# 16Km LoRa Radio Telemetry Modules

Features

- Upto 16km range line of sight
- FSK & LoRa Spread Spectrum
- 2 x Closed Contact Inputs
- 2 x Relay Switch Outputs
- Add-on Input/ Output channels
- Expandable to 16 I/P's and 32 O/P's
- All Signals 'Acknowledged'
- Watchdog Feature
- Walk / Range test Mode
- Many to Many Operation
- 12-32V ac / dc Supply
- LED Bar graph Signal indicator
- Easy 'Plug and Play' Installation
- 868MHz Version CE compliant
- 915MHz FCC Certified
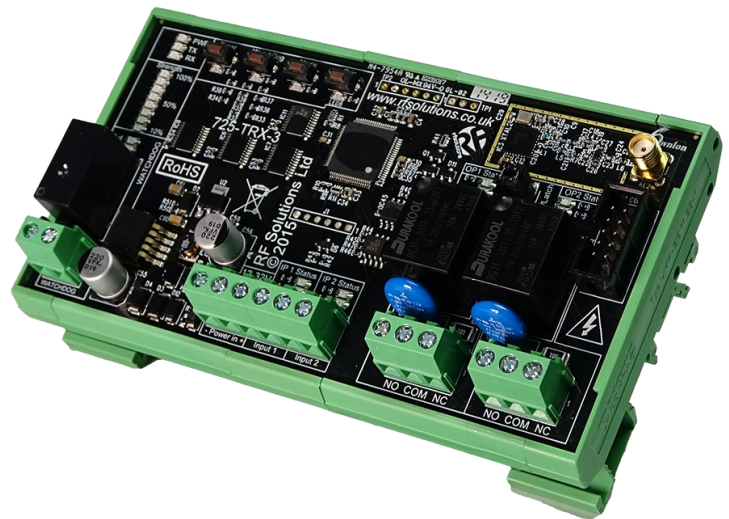
Applications

- Industrial Telemetry
- Remote Monitoring & Control
- Reliable Remote Switch

The 725TRX telemetry system provides bi-directional, transceiver, remote Switch System. Each module has two switch inputs and two relay changeover contact outputs. When two or more modules are paired together the relay outputs will follow the state changes of the other modules' Inputs.

Additional input / output modules can be connected to provide extra inputs/outputs. The system inputs / outputs can be used in various ways and also with a hand held keyfob or alternative handset.

All signals are acknowledged and a watchdog feature provides a system "Alive" indication. This is automatic, allowing the user to simply connect to the screw terminals and achieve a reliable telemetry link.

FM76316

725 Series

Safety Information

Carefully read the following safety information before proceeding with installation, operation, or maintenance of RF Solutions product. Failure to follow these warnings could result in death or serious Injury

- This radio system must not be used in areas where there is a risk of explosion.
- Only qualified personnel should be permitted to access the transmitter and operate the equipment.
- Always follow operating information as well as all applicable safety procedures and requirements.
- You must satisfy the age requirements in your country for operating the equipment.
- Store in a safe place.
- Keep a clear view of the work area at all time before using, check it is safe to do so

Before maintenance intervention on any remote controlled equipment
- Do not open the receiver enclosure unless you are qualified.
- Disconnect all electrical power from the equipment.
- Check the enclosure and cable for damage regularly, do not use if there is evidence of damage

Electrical Safety

ISOLATE the mains electricity supply before removing the cover and observe any relevant safety information.

- Maintenance to the product that involves removal of the cover should only be carried out by a competent person or qualified electrician.
- Ensure adequate protection on the Load circuit
- Refer to Product Datasheet for MAX operating Load.
- Product must be installed in accordance with the local country electrical regulations.
- A current limiting supply must be used in accordance with the datasheet

Information sur la sécurité

Lisez attentivement les informations de sécurité suivantes avant de procéder à l'installation, l'utilisation ou la maintenance du produit RF Solutions. Le non-respect de ces avertissements peut entraîner la mort ou des blessures graves

- Ce système radio ne doit pas être utilisé dans des zones présentant un risque d'explosion
- Seul le personnel qualifié doit être autorisé à accéder à l'émetteur et à utiliser l'équipement.
- Suivez toujours les instructions d'utilisation ainsi que toutes les procédures et exigences de sécurité applicables.
- Vous devez satisfaire aux exigences d'âge dans votre pays pour utiliser l'équipement
- Il est strictement interdit d'utiliser l'équipement sous l'influence de drogues, d'alcool et/ou de médicaments.
- Conserver dans un endroit sûr.
- Gardez une vue dégagée sur la zone de travail à tout moment

Avant intervention de maintenance sur tout équipement télécommandé
- N'ouvrez pas le boîtier du récepteur à moins d'être qualifié
- Coupez toujours l'alimentation électrique de l'équipement.
- Vérifiez régulièrement que le boîtier et le câble ne sont pas endommagés, ne les utilisez pas s'il y a des preuves de dommages

Avertissements de sécurité

- ISOLER l'alimentation électrique avant de retirer le couvercle et observer toutes les précautions de sécurité pertinentes.
- L'entretien du produit qui implique le retrait du couvercle ne doit être effectué que par une personne compétente ou un électricien qualifié.
- La valeur nominale du fusible F2 est de 4A (T) 250 H (céramique). Remplacez le fusible par le même type et la même valeur nominale.
- La sortie relais est évaluée à 10A en crête et 5A en constante.
- Le produit doit être connecté à une alimentation à fusible ou à une prise de connexion appropriée répondant aux exigences du pays d'installation.

Veiligheidsinformatie

Lees de volgende veiligheidsinformatie zorgvuldig door voordat u doorgaat met de installatie, bediening of het onderhoud van het RF Solutions-product. Het niet opvolgen van deze waarschuwingen kan de dood of ernstig letsel tot gevolg hebben

- Dit radiosysteem mag niet worden gebruikt in gebieden waar explosiegevaar bestaat.
- Alleen gekwalificeerd personeel mag toegang krijgen tot de zender en de apparatuur bedienen.
- Volg altijd de bedieningsinformatie en alle toepasselijke veiligheidsprocedures en -vereisten.
- U moet voldoen aan de leeftijdsvereisten in uw land voor het gebruik van de apparatuur.
- Bewaar op een veilige plaats.
- Houd te allen tijde een duidelijk zicht op het werkgebied voordat u het gebruikt, controleer of het veilig is om dit te doen

Vóór onderhoudsinterventie op op afstand bediende apparatuur

- Open de behuizing van de ontvanger niet tenzij u hiervoor gekwalificeerd bent.
- Koppel alle elektrische stroom van de apparatuur los.
- Controleer de behuizing en kabel regelmatig op beschadigingen, niet gebruiken als er tekenen van schade zijn

Electrische veiligheid

ISOLEER de netvoeding voordat u het deksel verwijdert en neem alle relevante veiligheidsinformatie in acht.

- Onderhoud aan het product waarbij de afdekking moet worden verwijderd, mag alleen worden uitgevoerd door een competent persoon of een gekwalificeerde elektricien.
- Zorg voor voldoende bescherming op het belastingscircuit
- Raadpleeg het productgegevensblad voor de MAX bedrijfsbelasting.
- Het product moet worden geïnstalleerd in overeenstemming met de plaatselijke elektriciteitsvoorschriften van het land.
- Er moet een stroombegrenzende voeding worden gebruikt in overeenstemming met de datasheet

Sicherheitsinformation

Lesen Sie die folgenden Sicherheitsinformationen sorgfältig durch, bevor Sie mit der Installation, dem Betrieb oder der Wartung des RF Solutions-Produkts fortfahren. Die Nichtbeachtung dieser Warnungen kann zum Tod oder zu schweren Verletzungen führen.

