

## 2 Function with Standard Transmitter

### SYSTEM PART NUMBER

**92150** 2 Function Receiver (Complete With Relevant Air Valves and Cylinder)  
+ 2 Function Standard Transmitter. No Master



### CONTENTS

1 x Receiver  
1 x Standard Transmitter  
1 x Lanyard  
1 x Cover  
1 x Instructions  
1 x Air Valve  
1 x Pneumatic Cylinder

### REPLACEMENT TRANSMITTER

**92102TX** - 2 Function Standard Transmitter

### REPLACEMENT RECEIVER

**9250RX** - 2 Function Receiver – No Master

### TRANSMITTER SPECIFICATION

#### ENCLOSURE

Material Glass reinforced Nylon  
Switch Type 12mm Dome Switch  
Functions 2  
Identification Pockets for printed text or image insertion

#### RF

Modulation 2-GFSK. Gaussian Frequency Shift Keying  
Frequency 433.050 MHz to 434.790 MHz  
Channels 1  
Channel Selection Fixed  
Technology Hand-held Transmitter  
Temperature Range  $-10^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$  ( $13^{\circ}\text{F}$  to  $+104^{\circ}\text{F}$ ). Use Lithium for lower temperatures  
Range 60m (200ft)  
Aerial Internal – printed on PCB  
Transmitted power 1mW Typical

#### POWER

Batteries 1x 9V Alkaline Manganese  
Quiescent Current  $15\mu\text{A}$   
Current Transmitting 20mA

#### PROTECTION

IP Rating 55  
Registration codes Over 16 million

#### INDICATOR

Type 1 x Red LED  
Off Transmitter is OFF and in standby mode  
Slow flash Transmitter is 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

#### COMPLIANCE

FCC FCC CFR 47-part 15.231  
433.9MHz

IC ISED RSS-210 Issue 8  
433.9MHz

RoHS Directive 2011/65/EU

## RECEIVER SPECIFICATION

### ELECTRICAL

Voltage Nominal	12/24V DC
Voltage Min/Max	8 to 36V DC
Switch Type	MOSFET (Positive Switching)

### RF

Modulation	2-GFSK. Gaussian Frequency Shift Keying
Frequency	433.050 MHz to 434.790 MHz 902.025 MHz– 927.975 MHz
Channels	32
Channel Selection	Fixed Channel hopping
Technology	Fixed Receiver
Temperature Range	-40 <sup>o</sup> C to + 70 <sup>o</sup> C (-40 <sup>o</sup> F to + 158 <sup>o</sup> F)
Range	60m (200ft)

### CURRENT CAPACITY

FET Rating	10A
System Rating	10A
Quiescent Current	31mA 12V/ 17mA 24V on Standby (Not SET)
Overload Protection	10A (Auto Shutdown)

### AERIAL

Internal Antenna	Yes	Supplied and fitted
External Antenna	Optional	AC9860/ AC9861/ AC9862/ AC9863 & AC9869 – order separately

### OUTPUTS

Master	No	
Function	2	Supply to Receiver is switched

### CONFIGURATION

RS232 Programming to users' requirements	Yes	For programming interlocks, push/push latch, parallel master inhibit, timeout, channel timeout delay, master on delay, radio button de-latching and output allocation.
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### PERFORMANCE

Simultaneous Outputs	Yes	Programmable (Modify through configuration)
Instant TX response	Yes	Programmable (Modify through configuration)

