

PASSIVE SEPARATOR  
SUPPLIED BY A CURRENT LOOP

**P17G**



USER'S MANUAL

CE

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## **1. Application**

The P17G passive separator in a housing of 6.2 mm width and supplied from a current loop, serves to the electric isolation and filtration of the 0(4)...20 mA standard signal value without an additional supply voltage.

## **2. Operational safety**

In the security scope, the separator meets the requirements of the EN 61010-1 standard.

### **Remarks concerning the safety:**

- All operations concerning transport, installation, and commissioning as well as maintenance must be carried out by qualified, skilled personnel and national regulations for the prevention of accidents must be observed.  
According to this basic safety information, qualified, skilled personnel are persons who are familiar with the installation, assembly, commissioning, and operation of the product and who have qualifications necessary for their occupation.
- **The removal of the separator housing during the guarantee period may cause its cancellation.**

## **3. Separator set**

The set of the P17G separator is composed of:

1. P17G separator
2. user's manual
3. guarantee card

When unpacking the instrument, please check whether the type and execution code on the data plate correspond to the order.

## **4. Installation**

### **4.1. Assembly** - (see p. 6)

### **4.2. Principle of operation** - (see p. 7)

The input signal of the passive separator, after converting into a signal of high frequency, is separated by means of a transformer and next, after rectifying and filtration, is directed to the output system.

The required energy for separation needs is collected from the current loop of the input signal.

### **4.3. Electrical connections** - (see p. 7)

The connection diagram of the passive separator is presented on the fig. 5.

In case of separator operation in a environment with high interference, one must apply shielded wires.

## 5. Technical data

### Basic parameters:

- conversion error	± 0.2%
- limit frequency (-3 dB)	70 Hz
- response time (10...90%), $R_o=500 \Omega$	5 ms
- voltage fastness (testing) inp/out	500 V, 50 Hz, 1 min.
- preheating time of the separator	not occurs
- ambient temperature	-20...23...65°C
- storage temperature	-40...+85°C
- relative air humidity	<95% (condensation inadmissible)
- operating position	any
- guaranteed protection class	IP 50 (housing) IP 20 (electrical connections)
- dimensions	( $6.2 \times 77.5 \times 100$ ) mm
- kind of terminals	screw terminals
- diameter of connecting wires	0.2...2.5 mm <sup>2</sup> (AWG24-12)
- length of wire without isolation	6 mm
- housing material	polyester PBT, black
- weight	80 g
- fixing	acc. to EN 60715

### **Input:**

- range of the input signal	0...20 mA, (4...20 mA)
- response current	ca. 150 $\mu$ A
- maximal input current/overload	40 mA
- maximal voltage current/overload	30 V

### **Output:**

- range of the output signal	0...20 mA, (4...20 mA)
- load resistance $R_o$	<u>0...100...500 <math>\Omega</math></u>
- ripples	≤ 10 mV

### **Additional errors:**

- from load resistance changes	≤ 0.15% / 100 $\Omega$
- from ambient temperature changes	≤ 0.05% / 10 °C

### **Electromagnetic compatibility:**

- noise immunity, acc. to EN 61000-6-2
- noise emissions, acc. to EN 61000-6-4

### **Safety requirements acc. to EN 61010-1**

- installation category	III
- pollution grade	2
- phase-to-earth working voltage:	50 V

## 6. Order codes

<b>Passive separator P17G</b>	<b>XX</b>	<b>X</b>
<b>Version:</b>		
Standard .....	00	
On order* .....	XX	
<b>Acceptance tests:</b>		
Without additional requirements .....	8	
With an extra quality inspection certificate.....	7	
Acc. to customer's agreement*.....	X	

\* after agreeing with the manufacturer

### ORDERING EXAMPLE:

The code: **P17G-007** means:  
passive separator of P17G,  
**00** - standard version,  
**7** - delivered with an extra quality inspection certificate

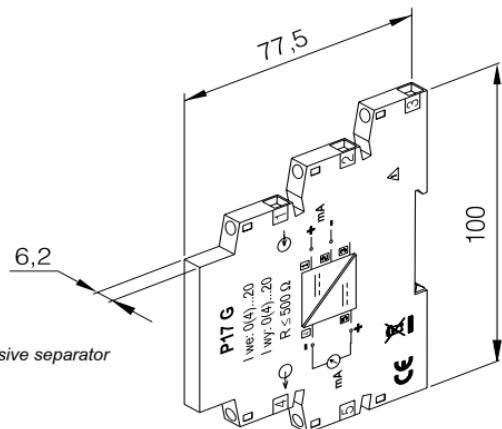


Fig.1. View of the P17G passive separator

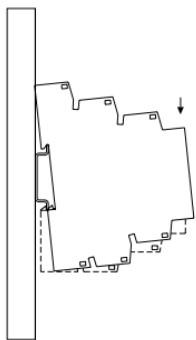


Fig.2. Assembly/disassembly way on the rail

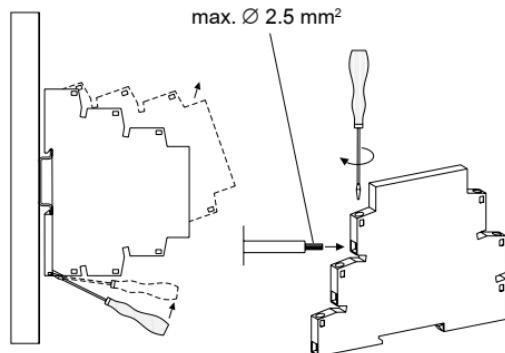


Fig.3. Way of wire fixing

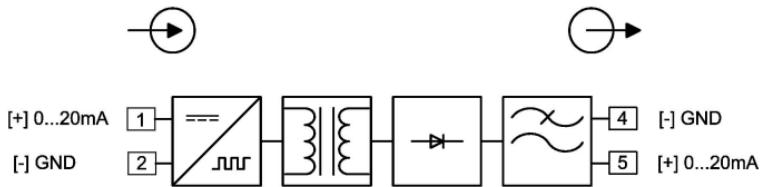


Fig.4. Principle of the P17G separator operation

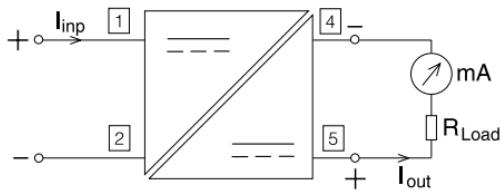


Fig.5. Electrical connections of the P17G separator

P17G-07A  
60-006-00-00583