- Dieses Funksystem darf nicht in explosionsgefährdeten Bereichen eingesetzt werden.
- Nur qualifiziertem Personal sollte der Zugang zum Messumformer und die Bedienung des Geräts gestattet werden.
- Befolgen Sie immer die Betriebsinformationen sowie alle geltenden Sicherheitsverfahren und -anforderungen.
- Für den Betrieb des Geräts müssen Sie die Altersanforderungen Ihres Landes erfüllen.
- An einem sicheren Ort aufbewahren.
- Behalten Sie vor der Verwendung jederzeit freie Sicht auf den Arbeitsbereich und prüfen Sie, ob dies sicher ist

Vor Wartungsarbeiten an ferngesteuerten Geräten

- Öffnen Sie das Empfängergehäuse nur, wenn Sie dafür qualifiziert sind.
- Trennen Sie die gesamte Stromversorgung vom Gerät.
- Gehäuse und Kabel regelmäßig auf Beschädigungen prüfen, bei Anzeichen von Beschädigungen nicht verwenden.

Elektrische Sicherheit

TRENNEN Sie die Netzstromversorgung, bevor Sie die Abdeckung entfernen und beachten Sie alle relevanten Sicherheitshinweise.

- Die Wartung des Produkts, bei der die Abdeckung entfernt wird, darf nur von einer sachkundigen Person oder einem qualifizierten Elektriker durchgeführt werden.
- Sorgen Sie für einen ausreichenden Schutz des Lastkreises
- Siehe Produktdatenblatt für MAX Betriebslast.
- Das Produkt muss in Übereinstimmung mit den örtlichen Elektrovorschriften des Landes installiert werden.
- Es muss eine Strombegrenzungsversorgung gemäß Datenblatt verwendet warden.

Información de seguridad

Lea atentamente la siguiente información de seguridad antes de continuar con la instalación, operación o mantenimiento del producto de RF Solutions. El incumplimiento de estas advertencias podría provocar la muerte o lesiones graves.

- Este sistema de radio no debe utilizarse en áreas donde exista riesgo de explosión.
- Solo se debe permitir el acceso al transmisor y operar el equipo a personal calificado.
- Siga siempre la información de funcionamiento, así como todos los procedimientos y requisitos de seguridad aplicables.
- Debe cumplir con los requisitos de edad en su país para operar el equipo.
- Almacenar en un lugar seguro.
- Mantenga una vista clara del área de trabajo en todo momento antes de usar, verifique que sea seguro hacerlo

Antes de la intervención de mantenimiento en cualquier equipo controlado a distancia

- No abra la caja del receptor a menos que esté calificado.
- Desconecte toda la energía eléctrica del equipo.
- Compruebe la carcasa y el cable en busca de daños con regularidad, no los utilice si hay evidencia de daños

Seguridad ELECTRICA

AISLE el suministro eléctrico de la red antes de quitar la tapa y observe cualquier información de seguridad relevante.

- El mantenimiento del producto que implica la extracción de la cubierta solo debe ser realizado por una persona competente o un electricista calificado.
- Asegurar una protección adecuada en el circuito de carga.
- Consulte la hoja de datos del producto para conocer la carga operativa MÁXIMA.
- El producto debe instalarse de acuerdo con las normativas eléctricas locales del país.
- Se debe utilizar un suministro de limitación de corriente de acuerdo con la hoja de datos

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Informazioni sulla sicurezza

Leggere attentamente le seguenti informazioni sulla sicurezza prima di procedere con l'installazione, il funzionamento o la manutenzione del prodotto RF Solutions. La mancata osservanza di queste avvertenze può provocare morte o lesioni gravi

- Questo sistema radio non deve essere utilizzato in aree a rischio di esplosione.
- L'accesso al trasmettitore e l'utilizzo dell'apparecchiatura deve essere consentito solo a personale qualificato.
- Seguire sempre le informazioni operative, nonché tutte le procedure e i requisiti di sicurezza applicabili.
- È necessario soddisfare i requisiti di età nel proprio paese per l'utilizzo dell'apparecchiatura.
- Conservare in un luogo sicuro.
- Mantenere sempre una visione chiara dell'area di lavoro prima dell'uso, controllare che sia sicuro farlo

Prima dell'intervento di manutenzione su qualsiasi apparecchiatura telecomandata

- Non aprire l'involucro del ricevitore se non si è qualificati.
- Scollegare tutta l'alimentazione elettrica dall'apparecchiatura.
- Controllare regolarmente la custodia e il cavo per verificare che non siano danneggiati, non utilizzare se vi sono segni di danneggiamento

Sicurezza elettrica

ISOLARE l'alimentazione di rete prima di rimuovere il coperchio e osservare tutte le informazioni di sicurezza pertinenti.

- La manutenzione del prodotto che comporta la rimozione del coperchio deve essere eseguita solo da una persona competente o da un elettricista qualificato.

- Garantire un'adeguata protezione sul circuito di carico

- Fare riferimento alla scheda tecnica del prodotto per il carico operativo MAX.

- Il prodotto deve essere installato in conformità con le normative elettriche locali del paese.

- È necessario utilizzare un'alimentazione con limitazione di corrente in conformità con la scheda tecnica

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Products Overview

725TRX Transceiver

- Range up to 16Km line of sight.
- Self Contained Telemetry Transceiver
- 2 No volt inputs
- 2 Relay Outputs
- 1 Relay Watchdog output for Failsafe Operation
- All Connections via screw terminal
- Supply Voltage 12-32V ac/dc
- Supplied with antenna
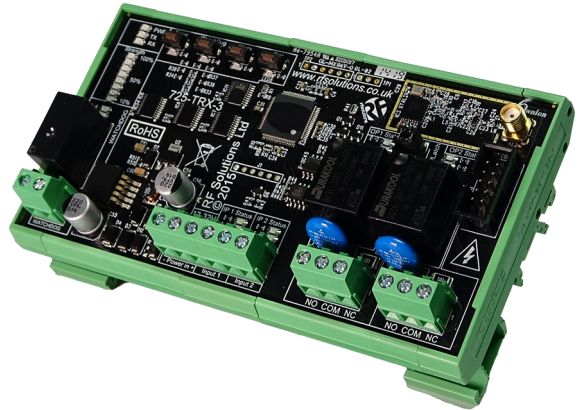
Part Number	Description	Range*
725-TRX8-1K	868MHz Transceiver +13dBm	1km
725-TRX8-16	868MHz Transceiver +20dBm	16km
725-TRX9-1K	915MHz Transceiver +13dBm	1km
725-TRX9-16K	915MHz Transceiver +20dBm	16km

* Range is quoted optimum LOS.

725-IP Additional 4 Switch Inputs

- Provides 4 additional inputs
- Connects Directly to 725TRX.
- Connecting ribbon cable supplied.
- Up to 16 725-IP may be Daisy Chained together.

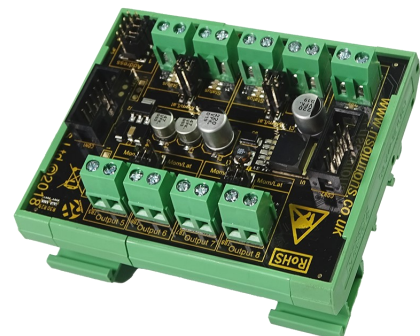| Part Number	Description
725-IP	4 input Add-on Module

725-OP Additional 4 Relay Output board

- 4 Changeover Relay Outputs.
- Connecting ribbon cable supplied.
- Up to four 725-OP's can be Daisy Chained.

