



### DESCRIPTION

APZ 2035 is a HVAC/R pressure transmitter and switch. Large informative display provides measured pressure info in digital and bargraph form as well as units selected, and switch outputs status. With highly configurable independent two single pole double throw relay switch outputs, this small and cost efficient device is capable of local fans and filters monitoring as well as remote signal transmission via 4...20 mA or 0...10V analog outputs.

### SPECIFICATIONS

Differential pressure ranges: 100 Pa up to 7 kPa  
Accuracy:  $\pm 1.5\%$   
Relay outputs: SPDT, 2 pcs  
Output: 0...10 V; 4...20 mA;  
Sensor: silicon piezoresistive  
Pressure port: barbed, for 4 mm ID tube  
Operating temperature: -10...+50 °C  
Shipped with 2 meters of tube and 2 duct connectors

### APPLICATIONS

For non-flamable and non-aggressive gases  
Heating and ventilation  
Air conditioning

Filters, fans, valves and air shutters monitoring  
Clean rooms

## TECHNICAL SPECIFICATIONS

### MEASURING RANGES

Pressure range (base), Pa	Pressure range, set, Pa	Overpressure, kPa	Burst pressure, kPa
-500...+500	-100...+100	±10	±20
	-200...+200		
	0...100		
	0...200		
	0...500		
-100...+2000	-100...+100	±30	±40
	0...100		
	0...200		
	0...500		
	0...1000		
0...7000	0...1000	±80	±100
	0...1500		
	0...2000		
	0...3000		
	0...5000		

### PERFORMANCE

	-500...+500 Pa	-100...+2000 Pa, 0...+7000 Pa
Accuracy, % of span*	≤ ±1.5	≤ ±1.5
Compensated range	-5...+65 °C	
Power supply effect (rated supply voltage: 24 V ± 10%)	≤ ±0.05% of span / 10 V	
Load resistance effect	≤ ±0.05% of span / kOhm	
Long-term stability	≤ ±0.2% of span / year	
Response time (10...90%)	≤ 1 ms	
Startup time (after power up)	less than 0.2 s	

\* Accuracy includes non-linearity, hysteresis, non-repeatability and temperature-related accuracy fluctuations within the compensated range.

### OPERATING CONDITIONS

Medium temperature	-5...+65 °C
Ambient temperature	-10...+50 °C
Storage temperature	-20...+70 °C
Pressure sensor service life	> 100×10 <sup>6</sup> cycles
Contacts switch cycles	> 5×10 <sup>6</sup>
Switch contacts service life (electric), load dependent:	
- AC:	
125 V: 3 A (NO)/3 A (NC)	200000
250 V: 5 A (NO)/3 A (NC)	50000
- DC:	
30 V: 5 A (NO)/3 A (NC)	100000

### MECHANICAL SPECIFICATIONS

Pressure port	brass
Tube	silicone rubber
Diaphragm	silicon
Wetted parts	Diaphragm, pressure ports, tube
Pressure port	barbed, for 4 mm ID tube
Electrical connection	1) Cable gland M16x1.5 - power supply and output signal (cable diameter 6...10 mm); 2) Cable gland M20x1.5 - switching lines (cable diameter 7...12.5 mm)
Housing/cover	ABS/polycarbonate
Ingress protection	IP54
Dimensions, mm, max	106×91×44
Weight, max	0.25 kg
Mounting position	vertical, wall-mounted, fittings downwards



## DIGITAL DISPLAY

Display digits	-19999...+19999
Display accuracy	0.1 % of span $\pm$ 1 digit

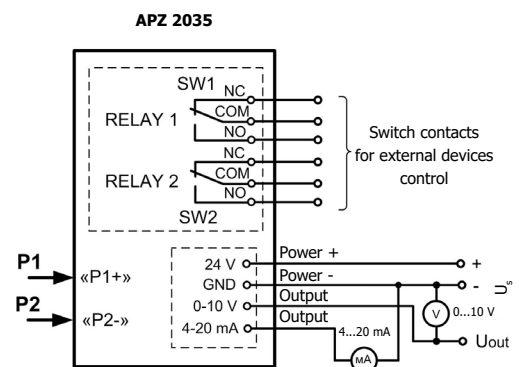
## ELECTRICAL SPECIFICATIONS

Power supply:	
- D.C., V	18 to 36 (rated 24 V)
- A.C., V	24 $\pm$ 10%
Power consumption, max	100 mA
Analog outputs:	
Number of measuring channels	2
Output parameter - voltage (3-wire) / load resistance	0...10 V / $\geq$ 10 kOhm
Output parameter - current (3-wire) / load resistance	4...20 mA / $\leq$ 500 Ohm
Relay outputs:	
Number of relay outputs	SPDT, 2 pcs
Type of mechanical switch contact	normally closed (NC) and normally open (NO)
Max switching voltage	250 V (AC) 30 V (DC)
Max switching current (contact type)	5 A (NO) / 3 A (NC)
Switched signals (active load):	
- DC, voltage of 30 V	5 A (NO) / 3 A (NC)
- AC, voltage of 250 V	5 A (NO) / 3 A (NC)
Switch operating modes (configurable)	hysteresis/window
Switching outputs accuracy	$\leq \pm 1,5$ of span for range -500...+500 Pa $\leq \pm 1$ of span for ranges -100...+2000 Pa and 0...7000 Pa

