# 96204 – AC 2 Function & IP Transmitter

**96 Series** – **AC Relay System (No Master)**

### SYSTEM PART NUMBER
**96204**          2 Function Receiver + 2 Function IP Transmitter

### REPLACEMENT TRANSMITTER
**92204TX**          2 Function IP Transmitter

## IP TRANSMITTER SPECIFICATION

### SWITCH
Type                     Tactile Dome on PCB Keypad

### BATTERY
Type                     4 x AAA Alkaline Manganese in holder (6volts)

### CURRENT DRAW
Quiescent                15 micro amps
Operating                20 milliamps

### PROTECTION
Reverse polarity         Protected
IP Rating                55
Registration codes       Over 16 million

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

### COMPLIANCE
EMC                      Exceeds ETSI 300 220.      Compliant E11 10R-037601
Modulation               FM
Frequencies              418.00 MHz F1D             USA (optional UK)
                         433.92 MHz F1D             World wide (optional USA)

# RECEIVER SPECIFICATION

## SWITCH TYPE
| | |
|---|---|
| Output Switching | HF118F Miniature High Power Relay |
| Max. Switching Current | 10 amps at 250VAC |
| Max. Switching Power | 2500VA |
| Max. Switching Volts | 250 VAC Nominal |
| Min. Switching Volts | 48 VAC (below this the Safety Circuits will switch off the Receiver |

## SUPPLY VOLTS
| | |
|---|---|
| Nominal | 90/264 VAC |

## AMPS
| | |
|---|---|
| Quiescent Current | 25 mA on Standby (Not SET) |

## AERIAL
| | | |
|---|---|---|
| Internal Antenna | Yes | Supplied and fitted |
| External Antenna | Optional | Receiver must be ordered with SMA connector (see Accessories Part 9010). |

## OUTPUTS
| | | |
|---|---|---|
| Master | 1 | Can be Parallel or Continuous. Not all models – see Build Specification Table |
| Functions | 4 | |

## CONFIGURATION
| | | |
|---|---|---|
| RS232 programming | Optional | Receiver must be ordered with RS232 connector (see Accessories Part 9011) for programming to user requirements; interlocks, push/push latch, parallel master inhibit, timeout, channel timeout delay, master output delay etc. |

## 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
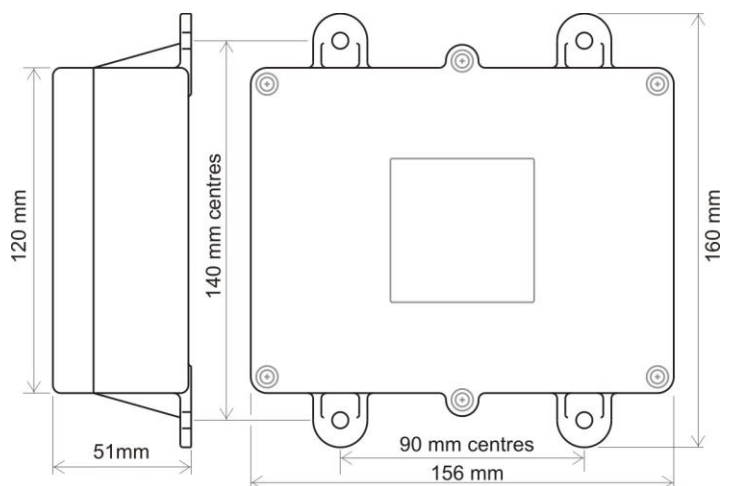| | | |
|---|---|---|
| ESR Safety | Yes | See ESR Safety document. |
| Back EMF | Yes | Diode protected on all outputs |
| Registration codes | Yes | Over 16 million |
| STOP Connection | Optional | External Emergency STOP connector (see Accessories Part 9011). |