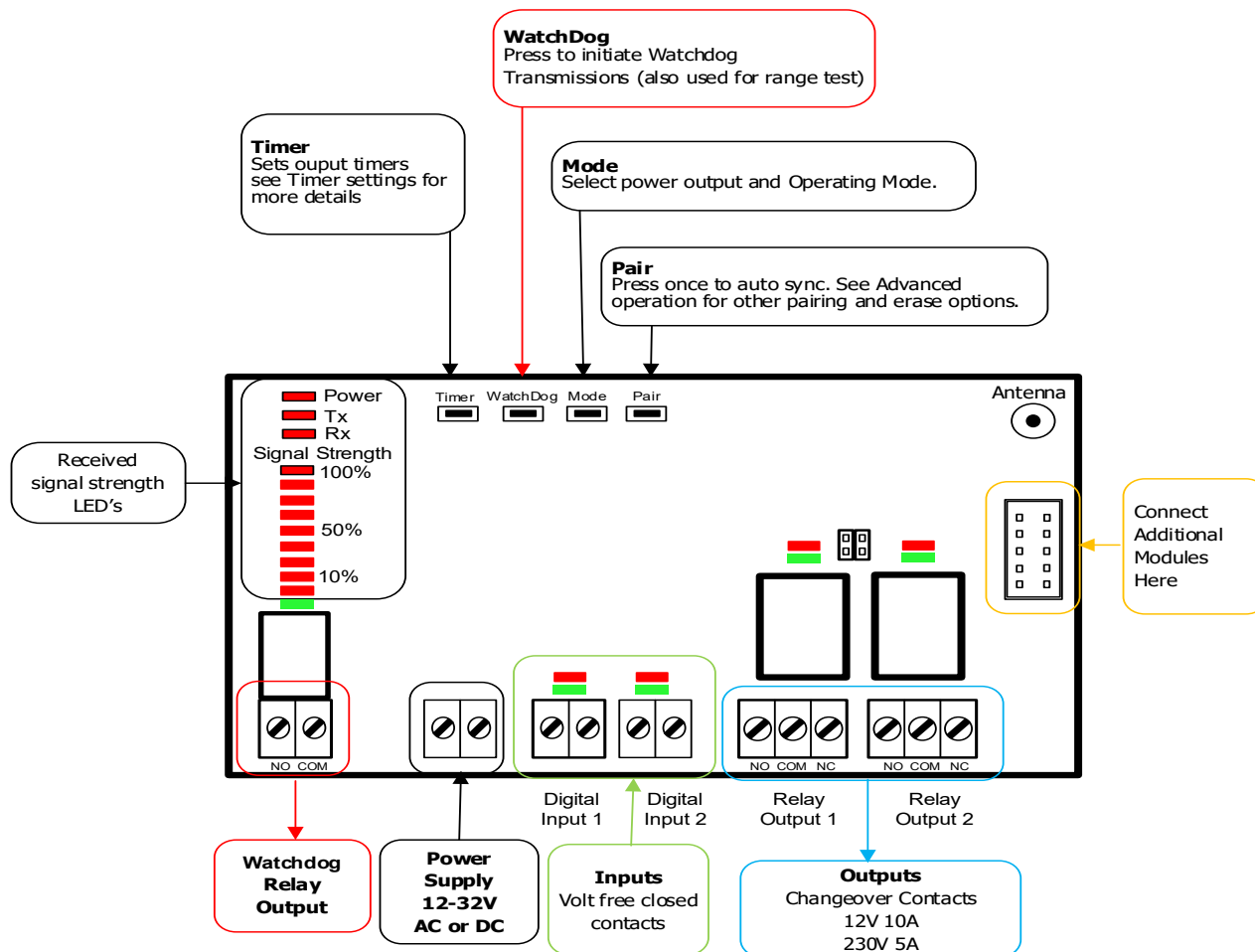| Part Number	Description
725-OP	4 Output Add-on Module

725-DOP 8 Channel Output board

- 8 Digital outputs for direct relay/contactor drive
- 0-30V operation range.
- 6A per channel.
- Connecting ribbon cable supplied.
- Up to four 725-DOP8 can be Daisy Chained.

Part Number	Description
725-DOP8	8 Output Add-on Module

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725TRX Overview

WatchDog
Press to initiate Watchdog
Transmissions (also used for range test)

Timer
Sets ouput timers
see Timer settings for
more details

Mode
Select power output and Operating Mode.

Pair
Press once to auto sync. See Advanced
operation for other pairing and erase options.

Received
signal strength
LED's

Power
Tx
Rx
Signal Strength
100%
50%
10%

Timer WatchDog Mode Pair

Antenna

Connect
Additional
Modules
Here

Digital
Input 1

Digital
Input 2

Relay
Output 1

Relay
Output 2

NO COM

NO COM NC

NO COM NC

**Watchdog
Relay
Output**

**Power
Supply
12-32V
AC or DC**

Inputs
Volt free closed
contacts

Outputs
Changeover Contacts
12V 10A
230V 5A

Overview of Features

725TRX has many 'optional' features. These are summarised below and explained in detail later in this document.

Auto or Manual Pairing: Modules can be auto paired together in banks or any individual input can be paired to any individual output(s).

WATCHDOG: This is a relay contact which is held 'ON' as long as the Auto TX signal is received.

RF Mode: Time of operation can be traded with system range. For standard FM operation the outputs operate within 30milliseconds, when LORA (Long Range) is enabled the time delay can be a couple of seconds. (16K version only)

OUTPUTS: The outputs can be set to Momentary/Latching /Timed.

Additional Modules: Additional Input and Output modules or a combination of both can be connect (max 4 input or output boards of any type).

Note: When using more than 2 output boards VCC must be connected to the 725-OP boards.

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Creating a Telemetry System using Two 725 TRX's
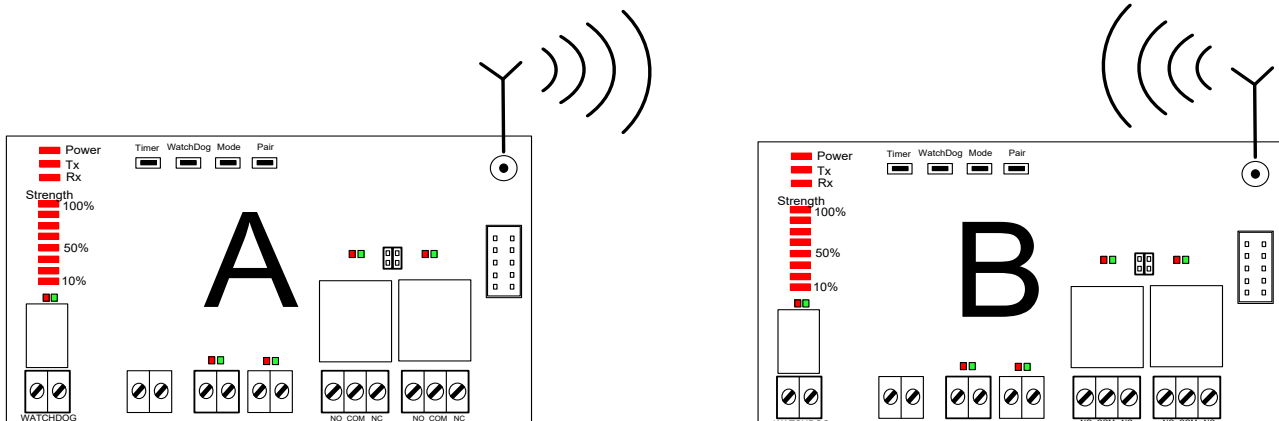
Follow these Steps:

1. Connect to screw Terminal Inputs.
2. Connect to screw Terminal Outputs.
3. Pair Together 725TRX Modules A and B.
4. Set Output Jumper Links (Momentary of Latching).
5. Optional configuration: Auto TX / TIMERS / WATCHDOG / MODE.

