

# 2 Function + Keypad with IP Transmitter – Narrow Band

## 93 Series - FET System

### SYSTEM PART NUMBER

**93202K** 2 Function Receiver + Keypad with Master + 2 Function IP Narrow Band Transmitter

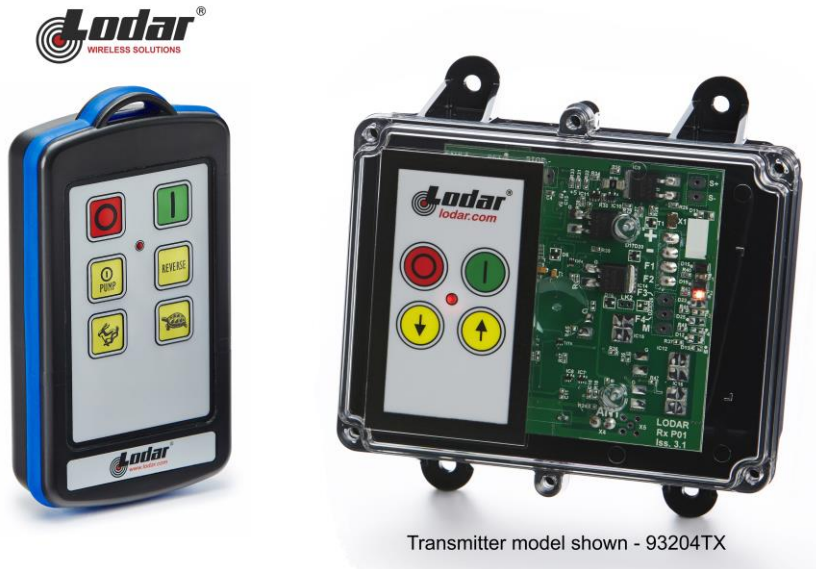
### SPECIAL ORDER

**93203K** 3 Function Receiver + Keypad, no Master + 4 Function IP Narrow Band Transmitter

### REPLACEMENT TRANSMITTERS

**93202TX** 2 Function IP Narrow Band Transmitter

**93204TX** 4 Function IP Narrow Band Transmitter



Transmitter model shown - 93204TX

### CONTENTS

- 1 x Receiver + Keypad
- 1 x IP Transmitter
- 1 x Lanyard
- 1 x LoCover
- 1 x Instructions

### IP TRANSMITTER SPECIFICATION

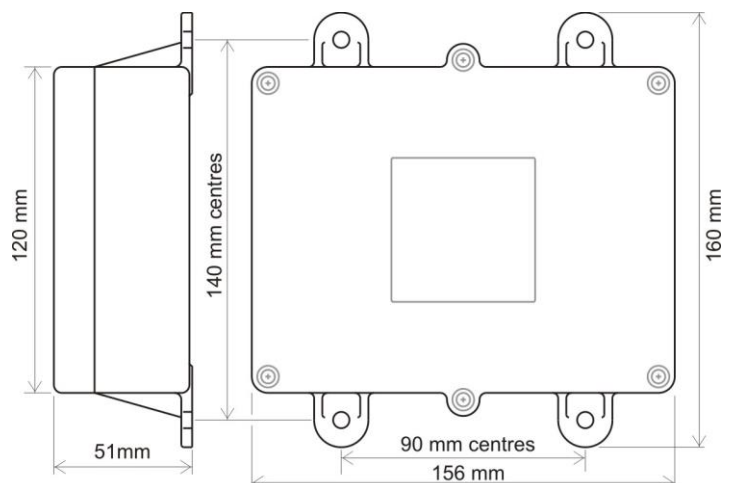
<b>SWITCH</b> - Type	Tactile Dome on PCB Keypad
<b>BATTERY</b> - Type	4 x AAA Alkaline Manganese in holder (6 Volts)
<b>INDICATOR</b>	
Type	1 x Red LED
Off	Transmitter OFF (The STOP Button has been pressed and released)
Slow flash	Transmitter ON and ready for use (The SET Button has been pressed and released)
On	Transmitting (A STOP, SET or Function Button is being pressed)
Fast flash	Transmitting – Indication that the battery will need replacing soon
<b>CURRENT DRAW</b>	
Quiescent	15 micro amps
Operating	24 milliamps
<b>PROTECTION</b>	
Reverse polarity	Protected
IP Rating	67
Registration codes	Over 16 million
<b>PERFORMANCE</b>	
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
<b>COMPLIANCE</b>	
EMC	2004/104/EEC Exceeds ETSI 300 220 Compliant E11 10R-037601
Modulation	FM
Frequencies	434 MHz Band, 15 Frequencies

