




- Complete Remote Control System
- 1 – 4 Channel Remote Control Systems
- 12 or 24Vdc Supply
- AM / FM Remote Receiver Decoder
- High Security  Protocol
- 'Easy Learn' Tx Encoder Feature
- Easy Installation via Screw Terminals.
- Up to 50 Transmitters per System
- 315 / 433 / 868 / 915 MHz Available
- Up to 4 Relay Outputs 12Apk @ 230Vac
- Momentary or Latching Outputs
- IP65 Rated Enclosure (Wall Mounting Lugs Supplied)
- Requires No Radio Licence
- 315MHz FCC Compliant for use in USA
- Range
 - AM upto 100metres
 - FM upto 200metres
 - FMNB upto 1000metres

Description

A Range of 'ready to operate' remote control systems supplied as either AM or FM and contain a transmitter and receiver decoder pair.

Installation simply requires connections to power supply and the output relay screw terminals. The output relays are activated by the key press on the transmitter encoder.

The system utilises the Microchip Keeloq protocol, ensuring high security and reliability.

The decoder has the capacity to learn up to 50 unique transmitters. These are memorised even if the power is removed.

The decoder is supplied in an IP65 rated enclosure with Cable Gland and wall mounting lugs supplied

433MHz Products
AM Remote Control Systems

| Part Number | Description | Transmitter Type | Freq (MHz) | Range** (Metres) |
|-------------|----------------------------|------------------|------------|------------------|
| 118C1A | AM RC System 1 ch 12/24Vdc | Pocket Keyfob | 433.92 | 100 |
| 118C3A | AM RC System 3 ch 12/24Vdc | Pocket Keyfob | 433.92 | 100 |

Additional AM Transmitter Keyfobs

| Part Number | Description | Freq (MHz) | Range** (Metres) |
|-------------|-----------------------------|------------|------------------|
| 110C1-433A | Transmitter Keyfob 1 switch | 433.92 | 100 |
| 110C2-433A | Transmitter Keyfob 2 switch | 433.92 | 100 |
| 110C3-433A | Transmitter Keyfob 3 switch | 433.92 | 100 |

FM Remote Control Systems

| Part Number | Description | Transmitter Type | Freq (MHz) | Range** (Metres) |
|--------------|----------------------------|------------------|------------|------------------|
| 128S1-433F | FM RC System 1 ch 12/24Vdc | Pocket Keyfob | 433.92 | 150 |
| 128S3-433F | FM RC System 3 ch 12/24Vdc | Pocket Keyfob | 433.92 | 150 |
| 10208S1-433F | FM RC System 1 ch 12/24Vdc | Handheld | 433.92 | 200 |
| 10208S4-433F | FM RC System 4 ch 12/24Vdc | Handheld | 433.92 | 200 |

Additional FM Transmitter Keyfobs

| Part Number | Description | Freq (MHz) | Range** (Metres) |
|-------------|---------------------------------|------------|------------------|
| 120T1-433F | Transmitter Keyfob 1 switch | 433.92 | 150 |
| 120T2-433F | Transmitter Keyfob 2 switch | 433.92 | 150 |
| 120T3-433F | Transmitter Keyfob 3 switch | 433.92 | 150 |
| 102C1-433F | FM Transmitter encoder 1 switch | 433.92 | 200 |
| 102C2-433F | FM Transmitter encoder 2 switch | 433.92 | 200 |
| 102C4-433F | FM Transmitter encoder 4 switch | 433.92 | 200 |

FM NB (Narrow Band) Remote Control Systems

| Part Number | Transmitter Type | Transmitter Type | Freq (MHz) | Range** (Metres) |
|--------------|-------------------------------|------------------|------------|------------------|
| 10208S1-525N | FM NB RC System 1 ch 12/24Vdc | Handheld + Ant | 434.525 | 1000 |
| 10208S4-525N | FM NB RC System 4 ch 12/24Vdc | Handheld + Ant | 434.525 | 1000 |

Additional FM NB Transmitters

| Part Number | Description | Freq (MHz) | Range** (Metres) |
|-------------|------------------------------------|------------|------------------|
| 102C1-525N | FM NB Transmitter encoder 1 switch | 434.525 | 1000 |
| 102C2-525N | FM NB Transmitter encoder 2 switch | 434.525 | 1000 |
| 102C4-525N | FM NB Transmitter encoder 4 switch | 434.525 | 1000 |

** Range stated is optimum, direct line of sight. In worst conditions this can be reduced by over 50%

315MHz Products
AM Remote Control Systems

| Part Number | Description | Transmitter Type | Freq (MHz) | Range** (Metres) |
|-------------|----------------------------|------------------|------------|------------------|
| 118C1-315A | AM RC System 1 ch 12/24Vdc | Pocket Keyfob | 315 | 100 |
| 118C3-315A | AM RC System 3 ch 12/24Vdc | Pocket Keyfob | 315 | 100 |

Additional AM Transmitter Keyfobs

| Part Number | Description | Freq (MHz) | Range** (Metres) |
|-------------|---|------------|------------------|
| 110C1-315A | Transmitter Keyfob 1 switch (FCC Compliant) | 315 | 100 |
| 110C2-315A | Transmitter Keyfob 2 switch (FCC Compliant) | 315 | 100 |
| 110C3-315A | Transmitter Keyfob 3 switch (FCC Compliant) | 315 | 100 |