Pairing

Factory Default Status:

In Factory default Input / Output LEDs flash Red/Green alternately

To AUTO-PAIR A to B:

1. Press and release the PAIR button on the 725TRX B.
2. The pair and all relay output LED's will flash on 725TRX B
3. Activate ANY input on 725TRX A.
4. All flashing LEDs on 725TRX B relays will go out. The PAIR LED will flash quickly for 2 seconds .
5. Pairing Complete

To PAIR A Input 1 to B Output 2:

1. Press and release the PAIR button on the 725TRX B to enter pair mode. Press and release the PAIR button to cycle through LED's until only the LED above Relay 2 is Flashing
2. Activate input 1 on 725TRX A.
3. All flashing LEDs on 725TRX B relays will go out, the PAIR LED will flash quickly for 2 seconds
4. Pairing Complete

Please Note:

1. Manual pair will not work when auto pair has been used.
2. The max no of pairings is 32, this applies to individual inputs (or buttons on keyfob)

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Pairing a hand held transmitter

To AUTO-PAIR a hand held transmitter:

1. Press and release the PAIR button on the 725TRX.
2. The pair and all relay output LED's will flash on 725TRX.*
3. Activate ANY button on your transmitter.
4. All flashing LEDs on 725TRX relays will go out. The PAIR LED will flash quickly for 2 seconds .
5. Auto-Pair is Complete

Note: *To Auto-Pair an output board you need to press the Pair button again and repeat until the desired 725-OP LEDs are flashing then continue from step 3.

To PAIR a hand held transmitter button to Relay 2:

1. Press and release the PAIR button on the 725TRX to enter pair mode. Press and release the PAIR button to cycle through LED's until only the LED above Relay 2 is Flashing
2. Activate your chosen button on your transmitter.
3. All flashing LEDs on 725TRX relays will go out. The PAIR LED will flash quickly for 2 seconds .
4. Pairing is Complete

Note: *To Pair an output board relay, you need to press the Pair button and repeat to cycle through LED's until only the LED above the desired 725-OP relay is flashing then continue from step 2.

Please Note: Manual pair will not work when auto pair has been used.

## Erasing

Reset to Factory Default Setting:

The 725TRX may be reset to Factory default at any time by pressing the PAIR button for 15 seconds.

Erasing Everything (reset to Factory Default):

1. Apply power
2. Press and hold the PAIR button for 15 seconds, the PAIR LED will flash slow then fast.
3. Release the PAIR button.
4. 725-TRX now reset to Factory Default

ERASE Individual Transmitters:

1. Apply power
2. Press and hold the PAIR button for 10 seconds, the PAIR LED will flash slow as soon as this happens release the PAIR button.
3. Press any button on the transmitter to be erased.
4. The 725-TRX will exit to normal operating mode and the transmitter will be erased.

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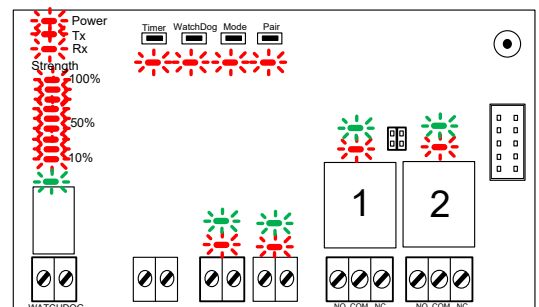
INPUTs Status LEDs

Inputs are activated by a closed contact switch.

When the status of any input is changed 725TRX immediately broadcasts the status (of all inputs).

After receiving the transmitted RF signal, the paired 725TRX Transceiver(s) respond with an ACKNOWLEDGE RF Signal.

When the ACKNOWLEGE signal is received back by the transmitting 725TRX it will be indicated on the input LED's.
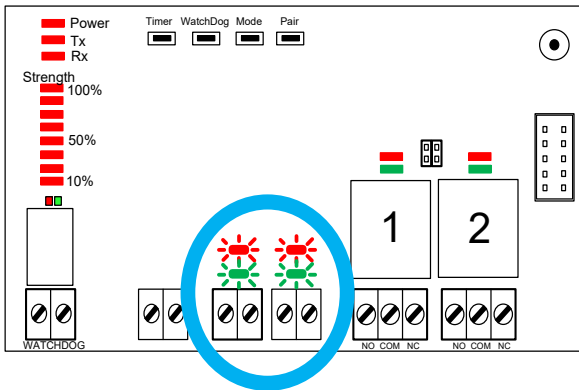
LED	Description
RED/GREEN Alternating	Input is not paired with any output

GREEN LED	Status of Input
ON	Input Active / ON
OFF	Input Inactive / OFF

RED LED	Feedback from Receiver
ON	After Power is applied and before transmitting any signal
OFF	Ack signal successfully received
Flashing	Failed to received the ack signal (out of Range)

OUTPUTs Status LEDs

When the receiving 725TRX gets a valid signal from a paired device it will activate an output.

The status of active relays will be displayed on their corresponding LED's.
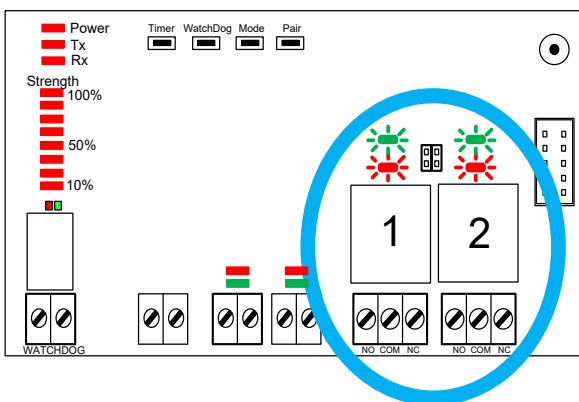
LED	Description
RED/GREEN Alternating	Output is not paired with any input

GREEN LED	Status of Output
ON	Relay is Active / ON
OFF	Relay is Inactive / OFF

RED LED	Feedback from Receiver
Flashing	Ready to pair

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MOMENTARY/LATCHING setting links

Each Relay Output can be individually pre-set to Momentary/Latching by fitting or removing the Link Headers
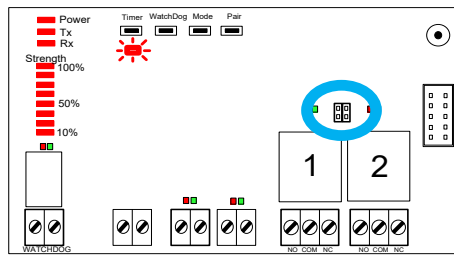
| Link fitted	LATCHING	Output changes state on each Transmit signal
Link Removed	MOMENTARY	Output operates for duration of Transmit signal

TIMER (Setting an Output Time Delay)

Setting a Timed Output:

1. Briefly press the TIMER Switch.
2. The TIMER and first relay output LED's will flash.
3. Press the TIMER switch again to scroll through relays until the chosen relay LED is flashing.
4. Wait until the chosen relay LED is on constantly.
5. Now Each press of the timer button will increase the timer delay in line with the TIMER OUTPUT Table Displayed on the signal strength LED's.
6. When you have selected the required delay, wait 3 seconds.
7. The Red TIMER LED will Stop flashing to show that the setting is saved

Note: Settings are saved even after power is removed.

Note: When zero LED's are lit the relays will operate as per the Momentary/Latching links.

LED	Timer Output
8	60 min
7	30 min
6	10 min
5	1 min
4	30 sec
3	10 sec
2	5 sec
1	1/2 sec
0	Mom
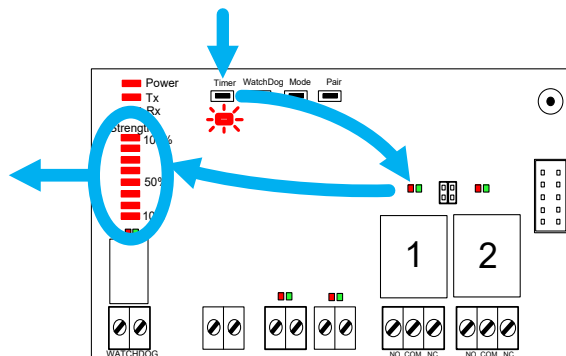
Erase ALL Timers:

1. Press and hold the TIMER button for 10 seconds,
2. Whilst held the TIMER LED will turn on and then flash fast.
3. When the LED flashes fast release the timer button the erase is complete
4.

