868 SLH SYSTEM

The 868 SLH Series is a patented 868 Mhz radio-control system with encrypted self-learning Rolling Code. At every transmission, the transmitter code changes according to a complex algorithm, synchronised with data awaited by the receiver.

TECHNICAL SPECIFICATIONS

RECEIVER MODEL	PLUS 868	RP 868 SLH
Power supply voltage	20÷30 Vdc / 24 Vac ±10%	20÷30 Vdc
Nominal absorbed current	10 mA dc / 25 mA ac	20 mA
Max N° channels	50	1
Storable codes	/	250
Reception frequency	868.35 MHz ± 200KHz	
Ambient temperature	-20 ÷ +55 °C	
Nominal capacity	100 m *	50 m *
Protection class	IP 44	IP 00
Dimensions	175x90x40 mm	50x46 mm

DECODING CARDS	DECODER SLH	MINIDEC SLH
Power supply voltage	20÷30 Vdc	20÷30 Vdc
Nominal absorbed current	30 mA	10 mA
Output	relay (NO/NC)	open-collector
Storable codes	1000	250
Ambient temperature	-20 ÷ +55 °C	
Max N° channels	1	
Signalling LED	code recognition	
Dimensions	50x50 mm	40x35 mm

TRANSMITTERS	T2 868 SLH	T4 868 SLH
N° channels	2	4
Transmission frequency	868.35 MHz ± 200KHz	
Type of coding	self-learning encrypted rolling code	
Combinations	> 72 million billions	
Power supply	Two 3V lithium batteries mod. CR2032	
Approx. battery life	4/5 years	
Ambient temperature	-10 ÷ +55 °C	
Protection class	IP 40	
Dimensions and weight	34 x 64 x 14 mm / 20g	

* External factors such as atmospheric disturbances, within-range obstacles, and charge level of transmitter batteries, can affect nominal capacity (significantly in some cases).

868 SLH TRANSMITTERS

The transmitters (2/4 channel) can be of two types: *master* and *slave*.

How to recognise a master/slave transmitter

•*master* : if you press any key of a master TX, the LED flashes before becoming steady.
•*slave* :   if you press any key of a slave TX, the LED goes on immediately with steady light.

Differences between master and slave TX

•*master* : only a master TX can transfer its "system code" to decoding cards/RP receivers and to other TXs (master or slave).
•*slave* :   unable to transfer its "system code" and, therefore, cannot be either duplicated, or used for coding systems.
           Can learn the "system code" from a master TX.

- *Plus 868*:   a radio receiver for connection to one or more decoding cards (one decoding card for each channel).
- *RP 868 SLH*:   single-channel radio receiver with built-in decoding facility, and rapid connector for connection to FAAC equipment. Stores up to 250 TXs.

868 DECODING CARDS

- *SLH Minidec*:   decoding card with open-collector output and rapid connector for connection to FAAC equipment. Stores up to 250 TXs.
- *SLH Decoder*:   decoding card with relay output and rapid connector to connection to FAAC equipment, plus terminal board for wired connection. Stores up to 1000 TXs.

OPERATION DESCRIPTION

The 868 SLH system is based on initial self-learning by the decoding card or RP receiver of a "system code" received from a master TX.

The decoding card or RP receiver is able to store and recognise only TXs with the same "system code" (albeit with a different serial code) : every TX (master or slave) must therefore learn the "system code" from the master TX used for coding the decoding card/RP receiver.

The TX is stored on the decoding card/RP receiver by self-learning, at the second consecutive channel activation.

Under normal operating conditions, the transmitter is immediately recognised by the decoding card/RP receiver, providing 32 consecutive unsuccessful activation operations are not exceeded; above this number, the transmitter's channel must be pressed twice in succession within a maximum of 5 seconds, in order to re-synchronise the system.

PROGRAMMING SEQUENCE

1) Power up the system after installing and connecting the electrical components of the 868 SLH System (fig.1).
2) Use a master TX to set the "system code" on the decoding card/RP receiver (see "*system coding*").
3) Use the same master TX to set the system code on the system's other TXs (See "*TX coding*").
4) Coded TXs are automatically stored in the decoding card/RP receiver by simply activating the transmitter channel twice in succession within 5 seconds.

SYSTEM CODING

- Simultaneously press push-buttons P1 and P2 of the master TX and release them when the LED flashes (after about one second);
- Press and hold down the learning button on the decoding card/RP receiver: the LED must flash;
- While the master transmitter's LED is flashing, press and hold down a channel (the transmitter's LED goes on with steady light);
- Before releasing the learning button on the decoding card/RP receiver, check if the LED goes on with steady light for a couple of seconds to confirm that the "system code" was saved.
- Release the button of the Master TX channel.

