

93 Series - FET Systems - FM - 4 Function with IP Transmitter

SYSTEM PART NUMBERS

93 2 04 4 Function Receiver with Master + 4 Function IP Narrow Band Transmitter

SPECIAL ORDER

93 2 03 3 Function Receiver no Master + 4 Function IP Narrow Band Transmitter

93 2 05 5 Function Receiver no Master + 6 Function IP Narrow Band Transmitter

REPLACEMENT TRANSMITTERS

93 2 04TX 4 Function IP Narrow Band Transmitter

93 2 06TX 6 Function IP Narrow Band Transmitter



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

IP TRANSMITTER SPECIFICATION

SWITCH - Type	Tactile Dome on PCB Keypad	
Battery - Type	4 x AAA Alkaline Manganese in holder (6 Volts)	
INDICATOR		
Type	1 x Red LED	
Off	Transmitter OFF (The STOP Button has been pressed and released)	
Slow flash	Transmitter ON and ready for use (The SET Button has been pressed and released)	
On	Transmitting (A STOP, SET or Function Button is being pressed)	
Fast flash	Transmitting – Indication that the battery will need replacing soon	
Current Drawn		
Quiescent	15 micro amps	
Operating	24 milliamps	
PROTECTION		
Reverse polarity	Protected	
IP Rating	67	
Conformal coating	No	
Registration codes	Over 16 million	
PERFORMANCE		
Temp Range	-10° C to + 40° C (13° F to + 104° F)	
Range Nominal as supplied	300 metres (1000 ft) from the Receiver, when driving a momentary output without signal drop out	
Transmitted power	10mW Typical	
COMPLIANCE		
EMC	2004/104/EEC	Exceeds ETSI 300 220
Modulation	FM	
Frequencies	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 25mA 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. Not all models - see Build Specification Table.
 Function 4
 Master (Secondary) 1 Continuous. Not all models - see Build Specification Table.

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

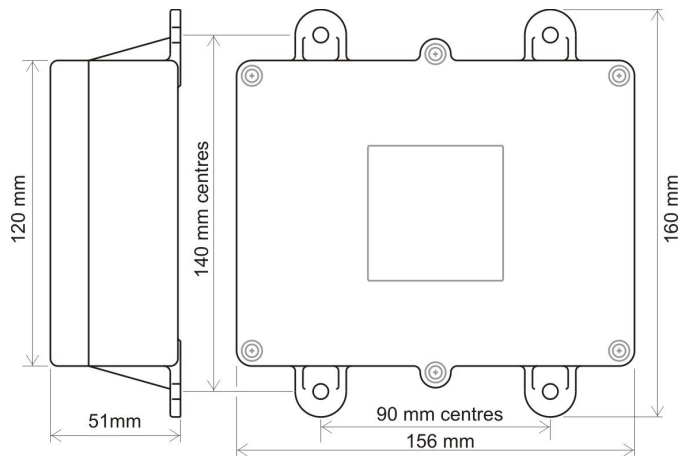
ESR Safety Yes See ESR Safety document.
 Reverse Polarity Yes Protected (with provisions)
 Back EMF Yes Diode protected on all outputs
 Conformal Coating Yes
 Registration codes Over 16 million
 STOP Connection Yes Internal Emergency Stop Connection, Not all models, see Build Specification Table.

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 2 00	93 2 02	93 2 03	93 2 04	93 5 05
BUILD SPECIFICATION TABLE FOR MODELS IN THIS RANGE							
Ident	Legend	Connection					
	+ - F1 F2	Positive, Negative, F1 and F2	S	S	S	S	S
	F3 F4 M	F3, F4, and Master		M	F3	S	S
	ST -	STOP and -		S	S	S	S
	S+ S-	S+ S-		S	S	S	S
	ANT	Internal Antenna	S	S	S	S	S
	SMA	Connector (external antenna)		S	S	S	S
LK1	P	Master - Parallel		C		C	
LK2	C	Master – Continuous		C		C	
LK3	RS232	RS232		S	S	S	S
		3 metres 4 core	S				
		3 metres 7 core		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

