

2 Function with Mini Transmitter - Narrow Band

93 Series - FET System

SYSTEM PART NUMBERS

93002 2 Function Receiver with Master + 2 Function Narrow Band Mini Transmitter

SPECIAL ORDER

93003 3 Function Receiver + 4 Function Narrow Band Mini Transmitter

REPLACEMENT TRANSMITTERS

93002TX 2 Function Narrow Band Mini Transmitter

93004TX 4 Function Narrow Band Mini Transmitter

CONTENTS

1 x Receiver
1 x Mini Transmitter
1 x Lanyard
1 x Instructions



MINI TRANSMITTER SPECIFICATION

SWITCH

Type Rubber membrane with carbon contact

BATTERY

Type 3 Volts (2 x AAA)

CURRENT DRAW

Quiescent 4 micro amps
Operating 20 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 150 metres (500 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 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. Not all models – see Build Specification Table.
 Function 2
 Master (Secondary) 1 Continuous. Not all models, see Build Specification Table.

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

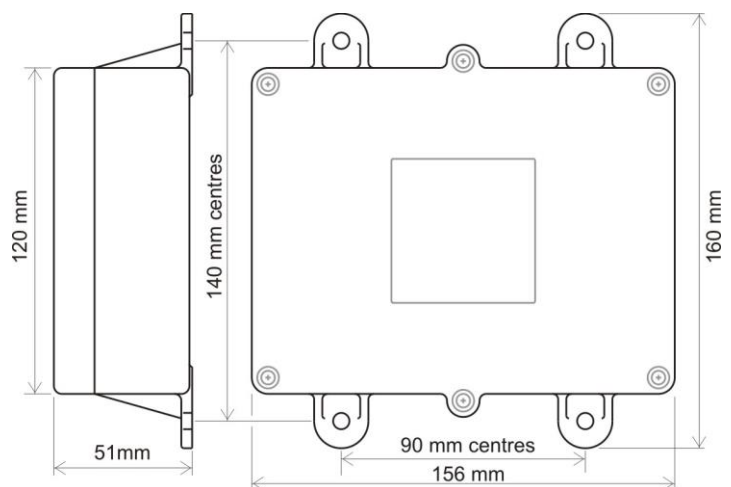
ESR Safety Yes See ESR Safety document.
 Back EMF Yes Diode protected on all outputs
 Registration codes Yes Over 16 million
 STOP Connection Yes Internal Emergency Stop Connection. Not all models, see Build Specification Table.

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	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").

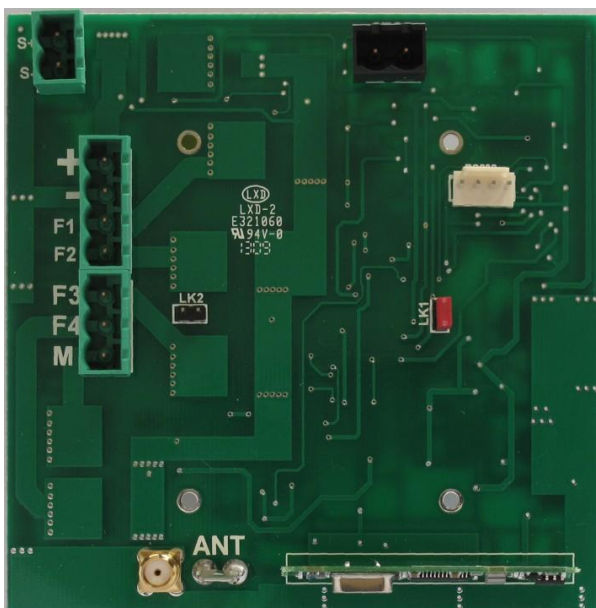
- + Positive 12/24 Volt supply
- Negative 0 Volts
- F1, F2, F3 & F4 Outputs to F1 through F4
- M Master Output

- 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

Photo of PCB

Connector Side



Component Side

