AKC
WIRELESS THERMAL ACTIVITY MONITORING SYSTEM
Product Datasheet

AKC is a radio-telemetric measuring system serving for wireless collection of temperature data in industrial conditions. It was designed for monitoring possible thermal runaway reactions in radioactive wastes processed by method of bitumenation but similarly it can be used for monitoring other reactive systems with thermal explosion risks in chemical industry.

INSTRUMENT DESCRIPTION

AKC consists of a series of measuring modules with two temperature sensors each, which send data via radio-frequency transmission to a receiver – data logger and to a computer. **AKC** is capable to monitor temperature in several dozens items (drums) simultaneously. AKCS software evaluates temperature detected by the sensors in each drum and compares it statistically with collection of past data and threshold values. Software warns operators when the criteria are exceeded and risk mitigating measures can be applied. **AKC** forms important part of safety systems of several nuclear power plants.

TECHNICAL PARAMETERS

Transmitters

Type of sensors:	PT 100
No. of channels:	2
Temperature range:	-100 to 200 °C / 0 to 300 °C
Resolution:	0.1 °C
Accuracy:	±0.3 °C
Power supplies:	Internal Battery 4 x AA Alkaline
Battery Life:	More than 5 years (at 5-minute transmit interval)

Receiver Logger

Frequency:	Licence exempt UHF. Other frequency bands available including VHF e.g. 173.250 Mhz and 914.500 Mhz
No. of channels:	250 maximum (a channel is the equivalent to a sensor input)
No. of Transmitters:	125 maximum
Memory:	Non-volatile 256k readings is standard, optional expansion up to 2 Mb
Power Supplies:	External: 12V DC at 500 mA Internal: six size AA nickel metal hydride rechargeable cells
Backup Battery Life:	24 hours operation from a full charge

STANDARD INSTRUMENT PARTS

AKC-LOG	Receiver-logger, incl. external power supply
AKC-RTD-2	Transmitters 2 inputs RTD, barell holder, 2 RTD sensors, calibration
AKCS	AKCS software for WXP, evaluation and data acquisition Data acquisition and evaluation unit (notebook computer with this minimum configuration)
Notebook ASUS	or higher: 17" display, 2 GHz processor, 2 GB RAM, DVD-RW, HDD 160 GB, WLAN, BT, LAN, USB, Win XP)