

AIR QUALITY TRANSMITTER 0-10VDC

EAQ..

These products can be used to detect a mixture of pollutant gases in the air ie cigarette smoke, odours and other gases generally found within clubs, pubs, restaurants, kitchens, smoking areas etc. The 0-10vdc linear output signal is proportional to the contamination level produced and can be used to control fresh air dampers or fans etc. A solid state element is used to sense contaminant gases.



EAQ-R1 EAQ-D1

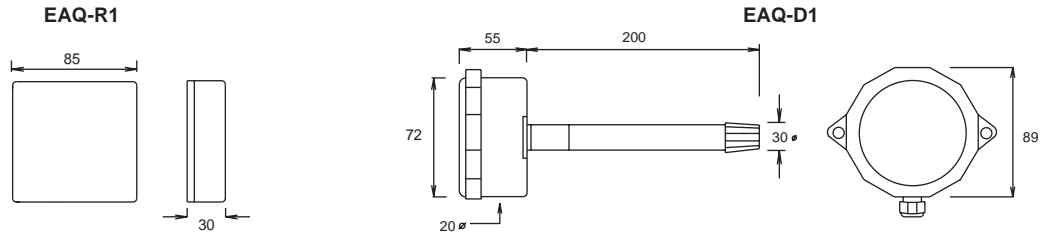
EAQ.. Transmitters should not be used to detect Carbon Dioxide (CO₂). CO₂ transmitters are ideal for use in clean areas ie. theatres, conference rooms. SEE SEPARATE DATA SHEET ON CARBON DIOXIDE TRANSMITTERS.

EAQ-R1
Fits square or round outlet box.

Enclosure Flammability:
EAQ-R1 = UL94-HB
EAQ-D1 = UL94-V0

Type	Mounting	Supply ±15%	Output Signal	Load	Consumption mA	Ambient Temp °C	Accuracy Approx	Enclosure
EAQ-R1	Room	24VAC/DC	0-10vdc	>10 KΩ	<110	0/50	±5%	IP30
EAQ-D1	Duct	24VAC/DC	0-10vdc	>10 KΩ	<110	0/50	±5%	IP65

DIMENSIONS:



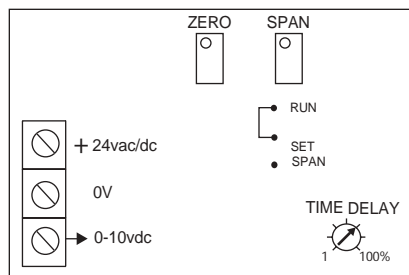
Room transmitters must not be used with excessively oily, dusty, dirty or aggressive media (see duct model). Mount approx 1.6 - 2m high, in an area with **good air movement**. Avoid areas of localised pollution, heat etc.

Install in the return air duct. Avoid ducts where excessive oily, dusty, dirty or aggressive media may be present ie, kitchens. In this case the duct transmitter should be wall mounted inside the kitchen. A filter is fitted to the probe to overcome minor dust, turbulence & velocity problems. Ensure that the filter does not become blocked.

Best results are achieved within controlled media temperatures between approx. 16 - 28°C.

At lower temperatures the output voltage may increase as temperature falls. Media Limits: 0 / +50°C 0-80% RH non-condensing.

WIRING:

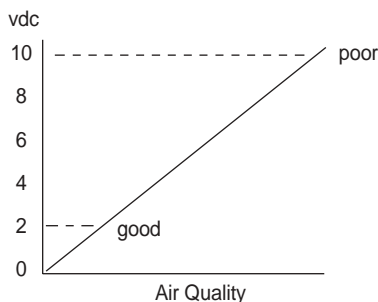


Link RUN for normal operation and 0vdc adjustment.

Link SET SPAN to adjust 8-10vdc.

Turn time delay to min when making adjustments.

OPERATION:



Allow approx 30 minutes for the device to stabilise after switching on. The sensing element will self-clean any dust which may have settled during storage. On initial power up the output will be 10vdc and this will reduce slowly during the self-cleaning process. On-site adjustments are not normally necessary. If any adjustments are required, they should only be carried out after the burn-in period, in clean air and with the time delay set to 0%.

The following adjustments can then be made if necessary:

SPAN - Fit link to SET SPAN & adjust to 8-10V indicating bad air quality.

ZERO - Fit link to RUN and adjust to 0V when clean air is detected.

TIME DELAY - Set to 0% for fast response, 100% for slow response. This overcomes problems if the air quality changes for a short period. The response time will also be affected by air movement, temperature and contamination rates.

The transmitter output should be below 2vdc when little or no contaminant is present in the air ie in periods of low or no occupancy. Dampers can therefore be set to minimum fresh air or to close at approx 2vdc. As the air quality worsens the output signal increases to modulate the dampers to the fresh air position or to fully open at about 8-10vdc.

INSTALLATION:

Terminals 0.5-2.5mm² Min sensor cable size 7/0.2mm Max length 100m. Screened cable is recommended.
The screen should be earthed at controller end only Keep sensor wires away from power cables/units which may cause interference.

CAUTION:

These devices are suitable for low voltage supply only. Device should be checked by a qualified technician before applying any voltage. Isolate device from electrical supply before removing cover. Observe all relevant safety precautions, wiring/earthing regulations and electrical ratings. Observe precautions for handling electrostatic sensitive devices.. Ensure electrical entry hole is completely sealed for all IP65/weatherproof models. Always ensure the device operates correctly. If failure of the device can cause damage a safety backup control should be fitted. All data is for guidance purposes only, subject to change without prior notice and not guaranteed to be absolutely correct unless confirmed by us in writing.

