹
- Flowrate %
- Low flow Cut-off
- Excitation on/off
- Current output normal/forced
- Digital output normal/forced
- Relay output normal/forced
- Operation time
- Error pending
- Status log
- Display test

Operator menu setup ⊹
- Upper line Flowrate / totalizer 1 / totalizer 2
- Operator Menu 1
- Operator Menu 2
- Operator Menu 3
- Operator Menu 4
- Operator Menu 5
- Operator Menu 6
- Operator Menu 7
- Operator Menu 8
- Error pending
- Status log

Product identity ▮▬
- Transmitter type
- Transmitter code no.
- Transmitter serial no.
- Transmitter SW version
- Sensor type
- Sensor code no.
- Sensor serial no.
- Sensor size
- Tag no.

Password
- Change password

Language mode ⊞
- English
- German
- French
- Danish
- Swedish
- Finnish
- Russian
- Spanish
- Italian
- Portuguese
- Polski

Setting locked after sealing

¹⁾ Factory set password: 1000
²⁾ Not visible when CT mode = Hot water