Note: When setting a Time Delay; If the Jumper Link is Removed the Time delay will restart on each transmission regardless of output status.

If the Jumper Link is Fitted, the Time delay output Will Latch OFF / ON Timed with each transmission.

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RF Mode of Operation

The 725 Transceivers can be configured to operate as standard FSK or LoRA Modes.

FSK = (FM) fixed frequency Carrier Frequency

LoRA– Long Range Spread Spectrum Frequency Hopping Protocol.

FSK: provides a fast Time of operation and is compatible with all other RF Solutions products at this frequency.

LoRA can be set to one of several modes of operation where the time of operation is extended but so also is the range.

| LED	Mode	Typical RF Transmit Packet Time
8	LORA 7	1.28 Seconds
7	LORA 6	640 mSecs
6	LORA 5	320 mSecs
5	LORA 4	160 mSecs
4	LORA 3	80 mSecs
3	LORA 2	40 mSecs
2	LORA 1	20 mSecs
1	FSK	20 mSecs
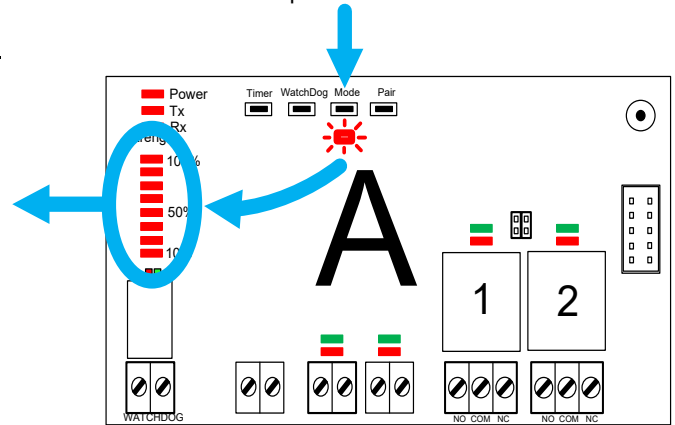
Note: 725-TRX '1K' versions can only operate in mode 1!

Note: 725-TRX9' will not operate in FSK mode and will start at mode 2

To Set the Mode of operation

1. Press the MODE button momentarily the MODE LED will flash.
2. Repeat press the MODE button until the chosen LED / Mode is selected

Walk / Range Test
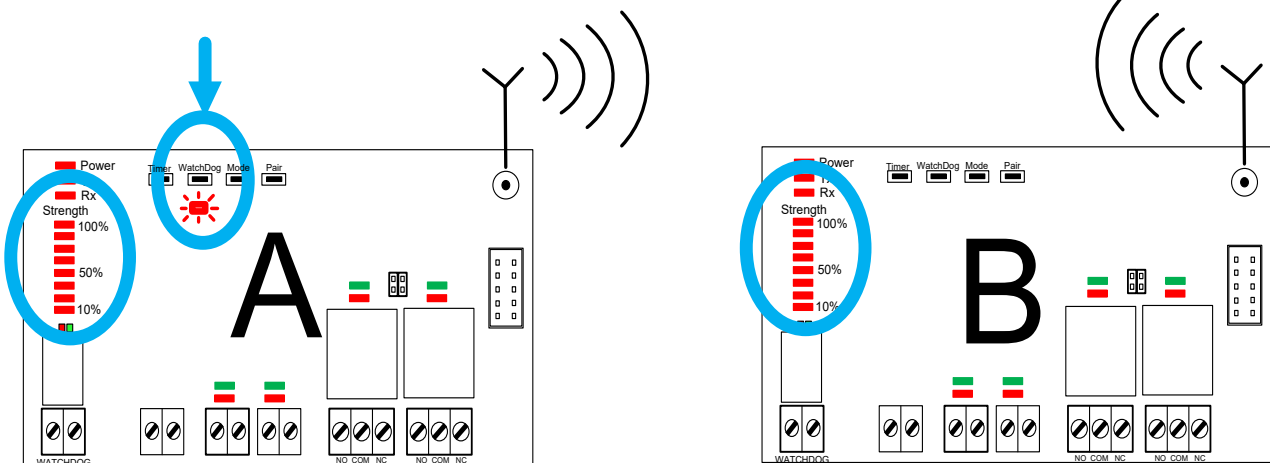
1. Press and hold the WatchDog button on the Transmitter for 5 seconds.
2. 725TRX emits a special Test transmission every second,
3. Any 725TRX will display the received Beacon on the signal strength LED bar graph.
4. An acknowledge will be sent back to the originating 725TRX by any paired 725TRX which will also display on its signal Strength LED bar graph
5. When activated on a paired transmitter, LEDs 1-8 on both devices will show signal strength - the more LEDs flashing, the better the signal.

Notes: For reliable communications we recommend 3 or more LED's are illuminated.
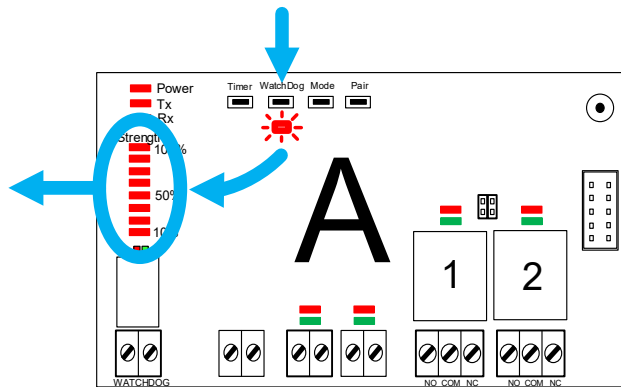
Watchdog

This feature provides a System "Alive" failsafe function between Two 725TRX modules.
When Watchdog is enabled a 725TRX automatically transmits a background Radio signal.
Any paired 725TRX receiving an RF packet from another paired 725TRX it will activate its "Watchdog relay". As long as the Watchdog relay is active the Radio signals are being received and working correctly.

Enable a Watchdog Transmit

Briefly press the WDOG button, WDOG LED is illuminated and Watchdog transmissions will be activated. Repeat press the WDOG Button to select a Watchdog time interval

LED	WDOG Tx Interval
8	120 min
7	60 min
6	20 min
5	10 min
4	2 min
3	65 sec
2	45 sec
1	25 sec

Watchdog Relay Output

The watchdog relay will automatically be activated whenever an RF signal from a paired transmission is received (the WDOG button does not need to be pressed to receive)
As long as an RF signal is received from a paired 725TRX within the timeout period, then the Watchdog relay will be maintained "ON"
If an rf signal is not received within the watchdog Timeout period then the Watchdog relay will relax indicating a problem!

LED	Watchdog Timeout
8	360 min
7	180 min
6	60 min
5	30 min
4	6 min
3	195 sec
2	135 sec
1	80 sec
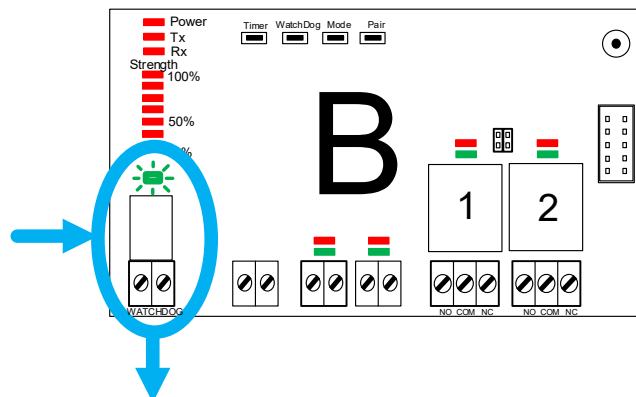
Notes:

