



# Radio Telemetry System STX4+8, SRX4+8, STRX4+8



## FEATURES

- 4 ANALOG AND 8 DIGITAL I/O CHANNELS.
- I/O INCLUDES 4-20mA,0-10V,SWITCH RELAY CONTACTS ETC.
- USES LOW POWER, SYNTHESIZED UHF RADIO.
- FULLY TYPE APPROVED TO MPT1329,ETS300 220.
- DIGITAL ENCODING FOR INTERFERENCE FREE OPERATION.
- NO LICENCE REQUIRED IN UK AND EUROPE.
- OVERSEAS APPROVAL AVAILABLE.
- UNI OR BI-DIRECTIONAL TRANSMISSION.
- MAINS OR BATTERY POWER.
- EXTERNAL TRANSDUCER SUPPLY.
- COMMUNICATIONS WATCHDOG MONITOR.

## DESCRIPTION

The SIGTEL 4 + 8 Radio Telemetry system comprises of an STX 4 + 8 transmitter, an SRX 4 + 8 receiver and a STR 4 + 8 transceiver.

Each unit allows up to four analog and eight digital (on/off contact type) to be transmitted and received using internationally approved UHF radio telemetry bands. Additionally the option of just selecting the analogue or digital interface connections is available with the '04' and '08' versions, which reduces the amount of redundant interface channels for simpler systems.

Analogue inputs are 4-20mA, 0-10V, etc from external sources such as transducers. Digital inputs are any 'volt free' contacts such as switches, relays, etc. Corresponding analog output channels are as above (signal types may be mixed), while equivalent digital outputs are 'volt free' relay contacts or 'open drain' switches.

An unswitched 12 volts DC supply is available for powering external transducers, which can be selected to operate continuously, or on a power saving, timed duty cycle, with an 'ON-time' of 1 or 10 seconds.

The system is fully type approved to MPT1329 and ETS300 220 for use within the UK 458MHz, and European 868MHz, low power radio telemetry bands. Other frequencies, radio options and approvals are available for overseas operation. A license is not required for operating this equipment in the UK, and many other countries.

Power requirements are 115/230VAC or a 12V-battery supply. Using the 'INTERVAL TRANSMISSION' mode can conserve transmitter battery power. In this mode the unit transmits data at pre-determined, user selectable time intervals, chosen to suit the application. An integral battery trickle charger is an available option, together with a battery voltage monitor, which indicates if the transmitter battery voltage falls below 10.5V.

The receiver unit is provided with a 'WatchDog timer' function, which enables the radio communications link to be monitored for activity. If during a certain selectable time interval no activity is detected, an open drain alarm switch is opened to produce an alarm condition. During an alarm condition all outputs are returned to the default settings.

The units are housed in high quality, weatherproof enclosures rated to IP65. Enclosure dimensions are 280 x 200 x 130 mm.

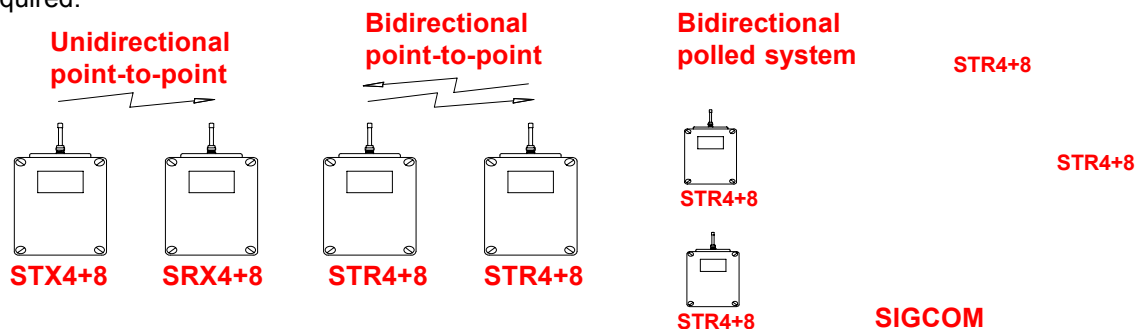
## SPECIFICATION

FREQUENCY RANGES:	400-470MHz - Standard:458.5 – 458.8MHz (UK- low power telemetry band). 868-870MHz (Pan-European ISM telemetry band).
NUMBER OF RF CHANNELS:	8 by onboard switch selection. Up to 112 sequential – serially programmed from PC.
TRANSMITTER POWER:	Standard: 25mW
APPROVAL:	MPT1329 (UK), ETS 300 220 (Europe), contact sales office for overseas approval details.
ANALOG INPUTS:	Up to 4 analog inputs inc.; 0-20mA, 4-20mA, 0-5V, 0-10V, etc.
ANALOG OUTPUTS:	As inputs.
RESOLUTION:	Better than 0.05%FS (12 bit).
DIGITAL INPUTS:	Up to 8 opto-isolated inputs from 'volt free' contacts.
WETTING VOLTAGE:	10Vdc internal
DIGITAL OUTPUTS:	Up to 8 N/O solid state relay contacts, 0-400V, 0.12A max. load.
POWER REQUIREMENTS:	115/230V 50-60Hz or 10.5 to 30Vdc.
CURRENT REQUIREMENT:	13mA in 'Stand-by'
TRANSDUCER SUPPLY:	Unregulated 12VDC.
INTERVAL TRANSMISSION:	Selectable from 0 – 30 minutes.
WATCHDOG TIMER:	0-540 minute, communications link monitor.
LINK FAILURE ALARM:	Open drain switch, 250mA max. load.
USER I.D.:	Switch selectable 8 bit address.
HOUSING:	High impact polycarbonate, rated to IP65.
DIMENSIONS:	280 x 200 x 130 mm.
WEIGHT:	Approximately 2.5Kg
OPERATING TEMPERATURE:	-30°C TO +55°C
STORAGE TEMPERATURE:	-30°C TO +70°C
ANTENNA:	¼wave helical in plastic moulding
RF FEED:	BNC jack plug
CABLE ENTRY:	IP65 Nylon cable gland, for cable diameter 4 to 8mm.
ELECTRICAL CONNECTIONS:	Screw terminal plug and socket, wire size from 0.5 to 1.5mm <sup>2</sup> .

## SYSTEM CONFIGURATION

The 4 + 8 system can be configured as a simple 'one way', 'point-to-point' link using a transmitter and receiver unit or by using two transceiver units, signals can be transmitted in both directions.

For 'master/slave' operation, two or more STR 4 + 8 transmitted 'outstations' may be polled using a 'SIGCOM' base station transceiver, allowing monitoring and logging via a PC. Optional analog/digital I/O modules may be used where discrete signals are required.



## ORDERING INFORMATION

MODEL No.	TYPE	I/O DESCRIPTION
STX4+8	Radio Transmitter	4 analog + 8 digital inputs
SRX4+8	Radio Receiver	4 analog + 8 digital outputs
STR4+8	Radio Transceiver	4 analog + 8 digital inputs or outputs
STX04	Radio Transmitter	4 analog inputs
SRX04	Radio Receiver	4 anaog outputs
STX08	Radio Transmitter	8 digital inputs
SRX08	Radio Receiver	8 digital outputs