

24 Function and IP Transmitter with Shift

SYSTEM PART NUMBER

92324 1 x 20 Function Receiver & 1 x 4 Function Receiver
 1 x 16 Function IP Transmitter with Shift Buttons.
(24 Function in Shift Mode – 8 functions not used)

REPLACEMENT TRANSMITTER

92316TX 16 Function IP Transmitter with Shift Buttons.
(24 Function in Shift Mode – 8 functions not used)

CONTENTS

2 x Receivers
1 x IP Shift Transmitter
1 x Lanyard
1 x Instructions



IP TRANSMITTER SPECIFICATION

SWITCH

Type Tactile Dome on PCB Keypad

BATTERY

Type 4 x AAA Alkaline Manganese in holder (6 Volts)

INDICATOR

2 x Red LED

| | |
|------------------------|--|
| Transmitter Off | The STOP Button has been pressed and released |
| Transmitter Slow Flash | ON and ready for use. The SET Button has been pressed and released |
| Transmitter On | Transmitting. A STOP, SET or FUNCTION Button is being pressed |
| Transmitter Fast Flash | An Indication that the battery will need replacing soon |
| Enclosure Slow Flash | ON and ready for use with Receiver 2. The SET button has been pressed and released |

CURRENT DRAW

| | |
|-----------|---------------|
| Quiescent | 20 micro amps |
| Operating | 25 milliamps |

PROTECTION

| | |
|--------------------|-----------------|
| Reverse polarity | Protected |
| IP Rating | 65 |
| Registration codes | Over 16 million |

PERFORMANCE

| | |
|---------------------------|---|
| Temp Range | -10° C to + 40° C (13° F to + 104° F) |
| Range Nominal as supplied | 60 metres (200 ft) from the Receiver, when driving a momentary output without signal drop out |
| Transmitted power | 1mW Typical |

COMPLIANCE

| | | |
|-------------|----------------|---------------------------|
| EMC | 2004/104/EEC | Exceeds ETSI 300 220 |
| Modulation | FM | |
| Frequencies | 418 MHz F1D | USA |
| | 433.92 MHz F1D | World wide (optional USA) |

RECEIVER SPECIFICATION

SWITCH TYPE

Output Switching MOS Field Effect Transistor (P Channel Power MOSFET)

SUPPLY VOLTS

Nominal 12/24 Volts DC
 Absolute Maximum 40 Volts DC
 Minimum 8 Volts DC
 Output Switch Supply Internal 12/24 Volts

AMPS

FET Rating 15 Amps
 System Rating 15 Amps
 Quiescent Current 25 mA on Standby (Not SET)
 Overload Protection 15 Amps (Auto Shutdown)

AERIAL

Internal Antenna Yes Supplied and fitted
 External Antenna Optional See Accessories

OUTPUTS

Master 1 Can be Parallel or Continuous
 Function 24 20+4
 Master (Secondary) 1 Continuous

CONFIGURATION

RS232 Programming to users' requirements Yes Not all models, see Build Specification Table. For programming interlocks, push/push latch, parallel master inhibit, timeout, channel timeout delay, master on delay, radio button de-latching and output allocation.

PERFORMANCE

Simultaneous Outputs Yes With horizontal interlocks (Interlocks are programmable – see CONFIGURATION above)
 Instant TX response Yes No perceivable delay between TX operation and RX action

DIAGNOSTICS

LED's Yes Confirm 5 Volts, SET, Fault and all Outputs.

PROTECTION

ESR Safety Yes See ESR Safety document.
 Back EMF Yes Diode protected on all outputs
 Registration codes Over 16 million
 STOP Connection Yes Internal Emergency Stop Connection

WIRING

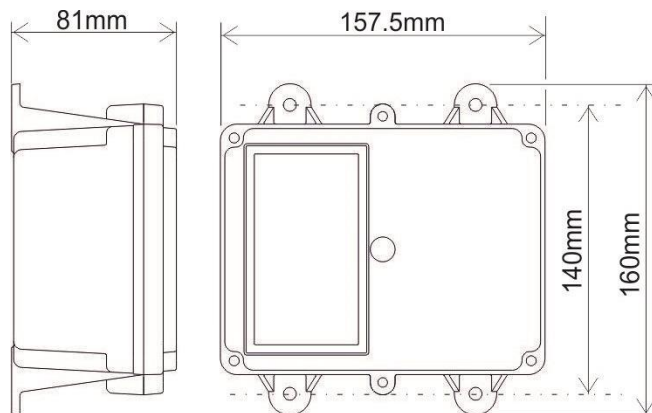
Wiring Loom No Can be supplied as an option
 Cable Gland Yes Supplied – fitted by customer
 Connections Screw terminal into plug and socket on PCB, for easy "swap out"