## RECEIVER SPECIFICATION

<b>KEYPAD</b>		Works independently from the Transmitter
Back up Control		Security coding available as an option
<b>SWITCH TYPE</b>		
Output Switching		MOS Field Effect Transistor (P Channel Power MOSFET)
<b>SUPPLY VOLTS</b>		
Nominal		12/24 Volts DC
Absolute Maximum		40 Volts DC
Minimum		8 Volts DC
Output Switch Supply		Internal 12/24 Volts
<b>AMPS</b>		
FET Rating		15 Amps
System Rating		15 Amps
Quiescent Current		25mA on Standby (Not SET)
Overload Protection		15 Amps (Auto Shutdown)
<b>AERIAL</b>		
Internal Antenna	Yes	Supplied and fitted
External Antenna	Optional	See Accessories.
<b>OUTPUTS</b>		
Master Function	1	Can be Parallel or Continuous. Not all models – see Build Specification Table.
Master (Secondary)	2/3	
	1	Continuous. Not all models, see Build Specification Table.
<b>CONFIGURATION</b>		
RS232 Programming to user's 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.
<b>PERFORMANCE</b>		
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
<b>DIAGNOSTICS</b>		
LED's	Yes	Confirm 5 Volts, SET, Fault and all Outputs.
<b>PROTECTION</b>		
ESR Safety	Yes	See ESR Safety document.
Back EMF	Yes	Diode protected on all outputs
Registration codes		Over 16 million
STOP Connection	Yes	Internal Emergency Stop Connection, not all models, see Build Specification Table.
<b>WIRING</b>		
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.

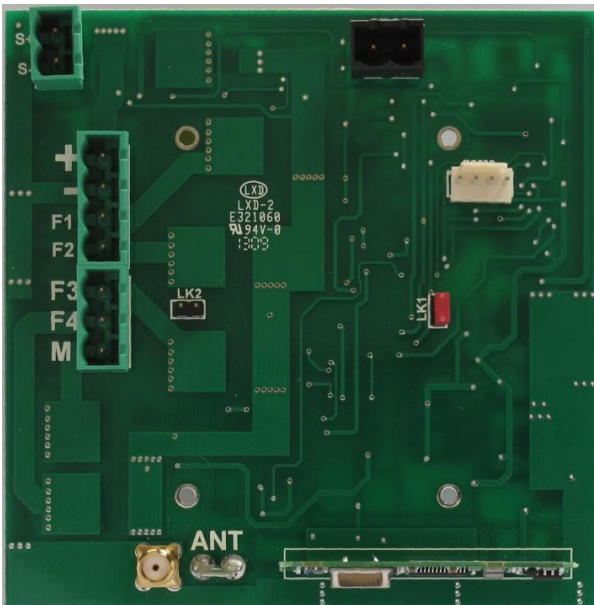
<b>93 Series</b>			<b>93 2 00</b>	<b>93 2 02</b>	<b>93 2 03</b>	<b>93 2 04</b>	<b>93 5 05</b>
BUILD SPECIFICATION TABLE FOR MODELS IN THIS RANGE							
Ident	Legend	Connection					
	+ - F1 F2	Positive, Negative, F1 and F2	S	S	S	S	S
	F3 F4 M	F3, F4, and Master		M	F3	S	S
	ST -	STOP and -		S	S	S	S
	S+ S-	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

Connector Side



Component Side

