

# QK-DM20002F + QK-DMTRDF

Two channel control board for access control systems. 2000 users



## Main features:

- 2 relays: 1A-30V, resistive load. Do not apply to the relay's contacts voltages over 30V dc or 24 V ac. Otherwise you must put an external relay.
- Power supply: from 12/24 V ac/dc
- Maximum numbers of codes, keys and proxy tags on memory: **2000 users**.
- Impulsive or permanent contact of the relays ( adjustable from ¼ sec. to 30")
- "Dead man" function.
- State of memory of the relays.
- Outputs protected from overtension.
- Function PTE (Push to exit) on both the relays.
- Storing of codes, keys and tags to the relay A or relay B or on both the relays.
- Output for led of relay contact.
- Output for led programming mode.
- Output for tamper alarm open collector ( 30 sec.)
- Possibility of reading, altering, duplicating and the storage of content of the internal memory by the QK-DMSWF.

## Simplified instructions for systems managed by proximity readers (QK-DMTRDF)

The control box reads Tags QK-DMTTAGF and Proximity cards QK-DMTCARDF.

It is possible to have 3 conditions of working: priority of reader, priority of code or double monochannel version.

**PRIORITY OF READER:** it is the reader that determines which relay has to go off.

This form needs the installation of two different readers, one that has to be connected to the line DATA1 and the other to the DATA 2.

Tags near the reader A set in action the relay A, whereas those near the reader B set in action the relay B. The same tag can be memorized two times in order to set both the relays.

It is not possible to obtain the simultaneous click of the relays.

**PRIORITY OF CODES:** it is the code saved in the tag that determines which relay must set.

This function is obtained by connecting, at the end of the storing, the two lines DATA 1 and DATA 2.

In this configuration the reader is only one and it results connected to both the lines of reading.

The tags draw up to the reader, determine the activation of the relay to which they had been combined during the storing.

If both validated, it will cause happen a sequential activation of both relays, and each one with its timing.

**DOUBLE MONOCHANNEL VERSION:** the two relays activate always at the same time.

If you want that each tag stored causes the simultaneous activation of the two relays, each one with its timing, you have to connect in a permanent way both the lines DATA1 and DATA 2 with the reader.

**TO ACTIVATE THE VERSION PRIORITY OF READER:** never connect the two lines one to the other. Reader A is connected to DATA 1, reader B is connected to DATA2.

## TO ACTIVATE THE VERSION PRIORITY OF CODES:

You have to store the tags by keeping separated the lines DATA1 and DATA2.

You have to use temporary two readers as the previous case, or you need to use only one reader by connecting it first to a line then to the other.

When you end programme mode, connect the reader of the system to both the lines.

Now switch-off the power-supply of the decoder and then restore it: you will notice a short flashing of the led, due to the fact that lines DATA 1 and DATA 2 are connected and this version has been activated.

## TO ACTIVATE THE VERSION DOUBLE MONOCHANNEL:

Before storing the tags, connect the reader of the system to both the lines DATA1 and DATA2,

now switch-off the power-supply to the system and then restore it, observing a short flashing of the led, due to the fact that lines DATA1 and DATA2 are connected and this version has been activated. Proceed with storing the tags in the usual way ( united lines) by waiting some seconds between a tag and the other.

## ATTENTION

In this version the codes are acquired two times ( the led emits two following vibrations),so each tag has to stay near the reader for double time.

If you don't respect the pause, you run the risk that the tag is joined to one relay only!

### Storing of tags and timings of the relays

Once set the version of working, it is better to put together in a first group the tags that have to be associated to the relay A, and in a second group those that have to be associated to the relay B and in a third group that have to be associated to both the relays.

- delete totally the memories by keeping pressed for 6 sec.continuos both the buttons P1 and P2 on the decoder. At the end, release again the buttons (the led starts flashing)
- approach to one of the two readers the first tag to store. This one will be the **MASTER\***
- approach to the reader A (connected to DATA1) the tags to store to the relay A
- approach to the reader B (connected to DATA2) the tags to store to the relay B
- approach first to the reader A and then to the reader B the tags to store to both the relays.
- Get out of the programming by using a tag already stored.
- Set up the timing of the relays in the following way:

#### Storing the timing of the relay A:

- switch-off the power-supply of the system
- Push P1 and keep it pressed
- Give power-supply to the system (by keeping pushed button P1) and count the flashes emit by the red Led
- When the number of the flashes you want is reached, leave again P1 (see the table for the meaning of the flashes).