ENCLOSURE – 20 Function shown

Weight Approx. 0.5 lbs (335gms)
 Lid Clear PVC - to view LEDs
 Base Black PVC
 Breather "Gortex", fitted in the base
 Mounting 4 external lugs
 Fixings 5mm (3/16") not supplied
 IP Rating IP66

ENCLOSURE – 4 Function

This has the same footprint as the 20 function Receiver but is only 53mm deep



| 92 Series | | | 92324 |
|--|-------------------------|---------------------------------|--------------|
| BUILD SPECIFICATION TABLE FOR MODELS IN THIS RANGE | | | |
| Ident | Legend | Connection | |
| | + - | Positive, Negative, | S |
| 1 | M, F1, F2, F3 | Master F1, F2 and F3 | S |
| 1 | F4, F5, F6, F7, F8, F9 | F4, F5, F6, F7, F8, F9 | S |
| 1 | F10, F11, F12, F13, F14 | F10, F11, F12, F13, F14 | S |
| 1 | F16, F17, F18, F19, F20 | F16, F17, F18, F19, F20 | S |
| 2 | F1, F2, F3, F4 | F1 & F2, F3, F4 | S |
| | | | |
| | S+, S- | Safety Solenoid S+ and S- | S |
| | STOP, 0Volts | STOP connections | S |
| | ANT | Internal Antenna | S |
| | | SMA (external antenna) | S |
| LK1 | LK1 | Master - Parallel | C |
| LK2 | LK2 | Master - Continuous | C |
| | RS232 | RS232 | S |
| | | 9863 Antenna with 3 metre cable | 2 |
| | | Number of Receivers | 2 |
| | | Number of Transmitters | 1 |

S = Standard. C = Customer configured (see "Factory Settings").

| | |
|------------------|--|
| + | Positive 12/24 Volt supply |
| - | Negative 0 Volts |
| F1 to F16 | Outputs to F1 through F16 |
| M | Master Output |
| STOP - | STOP, when grounded shuts down the Receiver |
| S+ S- | Master Secondary for Safety solenoid connections etc. |
| ANT | Blade connector for internal antenna |
| SMA | Aerial connection for optional external antenna (internal antenna must be removed) |
| LK1 | Master Selection by Jumper (BA = Continuous & AC = Parallel) |
| LK2 | Connected when using Parallel Master, connects safety circuits |
| Factory Settings | 418MHz configured Parallel, 433.92MHz configured Continuous |
| LK3 | RS232 for interface to access special programmes |

EXPLANATION OF “SHIFT” OPERATIONS - as illustrated with a 20 Function Transmitter.

These “SHIFT” operations can be applied to ALL Transmitters. For example, a 10 function Transmitter will give 20 functions – ideal if you do not want the larger 20 function Transmitter.



To operate 2 x 20 function Receivers, giving 40 functions

This is a standard 20 function Transmitter, modified so that it transmits 20 functions in two different modes.

The Green SET Button is the SHIFT button. Both 20 function Receivers can therefore be operated by one Transmitter.

Press the Green SET Button to turn both Receivers on - it will start in mode One; press it again for mode Two; press it again for mode One, and so on.

Press the Red Stop button to turn both modes off.

Receiver One (functions 1 to 20) is operated with the SHIFT buttons in mode One, indicated when the **Keypad LED** is flashing during operation.

Receiver Two (functions 21 to 40) is operated with the SHIFT buttons in mode Two, indicated when the **Enclosure LED** is flashing during operation.

To register a Transmitter to its TWO Receivers.

Switch OFF or DISCONNECT the power to the Receivers.

Switch ON or Reconnect the power to Receiver ONE, this opens a **10 SECOND** registration window in its processor.

Immediately **PRESS** and **HOLD** the green **SET** button while the registration window is open until the **SET LED** lights (5 seconds), the **SHIFT** function must **NOT** be active.

Receiver TWO, repeat the process but this time **PRESS** and **HOLD** the **SHIFT** button, and **PRESS** and **HOLD** the **SET** button until its **SET LED** lights.

You have now coded the Transmitter to both receivers.