92 Series - FET Systems - FM - 16 Function with IP Transmitter

SYSTEM PART NUMBERS
92 2 16 16 Function Receiver with Master + 16 Function IP Transmitter

REPLACEMENT TRANSMITTERS
92 2 16TX 16 Function IP Transmitter

SYSTEM CONTENTS

1 x IP Transmitter

1 x Lanyard

1 x Receiver

3 x Glands

1 x External Aerial Kit
(3m cable with gland)

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	25 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	60 metres (200 ft) from the Receiver, when driving a momentary output without signal drop out
Transmitted power	1 mW Typical

COMPLIANCE

EMC	2004/104/EEC	Exceeds ETSI 300 220
Modulation	FM	
Frequencies	418 MHz F1D	USA (optional UK)
	433.92 MHz F1D	World wide (optional USA)

RECEIVER PCB

PCB component side, this is viewable through the smoke lid of the Receiver.

20 Function board shown

LED's are visible for confirmation that the system is operating correctly.

These are:-

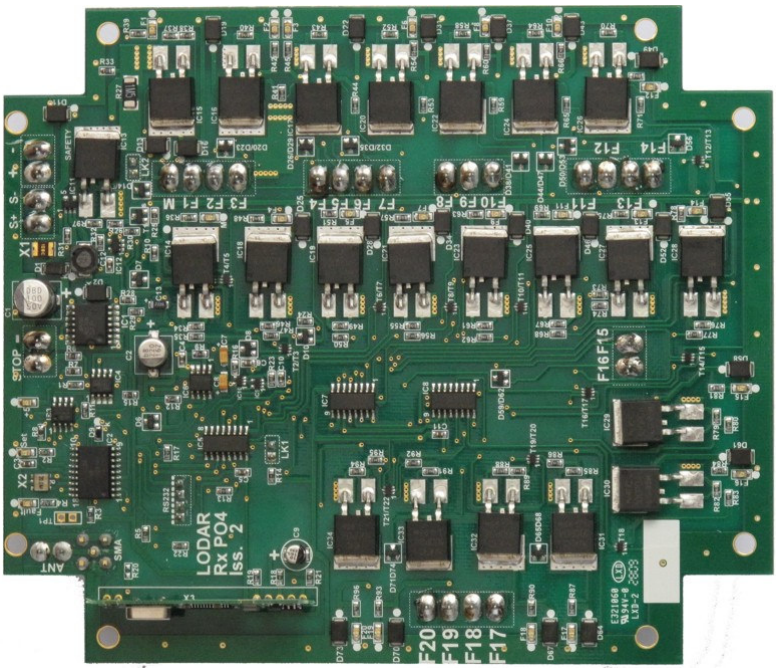
+5V Power Supply OK

SET Receiver operational

Fault Flashes for 20 seconds
At "power up"
Tx coding window open

Fault ON = Current overload

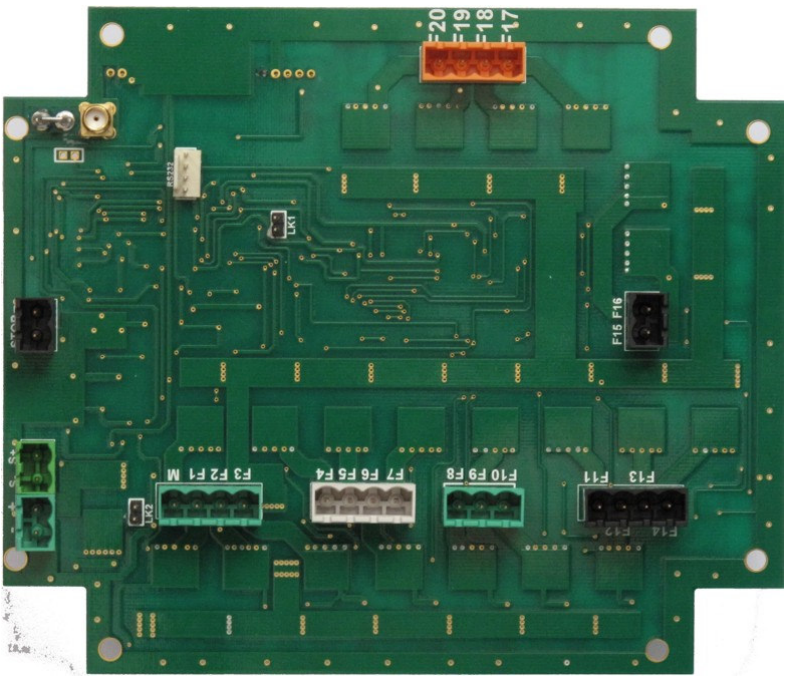
LED's F1 to F20 and M
ON when there is an output