### DIAGNOSTICS

LED's	Yes	Confirm 5 Volts, SET, Fault and all Outputs.
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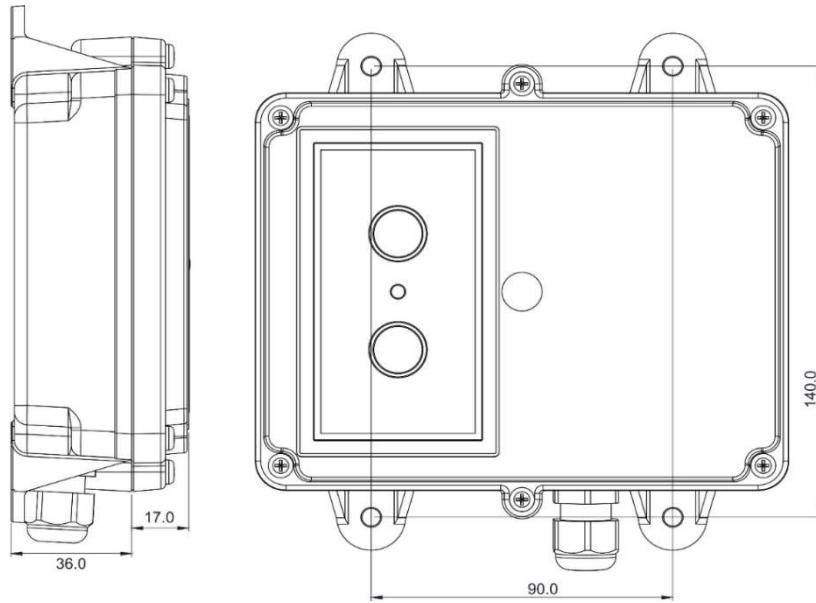
### PROTECTION

Back EMF	Yes	Diode protection on all outputs
Registration codes	Yes	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 Clear PC/FR V0 and UV stabilised  
 Base Black PC V0 and UV stabilised  
 Breather Gortex fitted in base  
 Mounting 4 external lugs  
 Fixings 5mm (3/16") not supplied  
 IP Rating IP66

<b>92 Series</b>			<b>92000</b>	<b>92002</b>	<b>92004</b>	<b>92100</b>	<b>92102</b>	<b>92104</b>
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		
		3 metres 7 core		S	S		S	S
		9801 Lo-Cover				S	S	S

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

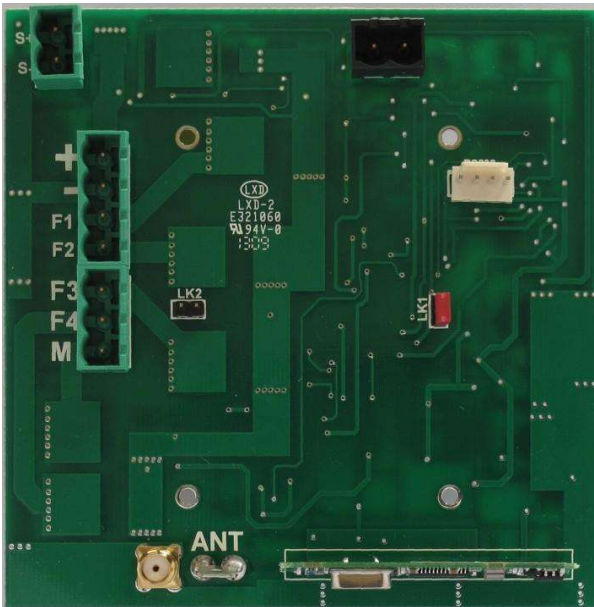
+ Positive 8-36V supply  
 - Negative 0 Volts  
 F1 to F4 Outputs to F1 through F4  
 M Master Output  
 STOP - STOP, when grounded shuts down the Receiver  
 S+ S- Master Secondary for Safety solenoid connections etc.  
 ANT Blade connector for internal antenna  
 SMA Aerial connection for optional external antenna (internal antenna must be removed)  
 LK1 Master Selection by Jumper (Parallel)  
 LK2 Master Selection by Jumper (Continuous)  
 Factory Settings 418/915MHz configured Parallel, 433.92MHz configured Continuous  
 RS232 RS232 for Wired Remote and interface to access special programmes

