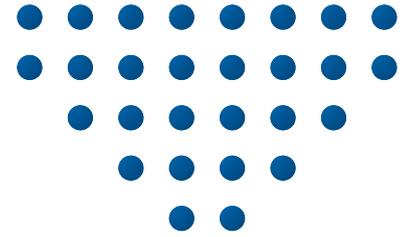ETF

NTC 10k

All-purpose temperature sensors

ETF is a range of temperature sensors de-signed for use in heating, ventilation and cooling systems, etc.

No one temperature sensor satisfactorily meets all needs. The requirements to be met must therefore be carefully considered.

Is temperature to be measured in a swim-ming pool complex, for example, or in an aggressive liquid or flue gas?

All major parameters have been taken into consideration in the design of our ETF sensors, including: measured temperature, mechanical load, corrosion, erosion and re-quired response time.

APPLICATIONS

The ETF range consists of a variety of temperature sensors, each specially designed and engineered to suit its own parti-cular purpose:

ETF-510 is a surface sensor suitable for machine parts.

ETF-910 is a room temperature sensor in classic OJ Electro-nics design.

ETF-1210L2 is a specially designed sensor for measuring temperature in ventilation ducts.

ETF-1210L1 is a 100 mm sensor which, together with ETFL-2 sensor pocket, is ideal for measuring water temperature in piping systems.

ETF-1610 is specially designed for measuring the surface temperature of piping systems.

ETF-1710 has an enclosure rating of IP54 and is specially designed for measuring outdoor temperature.

ETF sensors are designed to provide our customers with an advantageous combination of high quality, accurate measu-rement and low life cycle costs.

CE MARKING

ETF sensors meet the requirements contained in the fol-lowing directive:

MACHINERY DIRECTIVE

89/392/EEC

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taking comfort further

Sensor	Type	Dimensions	Sensor element (NTC 10kΩ@5°C)	Material	Applications
	ETF-510	Ø6.5 mm, L50 mm 2.5 m cable Max. pressure 0.5 atm	NTC 10k +25°C = 10 kΩ Range -50°C-+165°C	Brass	Universal sensor e.g. machine parts Non-aggressive liquids and gases.
	ETF-910	80 x 80 x 16 mm IP20	NTC 10k +25°C = 10 kΩ Range -20°C-+70°C	PVC Colour: white	Measurement of room temperature, for wall mounting. Recommended installation height: 1.70 m above floor.
	ETF-1210L1	Ø6 mm, 100 mm Screw cover: Ø73 mm Seal: PG13.5 IP54	NTC 10k +25°C = 10 kΩ Range -20°C-+80°C	PVC Colour: black	Sensor which, together with ETFL-2 sensor pocket, is ideal for measuring water temperature in piping systems. When used for liquids, ETF-1210L1 must ALWAYS be used together with ETFL-2 sensor pocket.
	ETF-1210L2	Ø6 mm, 200 mm Screw cover: Ø73 mm Seal: PG13.5 Flange: Ø50 mm IP54	NTC 10k +25°C = 10 kΩ Range -20°C-+80°C	PVC Colour: black Flange: PPU	Measurement of duct/air flow temperature in ventilation systems.
	ETF-1610	60 x 30 x 30 mm Max. pipe diam. 50 mm Incl. clamp IP54	NTC 10k +25°C = 10 kΩ Range -20°C-+70°C	Junction box: Polycarbonate Clamp: Stainless steel	Plant and surface sensor, specially designed for measuring the surface temperature of piping systems.
	ETF-1710	55 x 52 x 27 mm IP54	NTC 10k +25°C = 10 kΩ Range -40°C-+70°C	Polycarbonate	Wet environments Outdoors Non-aggressive
	ETFL-2	L = 100 mm Ø = 8 mm ¼" thread	n/a	Brass	Used as a sensor pocket together with ETF-1210L1 in non-aggressive media, e.g. water.

NTC 10k resistance table						
-20°C = 96358Ω	11°C = 19037Ω	16°C = 15056Ω	21°C = 11990Ω	26°C = 9612Ω	35°C = 6535Ω	60°C = 2490Ω
-10°C = 55046Ω	12°C = 18202Ω	17°C = 14414Ω	22°C = 11493Ω	27°C = 9224Ω	40°C = 5330Ω	70°C = 1753Ω
0°C = 32554Ω	13°C = 17368Ω	18°C = 13772Ω	23°C = 10995Ω	28°C = 8835Ω	45°C = 4372Ω	80°C = 1256Ω
5°C = 25339Ω	14°C = 16533Ω	19°C = 13130Ω	24°C = 10498Ω	29°C = 8447Ω	50°C = 3605Ω	90°C = 915Ω
10°C = 19872Ω	15°C = 15698Ω	20°C = 12488Ω	25°C = 10000Ω	30°C = 8059Ω	55°C = 2989Ω	100°C = 677Ω