TX CODING

- Simultaneously press push-buttons P1 and P2 of the master TX used for coding the system and release them when the LED flashes (after about one second);
- Frontally bring into contact the master TX and the TX to be coded (master or slave) as shown in figure 3;
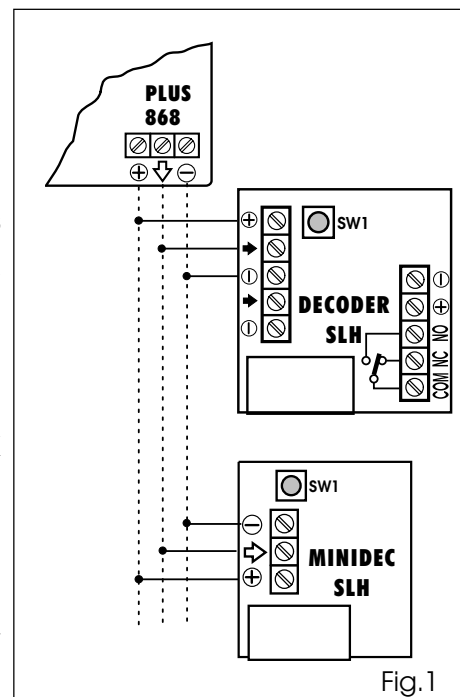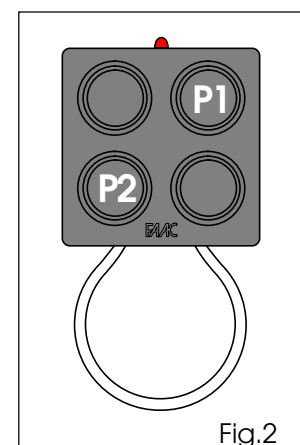

Fig.1

Fig.2

- On the master TX (while its LED is flashing), press and hold down the same channel used for coding the system: the LED goes on with steady light;
- Press the required channel on the TX to be coded and release it when the LED goes off after flashing twice to confirm the "system code" was saved;
- Release the button of the Master TX channel;
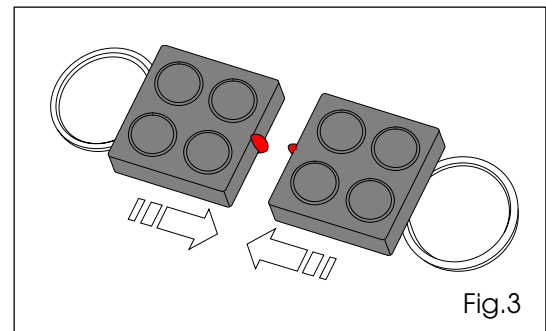- Repeat this procedure for every TX to be coded.

Fig.3

CONVERTING A TX FROM MASTER TO SLAVE

Procedure for converting a master transmitter into a slave transmitter:
- Simultaneously press push-buttons P1 and P2 of the master TX and release them when the LED flashes (after about one second);
- Again simultaneously press push-buttons P1 and P2 of the master TX and release them when the LED flashes faster(after about one second);
- Press push-buttons P1-P2-P1 in sequence: the LED will flash twice before going off to confirm the operation was performed.

RANDOMING THE SYSTEM CODE (master/slave TX)

"System codes" of all channels on a TX (master or slave) can be changed, by randomly generating them with the following procedure:
- Simultaneously press push-buttons P1 and P2 of the master TX and release them when the LED flashes (after about one second);
- Again simultaneously press push-buttons P1 and P2 of the master TX and release them when the LED flashes faster(after about one second);
- Press push-buttons P1-P2 in sequence and then simultaneously (P1+P2): the LED will flash twice before going off to confirm the operation was performed.

DELETING DECODER/MINIDEC/RP RECEIVER

Important: *if this procedure is carried out, the "system code" and all stored serial codes for transmitters will be deleted!*
- Press and hold down the learning button on Decoder/Minidec/RP Receiver: the LED starts to flash;
- 10 seconds later, the LED starts to flash more quickly;
- After another 10 seconds, the LED goes on with steady light for 5 seconds, and then goes off;
- When the LED goes off, release the learning button.
Note: If you release the push-button while the LED is flashing (slow or fast), deletion will not be executed.

REPLACING THE BATTERY

If transmitter capacity drops, we recommend you to change the batteries. Procedure:
- Open the TX by unscrewing the screw at the rear;
- Replace the two mod. CR2032 3V lithium batteries, fitting them in the compartment and observing correct polarity as shown in figure 4;
- Fit the base on the housing (ref. 1 fig. 4) before closing (ref.2 fig.4) and then secure with the screw (ref.3 fig. 4).
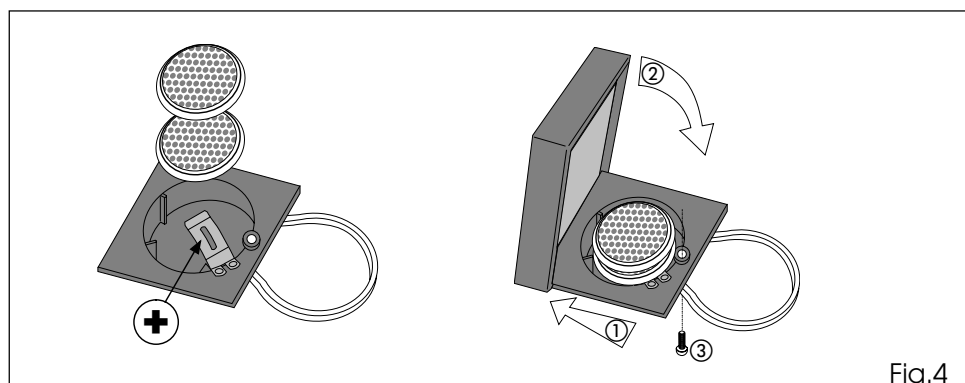

Fig.4