



Room temperature sensors

QAA1...

Use

The sensors are used for acquiring the room temperature in heating, ventilation and air conditioning plants (e.g. in lounges or working spaces).

They are designed for use in connection with automation equipment, display and logging devices.

Type summary

Measuring range	Type of measurement (output)	Type reference
0...60 °C	passive, Pt100	QAA100
0...50 °C	active, DC 0...10 V	QAA160
0...50 °C	active, 4...20 mA	QAA170

Ordering

When ordering, please give name and type reference according to "Type summary", e.g. room temperature sensor **QAA100**

Mechanical design

The sensor is designed for wall mounting. It can be fitted to most commercially available recessed conduit boxes. The cables can be introduced from the rear. The sensor consists of a plastic housing with a removable snap-on cover. The housing accommodates a printed circuit board with the sensing element and the connection terminals. The housing has ventilation slots at the top and at the bottom.

Technical data

	Type of sensor	QAA100	QAA160	QAA170
General sensor data	Measuring range	refer to "Type summary"		
	Sensing element	Pt100 (class B)	Pt1000	
	Measuring tolerance	±0.3 K at 0 °C	±1 %	
	Type of measurement and output	passive	active DC 0...10 V	active 4...20 mA
	Power supply (terminal UB)		AC 24 V / DC 15...24 V ±10 %	DC 15...24 V ±10 %
	Power consumption		max. 12 mA	max. 20 mA
	Load/dummy load		min. 5 kΩ	<500 Ω
	Perm. ambient temperature	-35...+70 °C		
	Degree of protection	IP20 as per EN 60 529		
	Materials used	ABS plastic, anti-static and dirt-resistant		
	Connections			
	Mechanical	screws		
	Electrical	screw terminals, max. 2 x 1.5 mm ²		
	Colour	pure-white, RAL 9003		
Weight	0.041 kg	0.044 kg	0.047 kg	
Norms and standards	Product safety			
	Automatic electric controls for household and similar use	EN 60 730-1		
	Electromagnetic compatibility			
	Immunity	EN 60 730-1 (1996)		
	Emissions	EN 55 011-B (1998)		
CE conformity				
Electromagnetic compatibility	89/336/EEC			
Low voltage directive	73/23/EEC			

Mounting notes

Mount the room temperature sensor on a vertical wall about 1.5 m above the floor. Make sure that the sensor's housing is not distorted due to the roughness of the wall where it is mounted.

Avoid the following mounting locations:

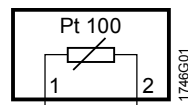
- Above radiators
- Near windows and doors
- On surfaces subject to vibration or exposed to direct solar radiation
- On outer walls or walls near fireplaces

Do not mount the sensor in recesses or niches. Protect it from drip or splash water. The sensor must be located such that room air can easily circulate through the ventilation slots from bottom to top.

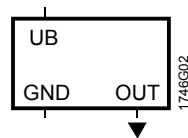
The unit is supplied together with mounting instructions.

Connection diagrams

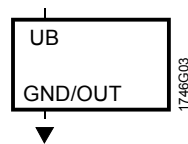
QAA100



QAA160



QAA170



Resistance characteristic Pt100 (DIN IEC 751, class B)

Temp. in °C	-50	-40	-30	-20	-10	0	+10	+20	+25	+30
Widerst. in Ω	80.31	84.27	88.22	92.16	96.09	100.00	103.90	107.79	109.74	111.67
Temp. in °C	+40	+50	+60	+70	+80	+90	+100	+110	+120	
Widerst. in Ω	115.54	119.40	123.24	127.07	130.89	134.70	138.50	142.29	146.06	

Dimensions (All dimensions in mm)

