

# 4 Function with Mini Transmitter

## SYSTEM PART NUMBER

**92004** 4 Function Receiver with Master + 4 Function Mini Transmitter

## CONTENTS

- 1 x Receiver
- 1 x Mini Transmitter
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## REPLACEMENT TRANSMITTER

**90004TX** - 2 Function Mini Transmitter

## REPLACEMENT RECEIVER

**9204RX** - 2 Function Standard

## TRANSMITTER SPECIFICATION

### ENCLOSURE

|                |   |
|----------------|---|
| Material       | ABS                                     |
| Switch Type    | Silicone Rubber keypad with carbon pill |
| Functions      | 4                                       |
| Identification | Subsurface printed transmitter label    |

### RF

|                    |  |
|--------------------|--|
| Modulation         | 2-GFSK. Gaussian Frequency Shift Keying                                    |
| Frequency          | 433.050 MHz to 434.790 MHz<br>902.025 MHz– 927.975 MHz                     |
| Channels           | 32   |
| Channel Selection  | Fixed<br>Channel Hopping   |
| Technology         | Hand-held Transmitter  |
| Temperature Range  | --10° C to + 40° C (13° F to + 104° F). Use Lithium for lower temperatures |
| Range              | 45m (150ft)  |
| Registration Codes | Over 16 million  |
| Aerial             | Internal – printed on PCB  |
| Transmitted power  | < 0.4mW Typical  |

### POWER

|                       |                    |
|-----------------------|--------------------|
| Batteries             | 2 x AAA – 3 volts. |
| Quiescent Current     | 5µA                |
| Current Standby (SET) | 2mA                |
| Current Transmitting  | 30mA               |
| RF Radiated Power     | 0dBm               |

### SAFETY & PROTECTION

|                             |          |
|-----------------------------|----------|
| IP Rating                   | 67       |
| Reverse Polarity Protection | Proteted |

### INDICATOR

|            |  |
|------------|--|
| Type       | 1 x Red LED  |
| Off        | Transmitter is OFF and in standby mode   |
| Slow flash | Transmitter is ON and ready for use (The SET Button has been pressed and released) |
| On         | Transmitting (A STOP, SET or Function Button is being pressed)                     |
| Fast flash | Transmitting – Indication that the battery will need replacing soon                |

## COMPLIANCE

|      |  |
|------|--|
| FCC  | FCC CFR 47-part 15.231<br>FCC CFR 47-part 15.109<br>433.050MHz to 434.790MHz<br>FCC CFR 47-part 15.249<br>FCC CFR 47-part 15.109<br>902.025MHz to 927.975MHz                                   |
| IC   | ISED RSS-210 Issue 9<br>ISED RSS-GEN Issue 4<br>ICES-003 Issue 6.<br>433.050MHz to 434.790MHz<br>ISED RSS-210 Issue 9<br>ISED RSS-GEN Issue 5<br>ICES-003 Issue 6.<br>902.025MHz to 927.975MHz |
| RoHS | Directive 2011/65/EU   |

## RECEIVER SPECIFICATION

### ELECTRICAL

|                 |                             |
|-----------------|-----------------------------|
| Voltage Nominal | 12/24V DC                   |
| Voltage Min/Max | 8 to 36V DC                 |
| Switch Type     | MOSFET (Positive Switching) |

### RF

|                   |  |
|-------------------|--|
| Modulation        | 2-GFSK. Gaussian Frequency Shift Keying                |
| Frequency         | 433.050 MHz to 434.790 MHz<br>902.025 MHz– 927.975 MHz |
| Channels          | 32   |
| Channel Selection | Fixed<br>Channel hopping                               |
| Technology        | Fixed Receiver   |
| Temperature Range | -40° C to + 70° C (-40° F to + 158° F)                 |
| Range             | 60m (200ft)  |

### CURRENT CAPACITY

|                     |   |
|---------------------|---|
| FET Rating          | 10A                                     |
| System Rating       | 10A                                     |
| Quiescent Current   | 31mA 12V/ 17mA 24V on Standby (Not SET) |
| Overload Protection | 10A (Auto Shutdown)                     |

### AERIAL

|                  |          |  |
|------------------|----------|--|
| Internal Antenna | Yes      | Supplied and fitted  |
| External Antenna | Optional | AC9860/ AC9861/ AC9862/ AC9863 & AC9869 – order separately |

### OUTPUTS

|          |     |                                |
|----------|-----|--------------------------------|
| Master   | Yes |                                |
| Function | 4   | Supply to Receiver is switched |

