

5. Functionality

The transmitters can be set to transmit either data compatible with the old System 460 or data according to the new System T60. This is set with a switch (SW1) on the PCB. If the switch is in position on the T60 protocol will be used, if the switch is in position 1 (off) the 460 protocol will be used.

Make sure to turn off the transmitter before changing the protocol type, otherwise the changed protocol can be rejected.

The transmitters can be set to transmit continuously (only T60TX-0xERL & T60TX-04EDL) or normally. With a continuous transmission the stopswitch must be pressed to end the transmission. While not pressing any buttons, the transmitter transmits no function (System 460) or function 0 (System T60).

5.1. T60TX-0xSRL

The transmitter is started by pressing any button on the transmitter, while doing so the function representing the digit pressed will be transmitted.

The transmitter has the ability to manoeuvre 8 functions, all compatible with the coding of 408RFLIE (460) or T60TX-15SML (T60).

The transmitter can activate all eight functions at the same time

The transmitter will shut down immediately (0.1 sec) after the last button has been pressed.

5.2. T60TX-0xCRL

Functionality equal to T60TX-0xSRL.

5.3. T60TX-0xERL

A switch on the PCB (SW2) decides whether continuous transmission shall be active or not. When the switch is in position ON continuous transmission is active, if not the transmitter works as a T60TX-0xCRL with the stopswitch as an enableswitch.

Continuous Transmission:

The transmitter is started by pulling out the stopswitch and pressing button 1 and 2 for at least 500 ms. After 500 ms the diode will flash red/green until the buttons are released.

After releasing the buttons the transmitter starts transmit (no function) and when pressing a button the function representing the button is sent.

The transmitter has the ability to manoeuvre 8 functions, all compatible with the coding of 408RFLIE (460) or T60TX-15SML (T60).

The transmitter can activate all eight functions at the same time

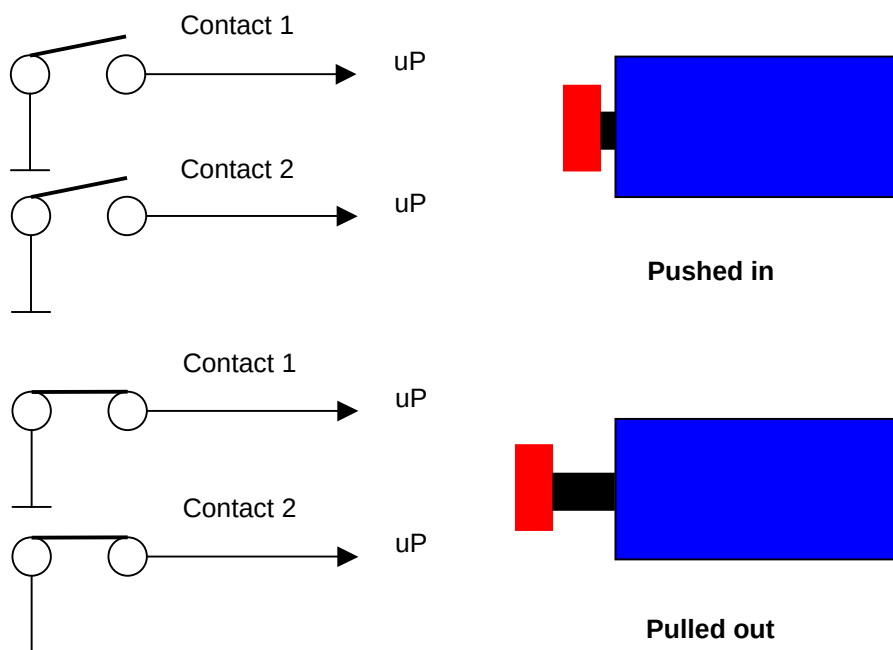
The transmitter will shut down when the stopswitch is pressed, and to restart the transmitter button 1 and 2 must be pressed again after releasing the stopswitch.

If the stopswitch does not work properly the transmitter will save an error code in the EEPROM. If the transmitter has saved an error code it will not startup when pressing button 1 and 2, instead the diode will flash red slowly.

To clear this error code a specific routine must be performed.

Test routine:

The stop button in the transmitter has 2 contacts that are separately connected to the microcontroller.



The following test of the stop button is done at start-up of the transmitter.

- 1.** Check that EEPROM value of address 0006H is equal to (00H). If it is not equal to (00H) an error has been found in the stopswitch when the transmitter has been shut-off. If EEPROM value is (00H) go to **3**.
- 2.** If the value of EEPROM address 0000H is not (00H) the transmitter diode will flash red slowly. The broken stopswitch must be replaced. When the transmitter is restarted the stop button must be checked by pushing it in once and pulling it out. If the test and stopswitch is OK the transmitter diode will flash red once while pressing the stopswitch and flash green once while pulling out the stopswitch. The transmitter will also clear the error status in the EEPROM. (flashing). If the yellow LED 2 is switched off when the stop button is pulled out again, the stop button is ok. The value (00H) will be written to EEPROM address 0000H (stop button=ok)

3. Read port PD0 and PD2.

4. If both contact are "closed" when the transmitter is started-up, the transmitter will startup. Any other state and the transmitter will not startup.

During transmission:

The stopswitch is monitored each lap of the program to guarantee highest safety.

T60

When pressing the stopswitch the transmitter starts sending a stop signal for 1 s. This is indicated with a red light from the diode. The stopswitch contacts are monitored continuously during this time. If both contacts are not "open" after 100

ms (eliminates contact bounces) the transmitter will write an Error Code to the EEPROM.

460

When pressing the stopswitch the transmitter stops transmitting instantly. This is indicated with a red light from the diode for 1 s. The stopswitch contacts are monitored continuously during this time. If both contacts are not "open" after 100 ms (eliminates contact bounces) the transmitter will write an Error Code to the EEPROM.

5.4. T60TX-04SDL

The transmitter is started by pressing any button on the transmitter, while doing so the function representing the digit pressed will be transmitted.

The transmitter has the ability to manoeuvre 4 functions, all compatible with the coding of 404RLIE (460) or T60TX-15SML (T60).

The transmitter can activate all four functions at the same time

The transmitter will shut down immediately (0.1 sec) after the last button has been pressed.

5.5. T60TX-04CDL

The transmitter is started by pressing any button on the transmitter, while doing so the function representing the digit pressed will be transmitted.

The transmitter has the ability to manoeuvre 4*2 functions, all compatible with the coding of 4042RLIE (460) or T60TX-15SML (T60).

The transmitter can activate all 4*2 functions at the same time

The transmitter will shut down immediately (0.1 sec) after the last button has been pressed.

5.6. T60TX-04EDL

Functions equal to T60TX-0xERL

4*2 simultaneous functions.

Startup on button 1 and 2 (first position)