

93 Series - FET Systems - FM - 4 Function with Narrow Band Standard Transmitter

SYSTEM PART NUMBERS

93 1 04 4 Function Receiver with Master + 4 Function Narrow Band Standard Transmitter

SPECIAL ORDER

93 1 03 3 Function Receiver + 4 Function Narrow Band Standard Transmitter
 93 1 05 5 Function Receiver + 6 Function Narrow Band Standard Transmitter

REPLACEMENT TRANSMITTERS

93 1 04TX 4 Function Narrow Band Standard Transmitter
 93 1 06TX 6 Function Narrow Band Standard Transmitter



<u>SYSTEM CONTENTS</u>	
1 x	Standard Transmitter
1 x	Lo-Cover
1 x	Lanyard
1 x	Receiver with Wiring Harness and Glands
1 x	Instructions

NARROW BAND STANDARD TRANSMITTER SPECIFICATION

SWITCH

Type Tactile Dome

POWER

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

AMPS

Quiescent 15 micro amps
 Operating 25 milliamps

PROTECTION

Reverse polarity Protected
 IP Rating 55
 Conformal coating No
 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
 Modulation FM
 Frequency Band 434 MHz Band 15 Frequencies

RECEIVER SPECIFICATION

SWITCH

Type MOS Field Effect Transistor (P Channel Power MOSFET)

VOLTS

Nominal 12/24 Volts DC
 Absolute Maximum 40 Volts DC
 Minimum 8 Volts DC

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 4 Supply to Receiver is switched
 Master 1 Parallel or Continuous.
 Master (Secondary) 1 Continuous.

CONFIGURATION

RS232 Programming Yes

PERFORMANCE

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

DIAGNOSTICS

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

PROTECTION

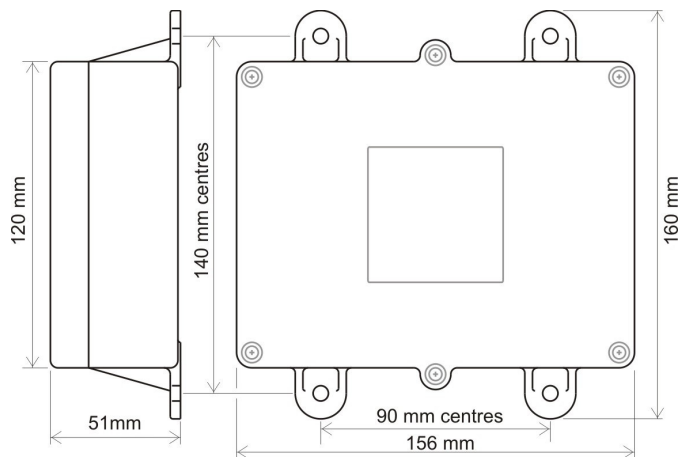
ESR Safety Yes See ESR Safety document.
 Reverse Polarity Yes Protected (with provisions)
 Back EMF Yes Diode protected on all outputs
 Conformal Coating Yes
 Registration codes Over 16 million (2¹⁶)
 STOP Connection Yes Not all models, see Build Specification Table.

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 Smoke 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

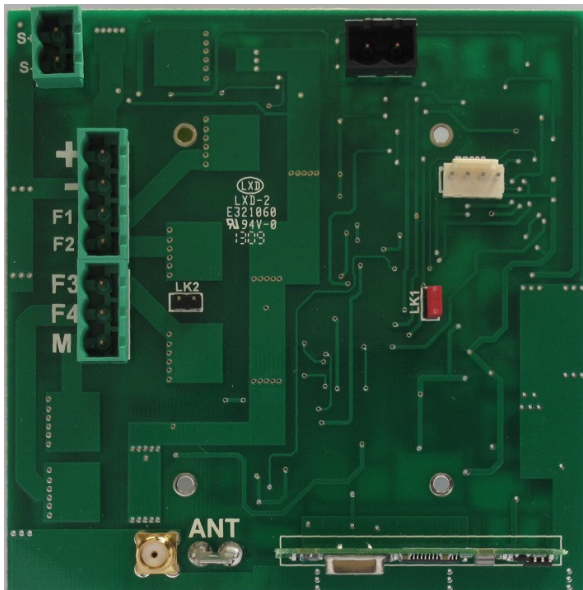
S = Standard. M = Standard but Master only connected. C = Customer configured (see "Factory Settings").

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

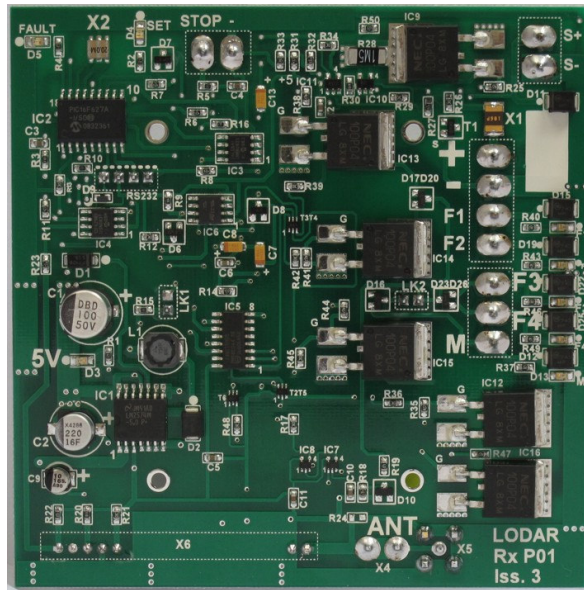
- STOP - STOP, when grounded shuts down the Receiver
- S+ S- Master Secondary for Safety solenoid connections etc.
- ANT Blade connector for internal antenna
- SMA Aerial connection for optional external antenna (internal antenna must be removed)

- 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

PCB – Not to scale



Connector Side



Component Side