1. We recommend that the receiving 725 allows for at least 3 Auto TX time periods
2. The 725-TRX will need to be paired in both directions for both watchdog relays to operate. A 725-TRX can only receive a watchdog signal when paired as a receiver.
3. When using Lora and Watchdog. Ensure that the Auto Tx Signal interval allows enough time for the Lora signal to transmit!
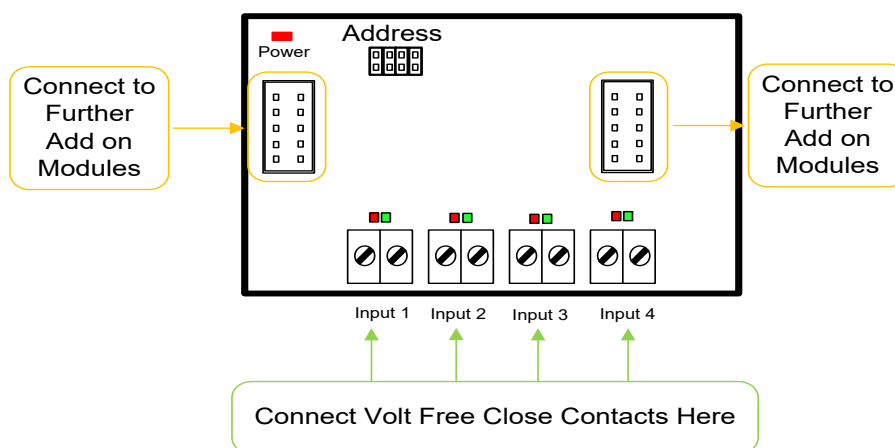
725 Series

Additional Input / Output Modules

Upto 4 Input and 4 Output modules can be added (16 inputs and 16 outputs (725-OP) 32 outputs (725-DOP8) max).
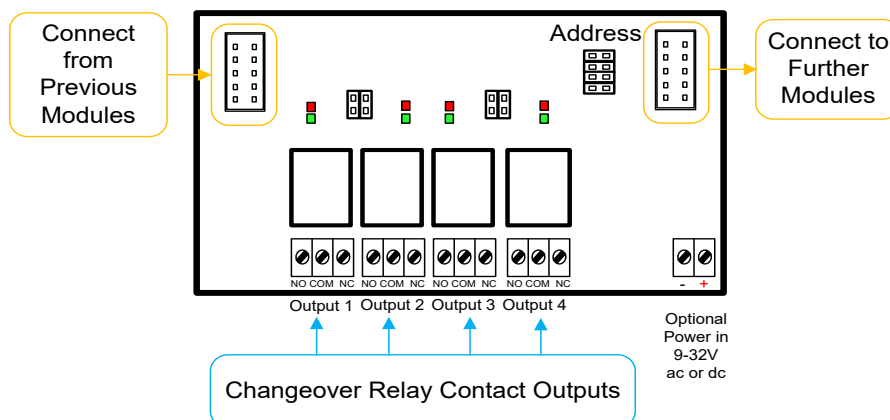
Cables are supplied to enable the modules to plug and play.

Once the Address Links are selected, no other configuration is required the add on modules function as an extension of the 725TRX Module.

725-IP Additional 4 Inputs Module

Power

Address

Connect to Further Add on Modules

Connect to Further Add on Modules

Input 1   Input 2   Input 3   Input 4

Connect Volt Free Close Contacts Here

725-OP Additional 4 x Output Relays Module

Connect from Previous Modules

Address

Connect to Further Modules

NO COM NC   NO COM NC   NO COM NC   NO COM NC   - +

Output 1 Output 2 Output 3 Output 4

Optional Power in 9-32V ac or dc

Changeover Relay Contact Outputs

725 Series

## 725-DOP8 Additional Outputs Module
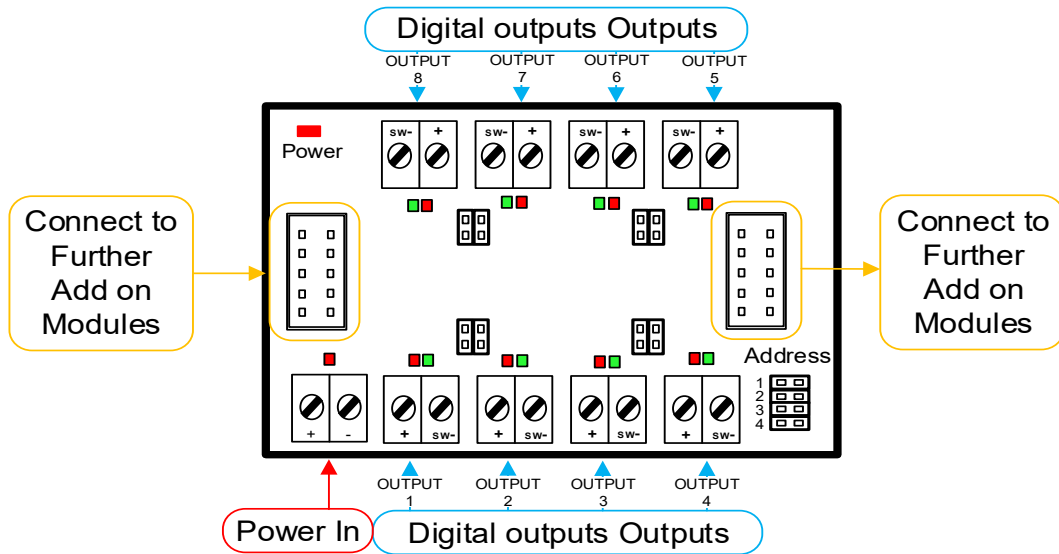
The 725-DOP8 module provides 8 Switching Outputs.

For each output, the +ve screw terminal is directly connected to the Power Supply +ve Voltage, When the output is activated the "SW" Screw Terminal is switched to GND.

The power supply for this module can be up to 30Vdc @6A enabling this module to switch higher voltages (e.g. contactors, PLC, or other switching logic)

