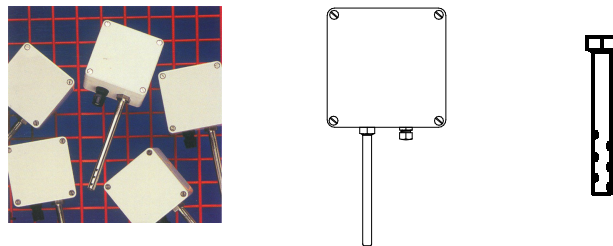# AMBIENT AIR – TEMPERATURE MEASUREMENT

APPLICATION

The measurement of ambient air is required for several industrial, commercial and research organisations. It is used to calculate the start up time/energy demand requirements for energy management systems, the control of laboratory and clean room environments and for frost protection on outside plant.

PROBLEM

Many clients had found that because the location of these devices are often in areas where a considerable amount of human traffic is experienced, this had led to accidental damage or tampering. Conversely, when located in remote positions normal servicing can often be forgotten or not considered to be economical. In these situations it is only when heating/cooling equipment fails to operate in a hot or cold spell, or outside plant freezes up that attention is given to the ambient air temperature sensor.

SOLUTION

The AA ambient air temperature sensor takes these failings into account by using materials of construction suitable for the intended use. The sensor housing is in a small diameter 316 stainless steel sheath with a protective, perforated outer shroud, also in 316 stainless steel. The shroud allows the use of a small diameter sensor housing for faster response to changing conditions, but with good mechanical protection and a reduction in the effect of wind-chill. The terminal case is either in powder coated die-cast aluminium or glass reinforced polyester (GRP), both fully weatherproof to IP65. A cable exit is supplied in the form of a standard M20 cable gland in either a thermoplastic material or brass. The selection of case and gland material is made according to the prevailing environmental conditions or at the discretion of the client. For further information pleases see Data Sheet PDS-067-AA.

BENEFIT

The AA ambient air temperature sensor can be easily fitted to any surface, the mounting hole locations are isolated from the inner housing, so retaining environmental integrity and the case will sustain rough handling without degradation. When fitted with an appropriate temperature transmitter the AA ambient air temperature sensor can provide a standard 4 to 20mA signal output, to connect to a variety of external instrumentation systems, such as chart recorders, data loggers, indicators or controllers. The case and sensor housing is unaffected by most industrial conditions and this device can be located anywhere, with the added confidence that when called upon to provide reliable data it will operate effectively.