## COMPLIANCE

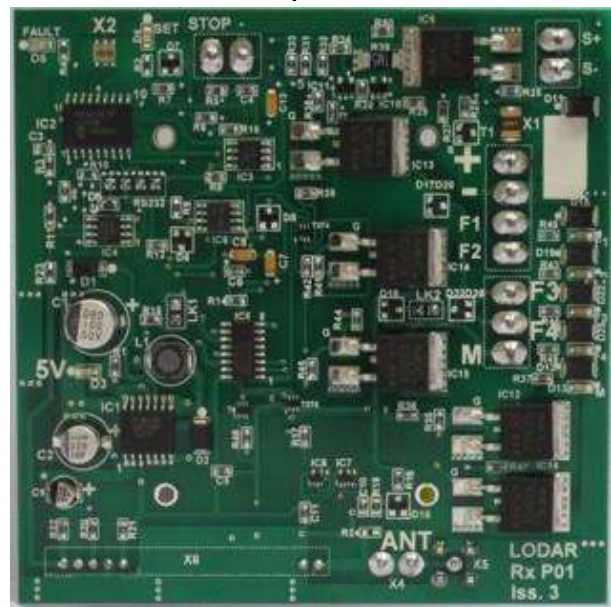
REG 10	EC Type-approval mark E11 037601 EC Type-approval No: e11/72/245*2009/19*7601*00
FCC	FCC CFR 47 Part 15.109 433.050MHz to 434.790MHz FCC CFR 47 Part 15.109 902.025MHz to 927.975MHz
IC	ICES-003 Issue 6. 433.050MHz to 434.790MHz ICES-003 Issue 6. 902.025MHz to 927.975MHz
CE	RED Directive ETSI EN 300 220-2 v3.2. ETSI EN 300 220-1 v3.1.1. ETSI EN 301 489-17 V3.1.1, ETSI EN 301 489-1 V2.1.1 433.050MHz to 434.790MHz
Australia/NZ	ETSI EN 300 220-2 v3.2.1 ETSI EN 301 489-1 V2.1.1 433.050MHz to 434.790MHz 915.025MHz to 927.975MHz
RoHS	Directive 2011/65/EU

## Photo of PCB

Connector Side



Component Side



## AIR VALVE SPECIFICATION

### 12V AIR VALVE TECHNICAL DATA (SY3120-6GZ-C4-Q)

Actuation (Type of Actuation)	2-position Single
Coil (Coil Specifications)	Standard
Voltage (Rated Voltage)	12 VDC
Entry (Electrical entry)	Grommet, Lead wire length 300mm
Suppressor (Light/Surge voltage suppressor)	With light/surge voltage suppressor
Manual (Manual Override)	Non-locking push type
Absize (A/B port size)	One-touch fitting
Thread (Thread Type)	Rc
Bracket (Bracket)	Without Bracket
CE (CE-compliant)	CE-compliant

### 24V AIR VALVE TECHNICAL DATA (SY3420-5GZ-C4-Q)

Actuation (Type of Actuation)	3-position exhaust centre
Coil (Coil Specifications)	Standard
Voltage (Rated Voltage)	24 VDC
Entry (Electrical entry)	Grommet, Lead wire length 300mm
Suppressor (Light/Surge voltage suppressor)	With light/surge voltage suppressor
Manual (Manual Override)	Non-locking push type
Absize (A/B port size)	One-touch fitting
Thread (Thread Type)	Rc
Bracket (Bracket)	Without Bracket
CE (CE-compliant)	CE-compliant

## PNEUMATIC CYLINDER SPECIFICATION

### SHAKO STANDARD CYLINDER (ISO6432)

Bore size	32mm
Port size	1/8"
Stroke	50mm
Fluid	Compressed Air
Acting	Double acting or Single acting
Cushion	Adjustable type
Operating pressure range	1.5 – 8.5 kgf/cm <sup>2</sup>
Max. operating pressure	9.5 kgf/cm <sup>2</sup>
Barrel material	Stainless steel SUS304
Magnet	Built-in
Ambient temperature	-5°C – 60°C
Piston speed	50-700mm/Sec