725-DOP8 Output Schematic

725 Series
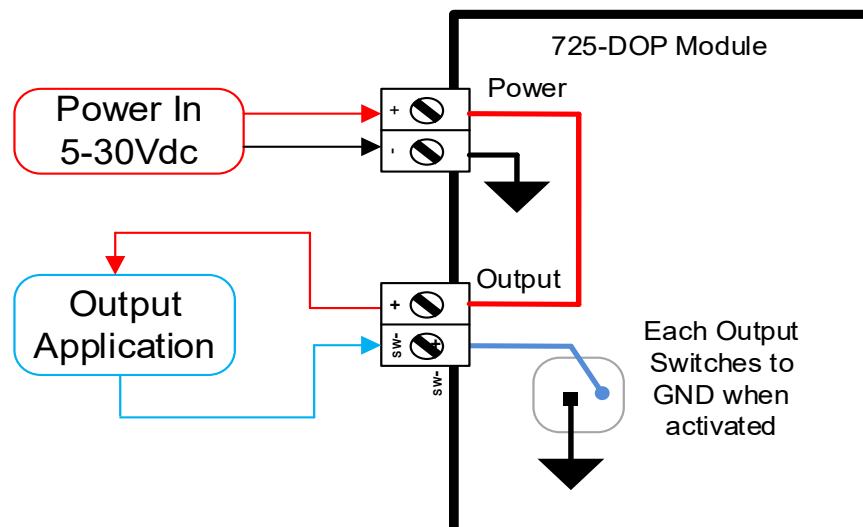
Connecting Add-on Input / Output Modules

Address settings:
Each module must have a unique address set by the Address jumpers (it doesn't matter what the address is)
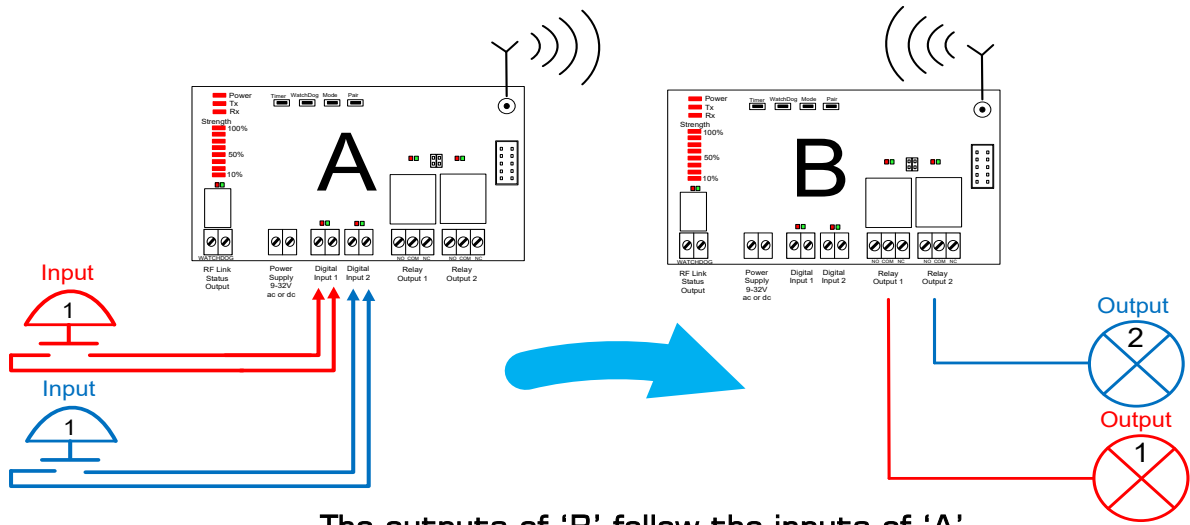*Note:* outputs will cycle in address order for pairing, timers and erasing.

Connect to 725TRX:
Connect to the 725TRX or previous I/O module using the ribbon cable provided
Note: When connecting more than one 725-OP module the power must be connected directly to the 725-OP module screw terminals.

Application Example A to B Telemetry

The outputs of 'B' follow the inputs of 'A'

Application Example A to B and B to A Telemetry

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725 Series
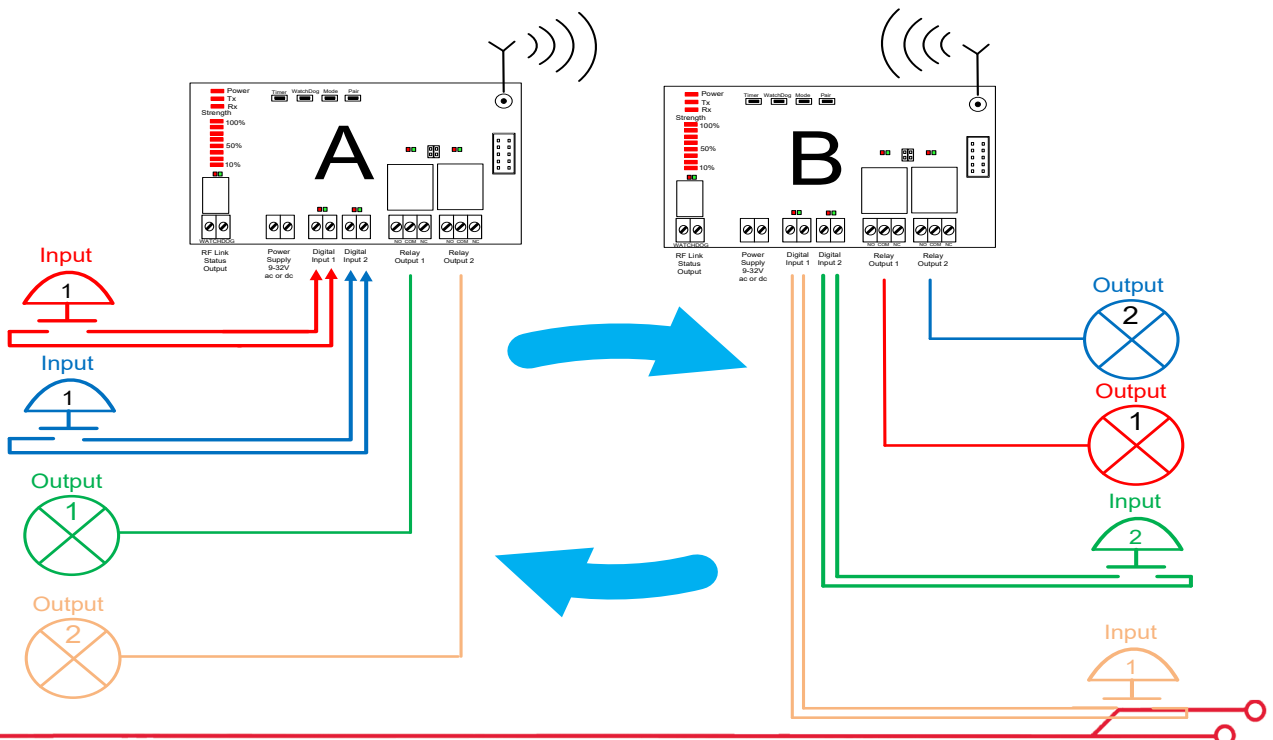
Application Example using Multiple Add-on Modules

In this Below example;
'A' inputs are paired directly with 'B' Outputs
'B' inputs are paired directly with 'A' Outputs

725 Series

More Advanced Example - using Multiple Transceiver Modules
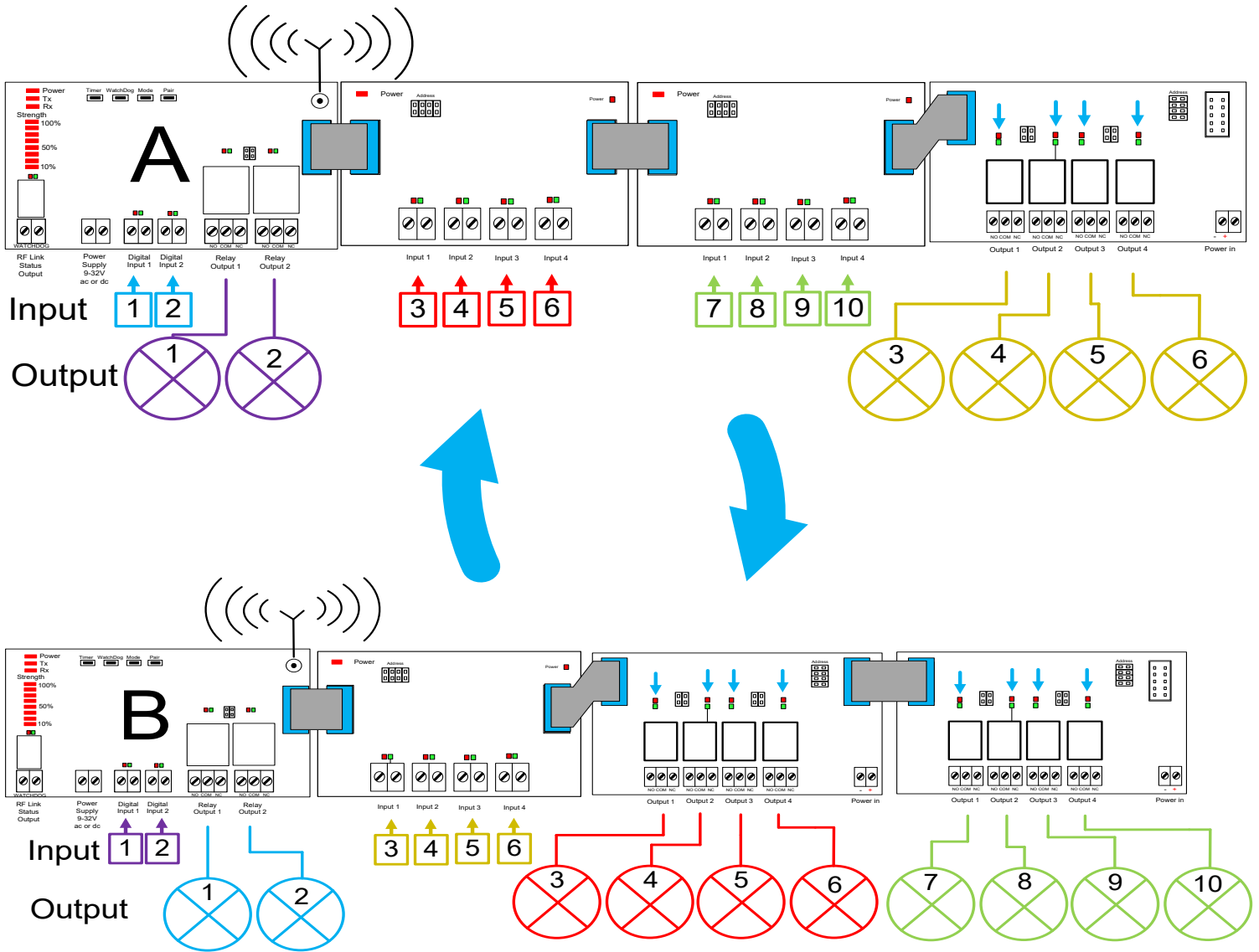
Application Example:

