SVM P3 Pulse Counter

DATA SHEET

- **Pulse counter with three registers**
- **Flow rate calculated for one pulse input**
- **Battery or 230VAC mains supply**
- **Built-in M-Bus**
- **Monthly registers**

Application

P3 is a pulse counter with three pulse inlets, and is used to collect pulses from water meters, gas meters, electricity meters or other meters that emit pulses.

The pulses are accumulated in three separate registers in P3, which in turn can be remotely read with 2-wire M-Bus. The pulse values are specified upon order and are set either as a pulse factor (multiplier) or as a pure pulse counter.

Pulse input 1 and 2 are set by the same factor, while input 3 is set separately. Input 3 is also used to calculate the momentary flow rate. Monthly values are stored for each pulse register along with any error code, for up to 37 months.

P3 is delivered with battery supply or mains supply, and is easily wall mounted with the enclosed wall adapter.

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Function

P3 offers three separate pulse register in which the pulses can be converted by a multiplier and then accumulated.

The basic unit of P3 is always [m³] (1000 l).

Example 1: The pulse value is 2.5 [l/p] and P3 receives 700 pulses. The register will show 2.5 × 700/1000 = 1.75 [m³].

Example 2: The pulse value is 1000 [l/p] and P3 receives 83 pulses. The register will show 1000 × 83/1000 = 83 [m³].

By setting the pulse value to 1000, the P3 acts as a pure pulse counter and may be used for any unit, kWh, USG etc.

NOTE! The pulse value is specified upon order, and can only be changed by using the service program FlexServ.

All three registers can be read directly on the LCD or via M-Bus. Pulse input 3 also reports momentary flow rate, which also can be read on the LCD or via M-Bus.

Display

P3 is equipped with an LCD. With the push button it is easy to navigate through the pulse registers and the historical values.

P3 have the following display sequence:

Sequence	Description
10	Pulse register 1
11	Pulse register 2
12	Pulse register 3
13	Momentary flow rate, pulse register 3
14	Display test
15	Error code
20	Total operating time (hours)
21	Date
22	RTC
23	Accumulated time for current error (minutes)
24	Total accumulated error time (minutes)
30	Primary communication address
A0	Secondary communication address
b0	Meter number S/N
40	Monthly register, date (YYMMDD)
41	Not used
42	Pulse register 3
43	Not used
44	Pulse register 1
45	Pulse register 2
46	Error code, at date of storage
47	Accumulated error time (minutes)

Table 1, P3 display sequence

Fig. 1, P3 LCD showing pulse register 1

Delivery

P3 is delivered in Transport mode where only the RTC is active. This means that the P3 can be stored for several months without affecting the battery or back-up battery life. To put the P3 in operation, see Service/Commissioning below.

Service/Commissioning

Press and hold the push button for about 5 seconds in order to exit Transport mode and put the P3 in Service mode. In Service mode it is possible to set the RTC, the date and the primary communication address, cf. Table 2 below.

The push button has a dual function. When the button is pressed and held the meter toggles through the service sequence without any values being changed. When the button is pressed and released again, the value of the current flashing digit is changed one step (+1).

When all parameters are properly set, exit the Service menu through sequence “0A” by changing the value from 0 to 1 and then press and hold the push button until sequence 10, normal mode, is displayed. The pulse counter P3 is now ready for use.

Sequence	Description
00	RTC [HHMM]
01	Date [YYMMDD]
06	Primary communication address [0000-0255]
0A	Exit Service mode [0=return to "00", 1=go to "10" Normal mode

Table 2, P3 service sequence

Dimensions

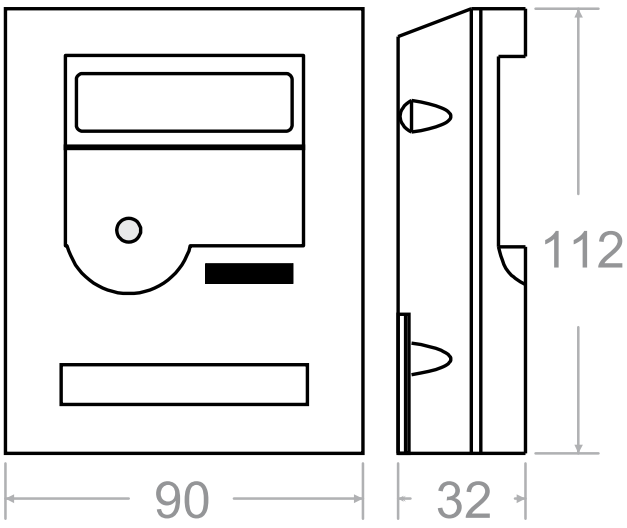

Fig.2, Dimensions

Wall adapter

A wall adapter is enclosed P3, cf. Fig 3 below.