### CONFIGURATION

|  |     |  |
|--|-----|--|
| RS232 Programming to users' requirements | Yes | 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 | Programable (Modify through configuration) |
| Instant TX response  | Yes | Programable (Modify through configuration) |

### DIAGNOSTICS

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

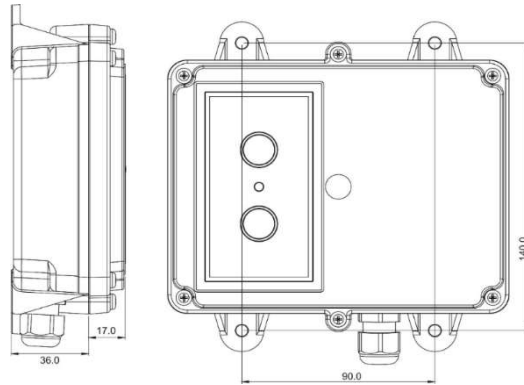
### PROTECTION

|                    |     |                                    |
|--------------------|-----|------------------------------------|
| Back EMF           | Yes | Diode protection on all outputs    |
| Registration codes | Yes | Over 16 million                    |
| STOP Connection    | Yes | Internal Emergency Stop Connection |

### WIRING

|             |     |   |
|-------------|-----|---|
| Wiring Loom | Yes | 3 metres (10ft) supplied and fitted                             |
| Cable Gland | Yes | Supplied and fitted   |
| Connections |     | Screw terminal into plug and socket on PCB, for easy "swap out" |

**ENCLOSURE**



Weight 0.3 lbs (335gms)  
 Lid Clear PC/FR V0 and UV stabilised  
 Base Black PC V0 and UV stabilised  
 Breather Gortex fitted in base  
 Mounting 4 external lugs  
 Fixings 5mm (3/16") not supplied  
 IP Rating IP66

**ACCESSORIES** 9861, 9862, 9863 and 9869 – External Antenna with cable.

| <b>92 Series</b>                                   |           |                               | <b>9200RX</b> | <b>9202RX</b> | <b>9204RX</b> |
|--|-----------|-------------------------------|---------------|---------------|---------------|
| BUILD SPECIFICATION TABLE FOR MODELS IN THIS RANGE |           |                               |               |               |               |
| Ident  | Legend    | Connection                    |               |               |               |
|  | + - F1 F2 | Positive, Negative, F1 and F2 | S             | S             | S             |
|  | F3 F4 M   | F3, F4, and Master            |               | M             | S             |
|  | ST -      | STOP and -                    |               | S             | S             |
|  | S+ S-     | S+ S-                         |               | S             | S             |
|  | ANT       | Internal Antenna              | S             | S             | S             |
|  | SMA       | Connector (external antenna)  |               | S             | S             |
| LK1  | P         | Master - Parallel             |               | C             | C             |
| LK2  | C         | Master – Continuous           |               | C             | C             |
| LK3  | RS232     | RS232                         |               | S             | S             |
|  |           | 3 metres 4 core               | S             |               |               |
|  |           | 3 metres 7 core               |               | S             | S             |
|  |           | 9801 Lo-Cover                 |               |               |               |

S = Standard. M = Standard but Master only connected. C = Customer configured (see "Factory Settings").

+ Positive 8-36V supply  
 - Negative 0 Volts  
 F1 to F4 Outputs to F1 through F4  
 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 (Parallel)  
 LK2 Master Selection by Jumper (Continuous)  
 Factory Settings 418/915MHz configured Parallel, 433.92MHz configured Continuous  
 RS232 RS232 for Wired Remote and interface to access special programmes

**COMPLIANCE**

|              |   |
|--------------|---|
| REG 10       | EC Type-approval mark E11 037601<br>EC Type-approval No: e11/72/245*2009/19*7601*00   |
| FCC          | FCC CFR 47 Part 15.109<br>433.050MHz to 434.790MHz<br>FCC CFR 47 Part 15.109<br>902.025MHz to 927.975MHz  |
| IC           | ICES-003 Issue 6.<br>433.050MHz to 434.790MHz<br>ICES-003 Issue 6.<br>902.025MHz to 927.975MHz  |
| CE           | RED Directive<br>ETSI EN 300 220-2 v3.2.<br>ETSI EN 300 220-1 v3.1.1.<br>ETSI EN 301 489-17 V3.1.1,<br>ETSI EN 301 489-1 V2.1.1<br>433.050MHz to 434.790MHz |
| Australia/NZ | ETSI EN 300 220-2 v3.2.1<br>ETSI EN 301 489-1 V2.1.1<br>433.050MHz to 434.790MHz<br>915.025MHz to 927.975MHz  |
| RoHS         | Directive 2011/65/EU  |