

Product Information

**On Site Electronics  
ESA1**



- Compact local display and switching module for RRI / H Flow Sensors
- Switching point displayed optionally
- Switching point can be set without process condition
- Display of the switching value via red LED signal lamp

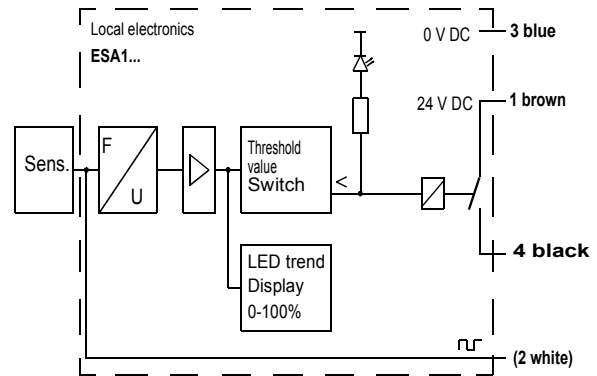
**Characteristics**

The electronics consist of a primary sensor, which is able to detect the rotor blade of the flow meter (inductive or Hall sensor depending on the material of the transmitter) and a calibratable F / U convertor, which presents the detected frequency on a trend display, and which allows the comparator and therefore the "min switching value" to be set via an adjustable potentiometer. Switch opens when there is a fault (< switching point)

**Technical data**

<b>Sensor</b>	see "Ordering code"
<b>Working ranges</b>	
<b>Measurement accuracy</b>	see relevant flow meter
<b>Operating pressure</b>	
<b>Operating temperature for the electronics</b>	max. 60 °C
<b>Materials</b>	PA6.6
<b>Supply voltage</b>	24 V DC ±10 %
<b>Power consumption</b>	1,5 W
<b>Limit values</b>	normally open (n.o.) ( 24 V DC, 24 W)
<b>Hysteresis</b>	set to 2 % at the factory
<b>Display</b>	12 LEDs (green)= current value and option to display switching value. LED (red) =< min
<b>Electrical connection</b>	for round plug connector M12x1, 4-pole, cable outlet optionally available
<b>Ingress protection</b>	IP 60

**Terminal assignment**

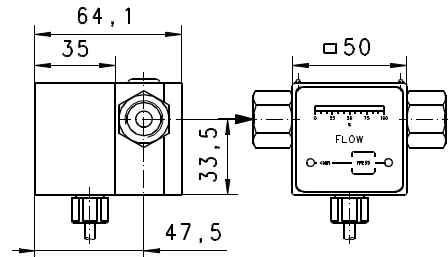


Before the electrical installation, it must be checked that the supply voltage corresponds with the data sheet. The "min." relay contact is to be used exclusively for signal voltages. If a higher powered relay is to be actuated, then connect a free-wheeling diode above the power relay, in order to reduce induction spikes.

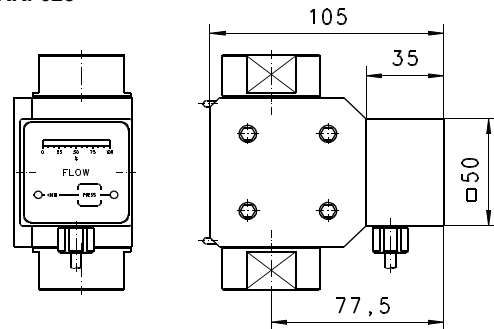
The changeover contact is depicted in the rest state (no supply voltage). The "in range" status accordingly corresponds to the tensed state. If the power to the sensor is lost, the relay then also returns to the rest state.

**Dimensions**

**ESA1-RR.-010**



**ESA1-RR.-025**



**Product Information**

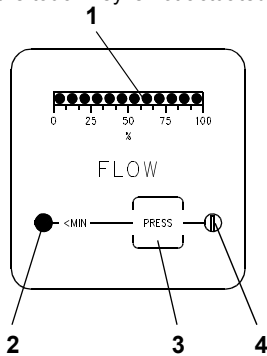
**Handling and operation**

**Installation**

It should be ensured that the flow meter and the ESA1 electronics are matched to each other (same production number). The ESA1 electronics must be full inserted into the Rototron flow meter in order to detect the signal securely. For RR.25... there is the option of turning the converter by 90° in order to create the most suitable reading position. For RR.10... the position should be stated when ordering.  
The stainless steel clamps prevent the electronics from coming away from the base unit, even if there is vibration.

**Adjustment**

Together with the corresponding flow meters, the ESA1 electronics create an adjustable flow meter with trend display (1). When the switching point is fallen short of, the output goes from 24 V DC to 0 V (open status). The switching point can be displayed at any time by pressing the "Press" button (3) and can be adjusted by simultaneously turning the potentiometer (4). A red LED (2) indicates when the switching point has been fallen short of. If the touch key is not actuated, the present value is displayed.



- 1. Trend display (12 x LED green)
- 2. <min. display (LED red)
- 3. Touch key (displays switching point)
- 4. Potentiometer for setting the min.-signal (simultaneously 3)

**Ordering code**

The base device is ordered, e.g. RRI-xxx with the signal output E and the evaluation electronics described here e.g. ESA1-RRI-xxx.

ESA1-  1.  2.  -  3.  4.

○=Option

<b>1. For types</b>	
RR	for flow meter RR
<b>2. Sensor</b>	
I	inductive (for flow meter RRI)
H	hall (for flow meter RRH)
<b>3. Nominal width</b>	
010	for flow meter size DN 10
025	for flow meter size DN 25
<b>4. Electrical connection</b>	
S	for round plug connector M12x1, 4-pole
K	<input type="checkbox"/> cable outlet 2 metres

**Options**

- Ingress protection IP 65

**Accessories**

- Cable/round plug connector (KB...) see additional information "Accessories"
- Fixing clamps RR.-010
- Fixing clamps RR.-025