

# 1 Function with Standard Transmitter - Narrow Band

## 93 Series - FET Systems

### SYSTEM PART NUMBER

**93101** 2 Function Receiver + 1 Function Narrow Band Standard Transmitter

### REPLACEMENT TRANSMITTER

**93101TX** 1 Function Narrow Band Standard Transmitter

### CONTENTS

1 x Receiver  
1 x Standard Transmitter  
1 x Lanyard  
1 x LoCover  
1 x Instructions



## NARROW BAND STANDARD TRANSMITTER SPECIFICATION

### SWITCH

Type Tactile Dome

### BATTERY

Type 9V Alkaline Manganese (GP 1604A – JIS 6LF22 – IEC 6LF22 – Eveready 522 – Duracell MN1604)

### CURRENT DRAW

Quiescent 15 micro amps  
Operating 25 milliamps

### PROTECTION

Reverse polarity Protected  
IP Rating 55  
Registration codes Over 16 million

### PERFORMANCE

Temp Range -10° C to + 40° C (13° F to + 104° F)  
Range Nominal 300 metres (1000 ft) from the Receiver, when driving a momentary output without signal drop out  
Transmitted power 10 mW Typical

### COMPLIANCE

EMC Exceeds ETSI 300 220 Compliant E11 10R-037601  
Modulation FM  
Frequency Band 434 MHz Band 15 Frequencies

**RECEIVER SPECIFICATION**

**SWITCH TYPE**

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

**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    (connected before a "SET")  
 Overload Protection              15 Amps (Auto Shutdown)

**AERIAL**

Internal Antenna                    Yes        Supplied and fitted  
 External Antenna                 Optional See Accessories.

**OUTPUTS**

Function 1                            Momentary  
 Function 2                            Latching

**CONFIGURATION**

RS232 Programming                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                        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        Confirms 5 Volts, SET, Fault and all Outputs.

**PROTECTION**

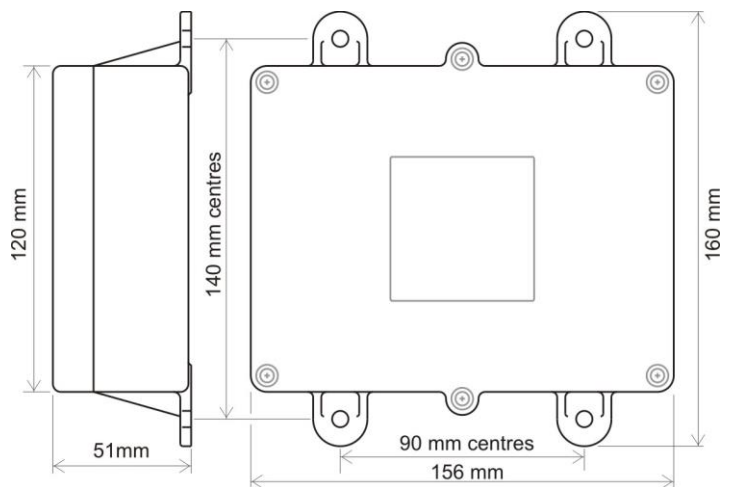
ESR Safety                            Yes        See ESR Safety document.  
 Back EMF                            Yes        Diode protected on all outputs  
 Registration codes                Over 16 million (2<sup>16</sup>)  
 STOP Connection                 Yes        Not all models, see Build Specification Table.

**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 PVC to view LEDs  
 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.

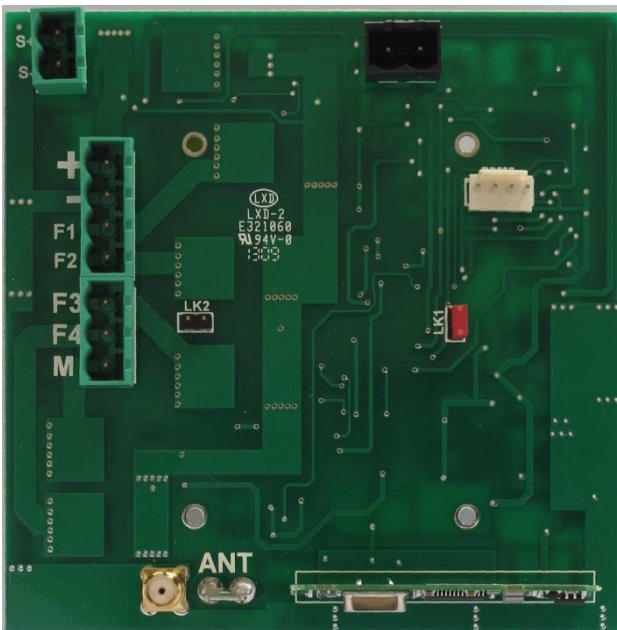
93 Series			93 0 00/1	93 0 02	93 0 04	93 1 00	93 1 02	93 1 04
BUILD SPECIFICATION TABLE FOR MODELS IN THIS RANGE								
Ident	Legend	Connection						
	+ - F1 F2	Positive, Negative, F1 and F2	S	S	S	S	S	S
	F3 F4 M	F3, F4, and Master		M	S		M	S
	ST -	STOP and -		S	S		S	S
	S+ S-	S+ S-		S	S		S	S
	ANT	Internal Antenna	S	S	S	S	S	S
	SMA	Connector (external antenna)		S	S		S	S
LK1	P	Master - Parallel		C	C		C	C
LK2	C	Master – Continuous		C	C		C	C
LK3	RS232	RS232		S	S		S	S
		3 metres 4 core	S			S	S	
		3 metres 7 core		S	S			S
LK3		RS232		S	S		S	S

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

- + Positive 12/24 Volt supply
- Negative 0 Volts
- F1, F2, F3 & 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 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
- LK3 RS232 for interface to access special programmes  
Also for connection to RS232 modules

### PCB – Not to scale

Connector Side



Component Side

