

# 93 Series - FET Systems - FM - 6 Function with Narrow Band Standard Transmitter

## SYSTEM PART NUMBERS

93 1 06      6 Function Receiver      with Master      + 6 Function Narrow Band Standard Transmitter

## REPLACEMENT TRANSMITTERS

93 1 06TX      6 Function      Narrow Band Standard Transmitter



### SYSTEM CONTENTS

- 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

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 Parallel or Continuous  
 Function 6  
 Master (Secondary) 1 Continuous

### CONFIGURATION

RS232 Programming to users requirements Yes

### 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

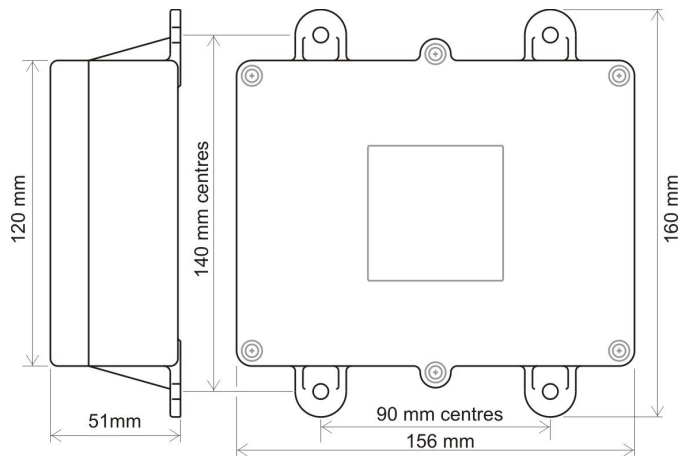
ESR Safety Yes See ESR Safety document.  
 Reverse Polarity Yes Protected (with provisions)  
 Back EMF Yes Diode protected on all outputs  
 Conformal Coating Yes  
 Registration codes Over 16 million  
 STOP Connection Yes Internal Emergency Stop Connection

### 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 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 1 06
BUILD SPECIFICATION TABLE FOR MODELS IN THIS RANGE			
Ident	Legend	Connection	
	+ - F1 F2	Positive, Negative, F1 and F2	S
	F3 F4 F5 F6 M	F3, F4, F5, F6 and Master	S
	ST -	STOP and -	S
	S+ S-	S+ S-	S
	ANT	Internal Antenna	S
X5		SMA Connector (external antenna)	S
LK1	P	Master - Parallel	C
LK2	C	Master – Continuous	C
LK3	RS232	RS232	S
		3 metres 2 core	S
		3 metres 7 core	S
		9804 Lo-Cover	S
		9802 Lo-Cover	

S = Standard. C = Customer configured (see "Factory Settings").

+  
-  
F1, F2, F3, F4, F5 & F6  
M

Positive 12/24 Volt supply  
Negative 0 Volts  
Outputs to F1 through F6  
Master Output

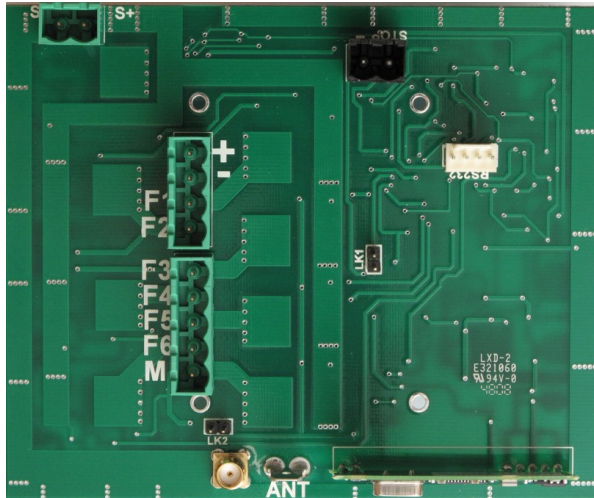
STOP -  
S+ S-  
ANT  
SMA

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

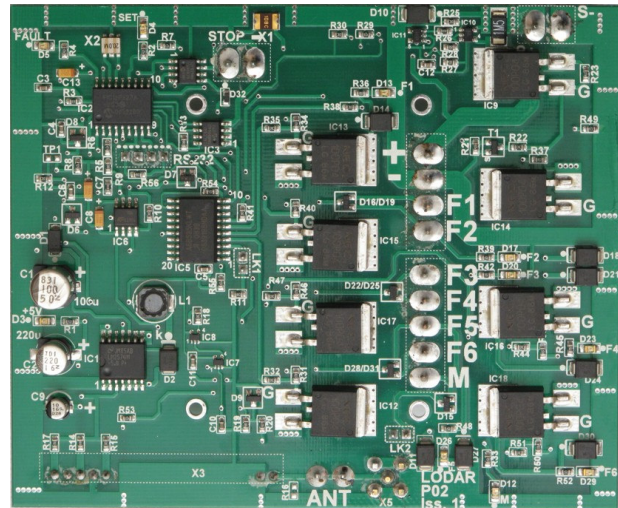
LK1  
LK2  
Factory Settings  
LK3

Jumper fitted to this link for continuous Master  
Jumper fitted to this link for parallel Master  
USA configured Parallel, Rest of the world configured Continuous  
RS232 for interface to access special programmes  
Also for connection to RS232 modules

PCB – Not to scale



Connector Side



Component Side