

# Z-FLOWCOMPUTER

## UNIVERSAL WATER, GAS, STEAM FLOW COMPUTER WITH 4,3" HMI

### Highlights

- **ModBUS RTU, ModBUS TCP/IP supported protocols**
- **HMI TFT touchscreen 4,3"**
- **Nr. 10 built-in I/O channels**
- **USB, Ethernet, RS232/RS485 communication interfaces**
- **EASY software gas / configuration for water / steam flow compensation**
- **Calculation rules: IAPWS IF-97, AGA8 GROSS METHOD, AGA8- 92DC (ISO 12213-2), SGERG88 (ISO 12213-3), Redlich-Kwong (RK) and Redlich-Kwong-Soave (RKS) equations**
- **EEC (Energy Efficiency Certificates) applications**

Z-FLOWCOMPUTER is a flow computer for gas, steam and water application.

The unit is equipped with nr. 4 PNP / NPN digital inputs, nr. 2 voltage / current analog inputs, nr. 1 universal analog input, nr. 2 relay digital outputs and nr. 1 analog voltage / current output.

Z-FLOWCOMPUTER is supplied with a 4,3" touch screen HMI which communicates via the RS485 port. The versatility of this controller, which is guaranteed by input signal different standards, allows applications such as corrected flow or energy efficiency calculation for white certificates issue.

Calculation rules are based on IAPWS IF-97, AGA8 GROSS METHOD, AGA8-92DC (ISO 12213-2), SGERG88 (ISO 12213-3), Redlich-Kwong (RK) and Redlich-Kwong-Soave (RKS) equations.



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### TECHNICAL SPECIFICATIONS

#### GENERAL DATA

Power Supply	11..40 Vdc; 19..28 Vac
Power consumption	Max 4 W
Isolation	1500 Vac
LED status indicators	Power supply Serial communication Ethernet link and transmission SD card Digital I/O status
Protection degree	IP20
Operating temperature	-10..+50 °C
Dimension	100 x 52,5 x 112 mm
Enclosure	Nylon 6 with 30% glass fiber, V0 self-extinguished class
Connection	Removable screw terminals at 3 ways with 5 mm pitch
Mounting	35 mm DIN rail (IEC EN 60715)

#### COMMUNICATION

Ethernet	Nr 1 10/100Tx Ethernet (RJ45) port
Serial	Nr. 1 RS232 / 485 port on clamps, baud rate 115k
USB	Nr. 1 USB port on side connector
Industrial protocols	ModBUS RTU, ModBUS TCP-IP Server
Network protocols	Http, Ftp

#### INPUT DATA

Channels	Nr 4 Digital Inputs PNP, NPN (max voltage 30Vdc) Nr 2 Analog Inputs 0..20 mA / 0..30 Vdc @16bit Nr. 1 Analog Universal Input V / mA / RTD / TC
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#### OUTPUT DATA

Channels	Nr. 2 Digital Outputs SPDT relay max 2A 250 Vac Nr. 1 Analog Output mA / V
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#### PROCESSING / MEMORY

CPU	ARM 32 bit
Flash Memory (data)	1M + 2 MB
RAM	256 kB
FeRAM	256 byte
Slot Micro SD	Yes
Micro SD card (ext. memory)	Max 32 GB

#### HMI

Display	4,3", 480x272, RM 600 MHz, TFT 16 million colors
RAM	128 MB
Communication ports	Nr.1 USB host 2.0 Nr. 1 RS232/RS485 Nr. 1 RS485 Nr. 1 Fast Ethernet
Dimension	128x102x32 mm

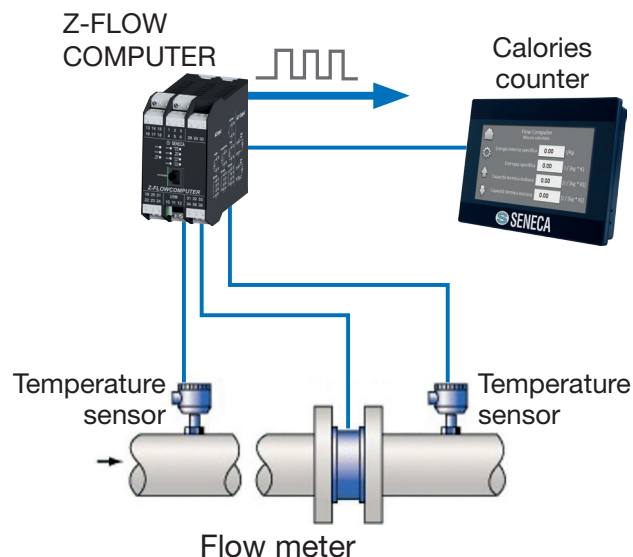
#### SETTINGS

Software	EASY FLOW COMPUTER
Web server	Yes (Web Configurator)
Datalogger	Yes

#### STANDARD

Marking	CE
Norms	EN 61000-6-4, EN 61000-6-2, EN 61000-1

### APPLICATION NOTE



#### ORDER CODES

Code	Description
Z-FLOWCOMPUTER	Universal water / steam flow computer with 4,3" HMI
<b>ACCESSORIES</b>	
MSD	Micro SD memory card with adapter
CE-RJ45-RJ45-R	Straight-thru Ethernet cable (RJ45-RJ45)
CS-DB9F-CLAMP	RS485 connection cable (DB9F-Clamps)
<b>SOFTWARE</b>	
EASY FLOW COMPUTER	Z-FLOWCOMPUTER software manager