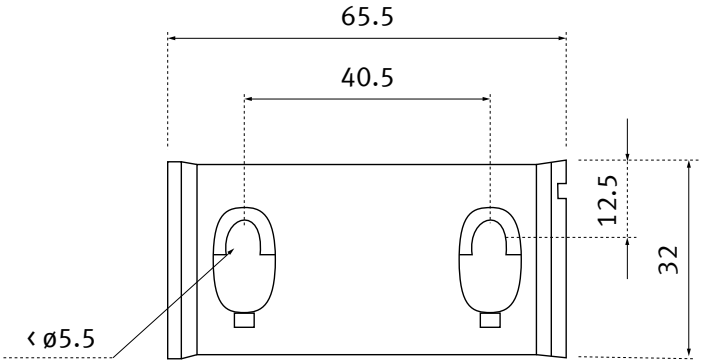

Fig. 3. Wall adapter

Fix the adapter to the wall and slide the pulse counter onto the rails. Fix the pulse counter with the mounting screw.

Installation

Use only the marked terminals in Fig. 4 below. The other terminals have no function.

Note! Incorrect connection may damage the P3.

P3 with mains supply is equipped with a fixed mains cable.

Marking on terminal	Signal
0	Pulse input 1 and 2, common signal zero (GND)
P1	Pulse input 1, signal
P2	Pulse input 2, signal
Kt	Pulse input 3, signal
0	Pulse input 3, signal zero (GND)
MBUS	M-Bus, polarity insignificant
MBUS	M-Bus, polarity insignificant

Table 3, P3 connections

Installation

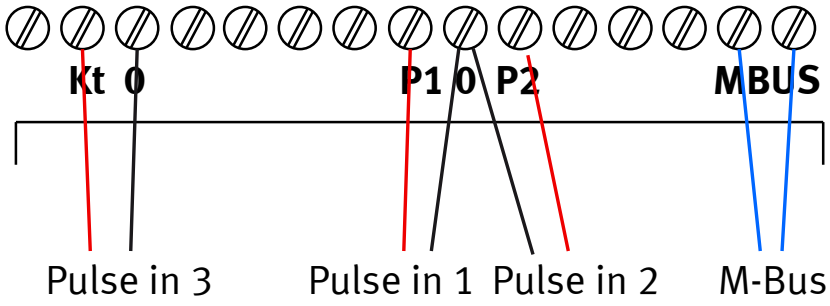

Fig. 4, P3 terminals

Technical data

Pulse inlets 1, 2 and 3

— Frequency	max 12 Hz
— Pulse length	min 40 ms
— Voltage	max 3 V
— Cable length	max 15 m
— Pulse value	1, 2.5, 10, 25, 100, 250, 1000 or 2500 l/p

Power supply

— Battry	3 V, 2.2Ah, battery life 10 years
— Mains	230 VAC ± 10%, 45-65 Hz, back-up battery 3.6V

Data output

— M-Bus (EN1434-3)	OPTO-interface (EN60870-5) and 2-wire bus connection (screw terminals)

Ambient temperature

— Operation	+5°C to +55°C
— Storage/ transport	-20°C to +70°C

Protection class	IP54
Environmental	class C acc. to EN1434
Display	LCD, 7 + 2 digits

SVM P3 Pulse Counter

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P3 Article number ABCDEFGHIJKLM

SVM P3	A	B	C	D	E	F	G	H	I	J	K L M
Sensors											
None	1										
Power supply											
Battery 3V		1									
Mains 230 VAC (w. back-up battery)		3									
Pulse value inlet 3											
Pulse inlet 3 2.5 l/p			1								
Pulse inlet 3 25 l/p			2								
Pulse inlet 3 250 l/p			3								
Pulse inlet 3 2500 l/p			4								
Pulse inlet 3 1 l/p			5								
Pulse inlet 3 10 l/p			6								
Pulse inlet 3 100 l/p			7								
Pulse inlet 3 1000 l/p			8								
Flow unit											
m³/h				1							
Configuration											
Standard					–						
Customer number – Separate specification needed					E						
Special – Separate specification needed					S						
Pulse value inlet 1/2											
Pulse inlet 1/2 2,5 l/p						1					
Pulse inlet 1/2 25 l/p						2					
Pulse inlet 1/2 250 l/p						3					
Pulse inlet 1/2 2500 l/p						4					
Pulse inlet 1/2 1 l/p						5					
Pulse inlet 1/2 10 l/p						6					
Pulse inlet 1/2 100 l/p						7					
Pulse inlet 1/2 1000 l/p						8					
Display											
No backlight. With Opto and M-Bus							1				
Montage											
Wall mounting, wall adapter is included								0			
Connections											
Standard connector									–		
Communication											
M-Bus, 300 baud										1	
M-Bus, 2400 baud										2	
Country											
English standard											300

P3 Article number key

To acquire the correct article number, just fill out the blanks.

P3	A	B	C	D	E	F	G	H	I	J	KLM
	1			1			1	0	-		300