In the example below

'A' input 1 is paired with 'B' Output2

'A' input 2 is paired with 'C' output 1

'B' input 2 is paired with 'C' output 2

725 Series
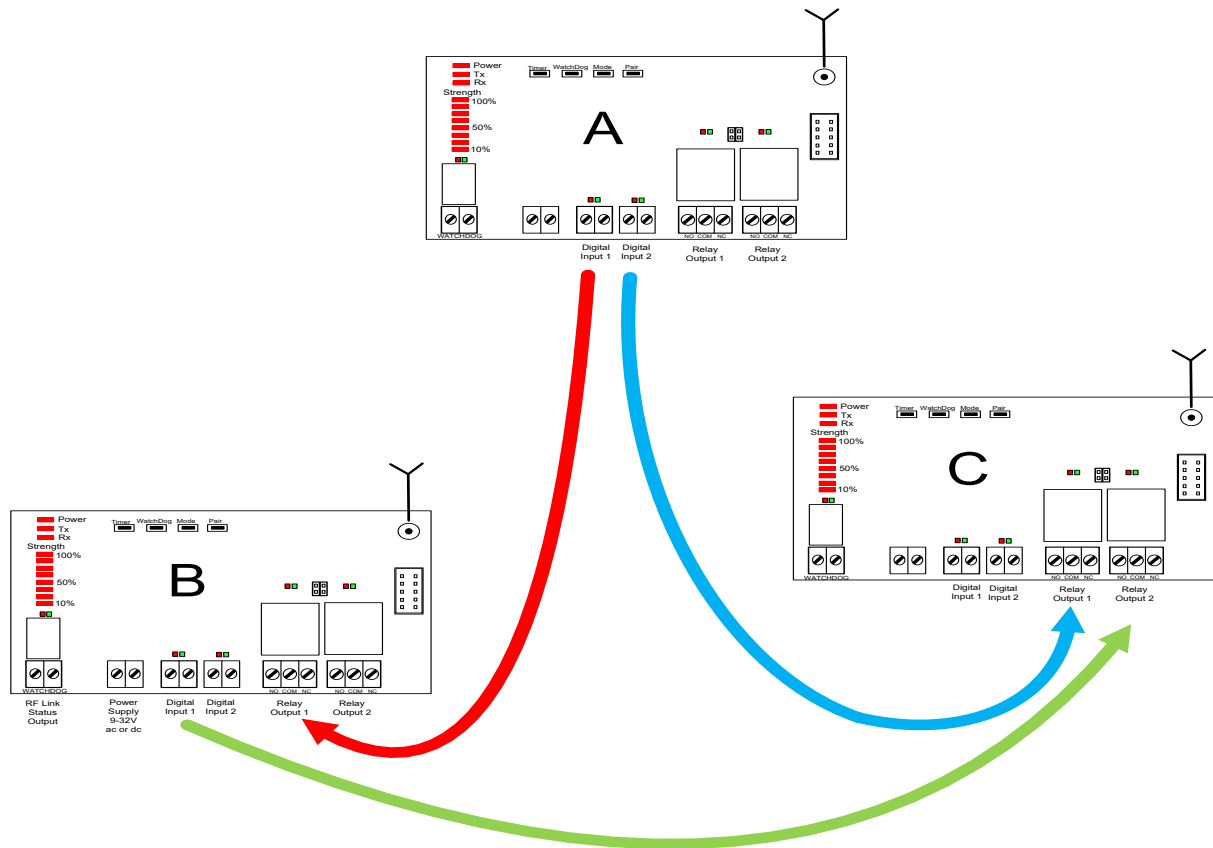
Optional Component Parts / Spares

ENC-DA3 enclosure:

- IP65 rated DIN rail enclosure
- 12V volt PSU
- 305mm X 220mm X 125mm
- Premade Back plate with DIN Rail Mount
- Easy clip fit for 700 series products

12V1A-IN-IP:

- IP67 rated PSU
- 12V volt
- 1Amp

CBA-SMAMR-SMAF:

Used for externally mounting an antenna

- SMA Male Right Angle
- 2. SMA Female Bulkhead Straight

ANT-GSM5WM:

- Wall mount antenna
- 3m cable
- Wall Mount Whip Antenna
- 824-960
- Active gain: +5dB
- RG58 Connecting Lead

725 Series

Technical Specifications

Transceiver: 725-TRX

Dimensions: 136 x 78 x 42 mm

Storage Temperature: -10 to +70º Celsius.
Operating Temperature: -10 to +50º Celsius.

Electrical Characteristics	Min	Typical	Max	Units	Note
Supply Voltage	12		32	Vdc or ac	1
Frequency:		869.500 915		MHz	
RF Output Power (ERP) @ 869.50 MHz	-	100		mW	
Supply Current : Quiescent All output relays operating Watchdog relay operating When transmitting		45 +101 +25 +95		mA mA mA mA	2

Input Module: 725-IP

Dimensions:68 x 78 x 42 mm

Storage Temperature: -10 to +70º Celsius.
Operating Temperature: -10 to +50º Celsius.

Electrical Characteristics	Min	Typical	Max	Units	Note
Supply Voltage		N/A		V	1
Supply Current		15		mA	

Output Module: 725-OP

Dimensions:136 x 78 x 42 mm

Storage Temperature: -10 to +70º Celsius.
Operating Temperature: -10 to +50º Celsius.

ELECTRICAL CHARACTERISTICS	Mode	Min	Typical	Max	Units	Note
Supply Voltage		12	N/A	32	V	1
Relay Rating* (230Vac) RLY 1-4			5		A(rms)	2
Time delay from Tx on Switch to Rx Relay operation	FSK LORA		30 30-1500		mS mS	
Time delay from Tx sw relax to Rx Relay re-lease	FSK LORA		30 30-1500		mS mS	
Supply Current : Quiescent All relays operating		12 +90			mA mA	

Output Module: 725-DOP8

Dimensions:90 x 78 x 42 mm

Storage Temperature: -10 to +70º Celsius.
Operating Temperature: -10 to +50º Celsius.

Electrical Characteristics	Min	Typical	Max	Units	Note
Supply Voltage	0.1	N/A	30	V	3
Supply Current per channel operating		6	7	A	
Quiescent current				mA	

Notes:

1. No direct power connection is required. The power is derived directly from 725-868 ribbon cable
2. The relay contacts in this unit are for functional use only and must not be used for isolation purposes
3. The supply input voltage is the output voltage for all outputs on the board.

725 Series

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RF Solutions Ltd
William Alexander House, William Way, Burgess Hill, West Sussex, RH15 9AG
Sales: +44 (0)1444 227900 | Support: +44 (0)1444 227909

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