FM Remote Control Systems

| Part Number | Transmitter Type | Transmitter Type | Freq (MHz) | Range** (Metres) |
|--------------|----------------------------|------------------|------------|------------------|
| 10208S1-315F | FM RC System 1 ch 12/24Vdc | Handheld | 315 | 150 |
| 10208S4-315F | FM RC System 4 ch 12/24Vdc | Handheld | 315 | 150 |

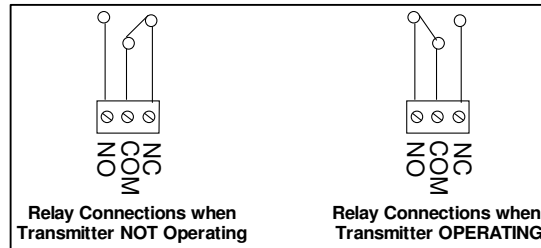
Additional FM Transmitters

| Part Number | Description | Freq (MHz) | Range** (Metres) |
|-------------|---------------------------------|------------|------------------|
| 102C1-315F | FM Transmitter encoder 1 switch | 315 | 150 |
| 102C2-315F | FM Transmitter encoder 2 switch | 315 | 150 |
| 102C4-315F | FM Transmitter encoder 4 switch | 315 | 150 |

** Range stated is optimum, direct line of sight. In worst conditions this can be reduced by over 50%

Data Outputs

Each output relay provides an isolated switch. Connections are Common (COM), Normally Open (NO) and Normally Closed (NC).



The jumper links (J1, J2) configure the outputs to be momentary or latching.
The jumper links are made / removed by a small link 'cap' placed over the pin header.

118 Receiver Outputs

| Link 1 (LK1) | Link 2 (LK2) | O/P 1 | O/P2 | O/P3 |
|--------------|--------------|-------|-------|-------|
| Open | Open | Latch | Latch | Latch |
| Open | Connected | Mom | Mom | Mom |
| Connected | Open | Mom | Mom | Latch |
| Connected | Connected | Latch | Latch | Mom |

008 Receiver Outputs

| Link 1 | Link 2 | Relay 1 | Relay 2 | Relay 3 | Relay 4 |
|-----------|-----------|-----------|-----------|-----------|-----------|
| Open | Open | Momentary | Momentary | Momentary | Momentary |
| Open | Connected | Momentary | Momentary | Latch | Latch |
| Connected | Open | Momentary | Latch | Latch | Latch |
| Connected | Connected | Latch | Latch | Latch | Latch |

Combining Transmitters to receivers

Each transmitter has a unique identity, (one of 16 billion possible numbers), the identity number is encrypted and transmitted as a random number that changes on each press of the switch. (the same number is never repeated!). Each receiver can learn the identity of upto 50 unique transmitters.

Note : the same transmitter may be taught to any number of receivers to create 'master keys'.

Learning a New Transmitter Keyfob Switch

1. Press the learn switch (SW1), the accept LED will illuminate.
2. Press the transmitter once, accept LED will extinguish.
3. Press the transmitter again, the accept LED will flash.
4. Wait for the accept LED to stop flashing.
5. This transmitter will now operate the system.

The system can learn upto 50 unique transmitter keyfobs

Erasing Existing Transmitters

1. To completely erase the Tx encoders, press SW1 on the Rx decoder for 10 seconds.
2. The learn LED will turn off after the 10 seconds to indicate the Tx encoder(s) have been erased

NOTE: You cannot erase individual Tx encoders

Technical Specifications
'110' & '120' Transmitter Keyfob

Battery Type GP23AE (supplied)

| Electrical Characteristics | Min | Typical | Max | Units |
|-------------------------------|-----|---------|-----|-------|
| Supply Voltage | 8.5 | 9 | 16 | V |
| Supply Current : Quiescent | | 0 | | mA |
| Supply Current : Transmitting | | 8 | | mA |
| Operating frequency | | 433.92 | | MHz |

'102' Transmitter Encoder

Battery Type PP3 (supplied)

Dimensions 110mm x 65mm x 24mm

| Electrical Characteristics | Min | Typical | Max | Units |
|---------------------------------|---------|---------|---------|-------|
| Supply Voltage | 8 | 9 | 12 | V |
| Supply Current | 11 | 14 | 21 | mA |
| Frequency: Wideband | 432.90 | 433.920 | 434.10 | MHz |
| Narrowband | 434.450 | 434.525 | 434.600 | MHz |
| RF Output Power (ERP) @ 433 MHz | - | | 10 | mW |

'008, 118' Receiver Decoder

Dimensions 110mm (not including antenna) x 85mm x 35mm

Storage Temperature: -10 to +70° Celsius. Operating Temperature: 0 to +55° Celsius.

| ELECTRICAL CHARACTERISTICS | MIN | TYPICAL | MAX | DIMENSION |
|--|-----|---------|-----|-----------|
| Supply Voltage for +12 v | 10 | 12.0 | 16 | V |
| Supply Voltage for +24 v | 22 | 24.0 | 28 | V |
| Supply Current : | | | | |
| Quiescent | | 19 | | mA |
| all relays operating* | | 100 | | |
| Time delay from Tx on Switch to Rx Relay operation | | | 100 | mS |
| Time delay from Tx sw relax to Rx Relay release | | | 300 | MS |

***The relay contacts in this unit are for functional use only and must not be used for isolation purposes**

**R F Solutions Ltd.,
Unit 21, Cliffe Industrial Estate,
Lewes, E. Sussex. BN8 6JL. England.**

Email : sales@rfsolutions.co.uk <http://www.rfsolutions.co.uk/>

Tel: +44 (0)1273 898 000 Fax: +44 (0)1273 480 661

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