## ELECTRICAL CONNECTIONS / PIN ASSIGNMENT

Circuits		Contacts
6-pin terminal block:		
Switch 1		NC
		COM
		NO
Switch 2		NC
		COM
		NO
4-pin terminal block:		
Power +	+U <sub>s</sub>	24 V
Power -	common	GND
Analog output	U <sub>out</sub>	0...10 V
Analog output	I <sub>out</sub>	4...20 mA

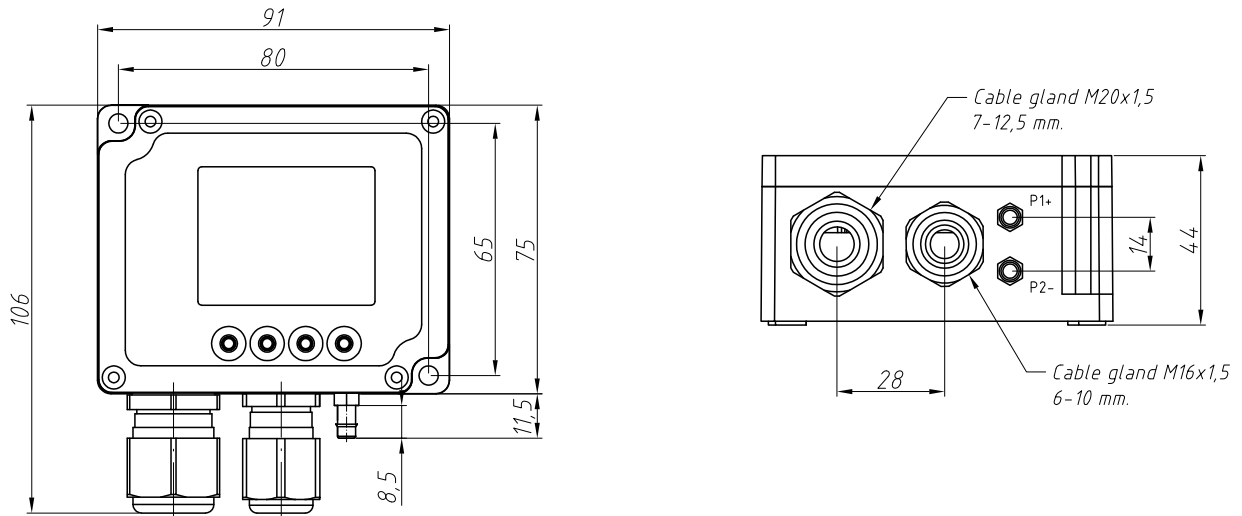
## CONNECTIONS CHART



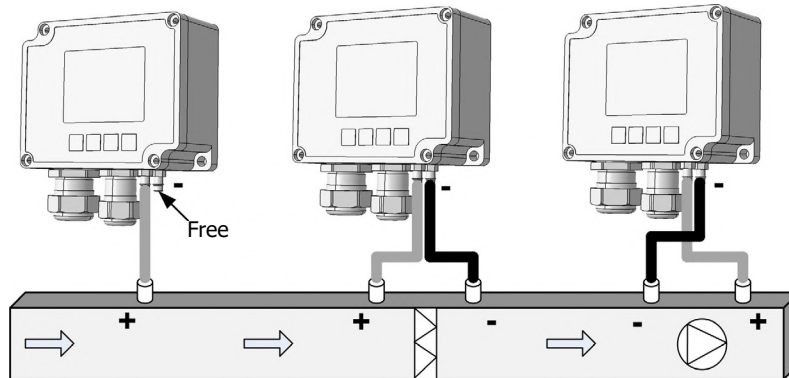
Cable gland wires are screwed to pins on the card with clamps inside the housing; acceptable cross-section of wires is 0.14...1.5 mm<sup>2</sup>.

P1, P2 - input pressure of the medium;  
P1 (+) for higher pressure, P2 (-) for lower pressure.

## DIMENSIONS (mm)



## PRESSURE PORTS



Application	Transmitter inputs connections
A) Gauge pressure monitoring	P1+ connected to channel P2- disconnected (open to atmosphere)
B) Filter condition control	P1+ connected to channel before filter P2- connected to channel after filter
C) Ventilator operation monitoring	P2- connected to channel before ventilator P1+ connected to channel after ventilator
D) Pressure control	P1+ disconnected (open to atmosphere) P2- connected to channel

There are + and - marks on the housing denoting high pressure (+) and low pressure (-) fittings.

ORDERING CODE		-X	-XXXX	-X	-XX	-X	-XXX	-XX
<b>MEASUREMENT TYPE</b>								
Differential	D							
<b>UNIT OF MEASUREMENT</b>								
	Pa	P						
<b>PRESSURE RANGE</b>								
	-500...+500		5002					
	-100...+2000		2003					
	0...7000		7003					
<b>NUMBER OF RELAY OUTPUTS</b>								
		SPDT, 2 pcs		2				
<b>ELECTRICAL CONNECTION</b>								
		Cable glands M20x1.5 / M16x1.5			42			
<b>OUTPUT SIGNAL</b>								
				0...10 V / 3-wire		J		
				4...20 mA / 3-wire				
				Other (specify when ordering)		X		
<b>PRESSURE PORT</b>								
				Barbed, for 4 mm ID tube			300	
<b>VERSION</b>								
						Standard		00
						Other (specify when ordering)		XX

Example: APZ 2035-D-P-5002-2-42-J-300-00