RECEIVER PCB

Connector side – not to scale

20 Function board shown



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 Output 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	Yes	P. No. 9863 – External Antenna with cable and gland, supplied

OUTPUTS

Master	1	Parallel or Continuous.
Functions	16	
Master (Secondary)	1	Continuous (S+ S-)

CONFIGURATION

RS232 Programming To users requirements	Yes	For programming interlocks, push/push latch, parallel master inhibit, timeout, channel timeout delay and master on delay.

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

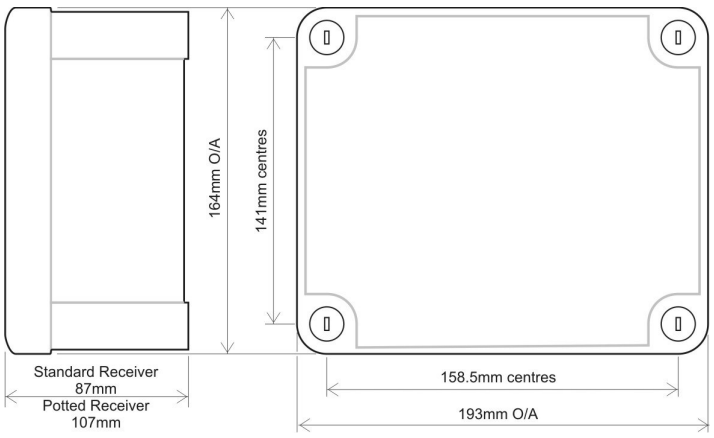
ESR Safety	Yes	See ESR Safety document.
Reverse Polarity	Protected (with provisions)	
Back EMF	Diode protected on all outputs	
Conformal Coating	No	
Registration codes	Over 16 million	
STOP Connection	Yes	

WIRING

Wiring Loom	No	
Cable Glands	Yes	3 Supplied
Connections	Screw terminal into plug and socket on PCB, for easy "swap out"	

ENCLOSURE

Weight	1.0kg
Lid	Smoke PVC - to view LEDs
Base	Grey
Breather	No
Mounting	4 Holes under Lid Fixings
Fixings	Not supplied
IP Rating	Performs to IP67 standard



ACCESSORIES 9861, 9862, 9863 and 9869 – External Antenna with cable.

92 Series			92 2 10	92 2 16	92 2 20
BUILD SPECIFICATION TABLE FOR MODELS IN THIS RANGE					
Ident	Legend	Connection			
	+ -	Positive, Negative,	S	S	S
	M, F1, F2, F3	Master F1, F2 and F3	S	S	S
	F4, F5, F6, F7	F4, F5, F6 & F7	S	S	S
	F8, F9 & F10	F8, F9 & F10	S	S	S
	F11, F12, F13, F14	F11, F12, F13 & F14		S	S
	F15, F16	F15 & F16		S	S
	F17, F18, F19, F20	F17, F18, F19 and F20			S
	S+, S-	Safety Solenoid S+ and S-	S	S	S
	STOP, 0Volts	STOP connections	S	S	S
	ANT	Internal Antenna	S	S	S
		SMA (external antenna)	S	S	S
LK1	LK1	Master - Parallel	C	C	C
LK2	LK2	Master - Continuous	C	C	C
	RS232	RS232	S	S	S
		9863 Antenna with 3 metre cable	S	S	S

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

+	Positive 12/24 Volt supply
-	Negative 0 Volts
F1 to F16	Outputs to F1 through F16
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 (BA = Continuous & AC = Parallel)
LK2	Connected when using Parallel Master, connects safety circuits
Factory Settings	418MHz configured Parallel, 433.92MHz configured Continuous
RS232	RS232 for Wired Remote and interface to access special programmes