## WIRING
| | | |
|---|---|---|
| Wiring Loom | No | |
| Cable Gland | Yes | Supplied and fitted |
| Connections | Yes | Screw terminal into plug and socket on PCB, for easy "swap out" |

## ENCLOSURE
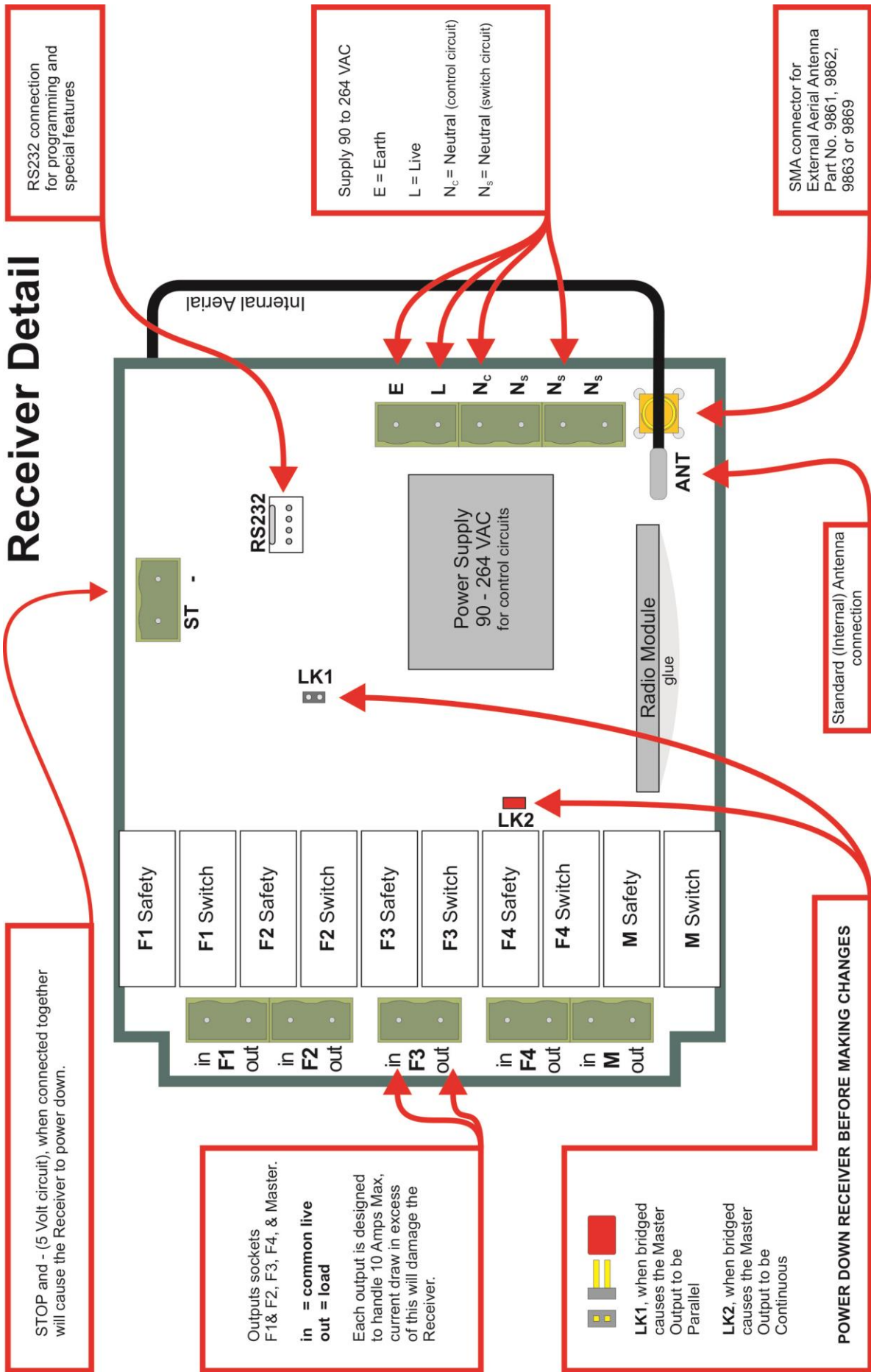| | |
|---|---|
| Weight | 0.3 lbs (335gms) |
| Lid | Black PVC |
| Base | Black PVC |
| Breather | Gortex fitted in base |
| Mounting | 4 external lugs |
| Fixings | 5mm (3/16") not supplied |
| IP Rating | Performs to IP67 standard (0.5 metre water for 1 hour) |



## ACCESSORIES
9861, 9862, 9863 and 9869 – External Antenna with cable.
9010 – SMA Connector, for external aerial
9011 – ST, S+ & S- connector and RS232 connector

| 96 Series | | | 96000 | 96002 | 96004 | 96200 | 96202 | 96204 |
|---|---|---|---|---|---|---|---|---|
| BUILD SPECIFICATION TABLE FOR MODELS IN THIS RANGE | | | | | | | | |
| Ident | Legend | Connection | | | | | | |
| | E | Earth | S | S | S | **S** | S | S |
| | L | Live | S | S | S | **S** | S | S |
| | N | Neutral | S | S | S | **S** | S | S |
| | F1 & F2 | Outputs to F1 & F2 (IN & OUT) | S | S | S | **S** | S | S |
| | F3 & F4 | Outputs to F3 & F4 (IN & OUT) | | | S | | | S |
| | M | Master Output | | S | S | | S | S |
| | S- | Stop Circuit (5 Volts DC) | | S | S | **S** | S | S |
| | ANT | Internal Antenna | S | S | S | **S** | S | S |
| | SMA | Connector for External Antenna | | S | S | | S | S |
| LK1 | | Master Parallel | | C | C | | C | C |
| LK2 | | Master Continuous | | C | C | | C | C |
| RS232 | | RS232 | | S | S | | S | S |

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

| | |
|---|---|
| E | Earth |
| - | Live 90-264 VAC |
| F1, F2, F3, F4 | Outputs F1 to F4 |
| M | Master Output |
| | |
| ST | STOP - grounding shuts down the Receiver |
| ANT | Blade Connector for Internal Antenna |
| SMA | Aerial Connection for External Antenna (Internal Antenna must be removed) |
| | |
| LK1 | Jumper fitted to this link for Continuous Master |
| LK2 | Jumper fitted to this link for Parallel Master |
| Factory Settings | 418MHz configured Parallel, 433.92MHz configured Continuous |
| RS232 | RS232 for interface with other RS232 modules and special programming |

# Receiver Detail

RS232 connection for programming and special features

Supply 90 to 264 VAC

E = Earth

L = Live

$N_c$ = Neutral (control circuit)

$N_s$ = Neutral (switch circuit)

SMA connector for External Aerial Antenna Part No. 9861, 9862, 9863 or 9869

Internal Aerial

E    L    $N_c$    $N_s$    $N_s$    $N_s$

ANT

RS232

ST  -

Power Supply 90 - 264 VAC for control circuits

Radio Module
glue

LK1

LK2

Standard (Internal) Antenna connection

STOP and - (5 Volt circuit), when connected together will cause the Receiver to power down.

F1 Safety

F1 Switch

F2 Safety

F2 Switch

F3 Safety

F3 Switch

F4 Safety

F4 Switch

M Safety

M Switch

in **F1** out

in **F2** out

in **F3** out

in **F4** out

in **M** out

Outputs sockets F1& F2, F3, F4, & Master.

**in  = common live**
**out = load**

Each output is designed to handle 10 Amps Max, current draw in excess of this will damage the Receiver.

**LK1**, when bridged causes the Master Output to be Parallel

**LK2**, when bridged causes the Master Output to be Continuous

**POWER DOWN RECEIVER BEFORE MAKING CHANGES**