#### Storing the timing of the relay B:

- Do the same things as above, but working on P2 instead of P1

(\*) **the MASTER can be stored by the reader A or B or both, it depends on which relay you want to activate.**

The main operation of the **Master** is to send the control board in programme mode, however it can be also used for operating the relays (we advise you not to make it, especially in timing "dead man").

**Remember that the MASTER enter in programme mode the system when it is kept for 8 sec. continuously in front of a reader.**

If the activation of the relay with the Master is not wanted, do the following steps:

#### Master does not activate the relays:

- enter in programme mode
- push P2 and keeping it pressed, approach the master to the reader.
- leave the planning

If you want to restore the Master, follow the steps:

#### Master activates the relays:

- enter in programme mode
- push P1 and keeping the button pushed,approach the reader to the master
- leave the planning

#### **N.B.**

- The adressed cancellation excludes the tag from both the relays.
- Pressing the button PTE1 causes the click of relay A. Pressing the botton PTE2 causes the click of relay B.
- You can change timing of the relays whenever you want
- You can add tags in memory when ever you desire.

#### **Timing table of the relays**

When you push a button P1 or P2 on the card while the alimentation is removed and after you apply the alimentation ( always keeping the button pushed),the red Led starts emitting short flashes of light as the following table:

- 1° flash = PERMANENT (BISTABILE)
- 2° flashes = DEAD MAN (\*\*)
- 3° flashes = 0,25 sec
- 4° flashes= 1 sec
- 5° flashes= 2 sec
- 6° flashes= 3 sec
- .....ectetera.....
- 31° flashes = 28 sec.: max timing admitted

(\*\*) DEAD MAN: The relays stay active until the tag stays in proximity of the reader.

**If you use the Master to activate the relay, just remember that after 8 sec. the control board starts working.**

To avoid this possibility choose the option: in order not to make the Master activate the relays  
The function DEAD MAN can be also activated with the PTE button.

Leaving the planning can also happen in the following cases:

- 1) taking off the alimentation to the card
- 2) by reaching the 2000° tag memorization (full memory)

**Example of programming (modality: priority of reader)**

Memorize a tag on the relay A and other 5 tags on the relay B

timing of relay A = DEAD MAN

timing of relay B = impulsive 2 sec

PROCEDURE:

1. push together P1 and P2 on the card □ the Led "vibrates"
2. after 6 sec nearly the Led blinks
3. leave again the buttons
4. approach the first tag (MASTER \*) to one of the two readers □ the Led "vibrates"
5. approach to the reader A the tag that must set the relay A □ the Led "vibrates"
6. approach to the reader B, one by one, the other 5 tags □ the Led "vibrates"
7. approach to the reader B one of the 5 tags already memorized □ the programming of the codes is finished.
8. Take off the alimentation from the card
9. Push P1 and, keeping it pushed, supply the card again
10. count the flashes of the led; then leave P1 at the 2° flash □ relay A = DEAD MAN
11. take off the alimentation from the card
  
12. push P2 and, keeping it pushed, supply the card again
13. count the flashes of the Led; then leave P2 at the 5° flash □ relay B = impulsive 2 sec

#### **Add of tags to memory**

You can add tags whenever you want, by using the MASTER, or by using the button P1

**Example: HOW TO ADD TAGS COUPLED TO THE RELAY A (modality: priority of reader)**

PROCEDURE:

- approach to the reader A the tag MASTER, by keeping it stopped for nearly 8 sec, or push P1 for 6 sec. At the end the Led blinks □ enter in programming
- approach to the reader A, one by one, the 4 tags □ the Led "vibrates" and then flashes  
approach to the reader A one of the 4 tags already memorized the led switches off (leaving the planning)

**IMPORTANT.** If the control board is in modality: **priority of codes**, before adding tags in memory, you have to link off both the lines, then memorize the new tags, then connect the lines and at the end switch off and supply again the alimentation.

#### **ELIMINATION OF LOST TAGS FROM THE MEMORY**

Whenever you want it's possible to delete tags from memory, by using QK-DMSWF. Also, it is possible to delete all tags by maintaining pressed P1 and P2 on the control board for at least 6 seconds.

#### **TAMPER**

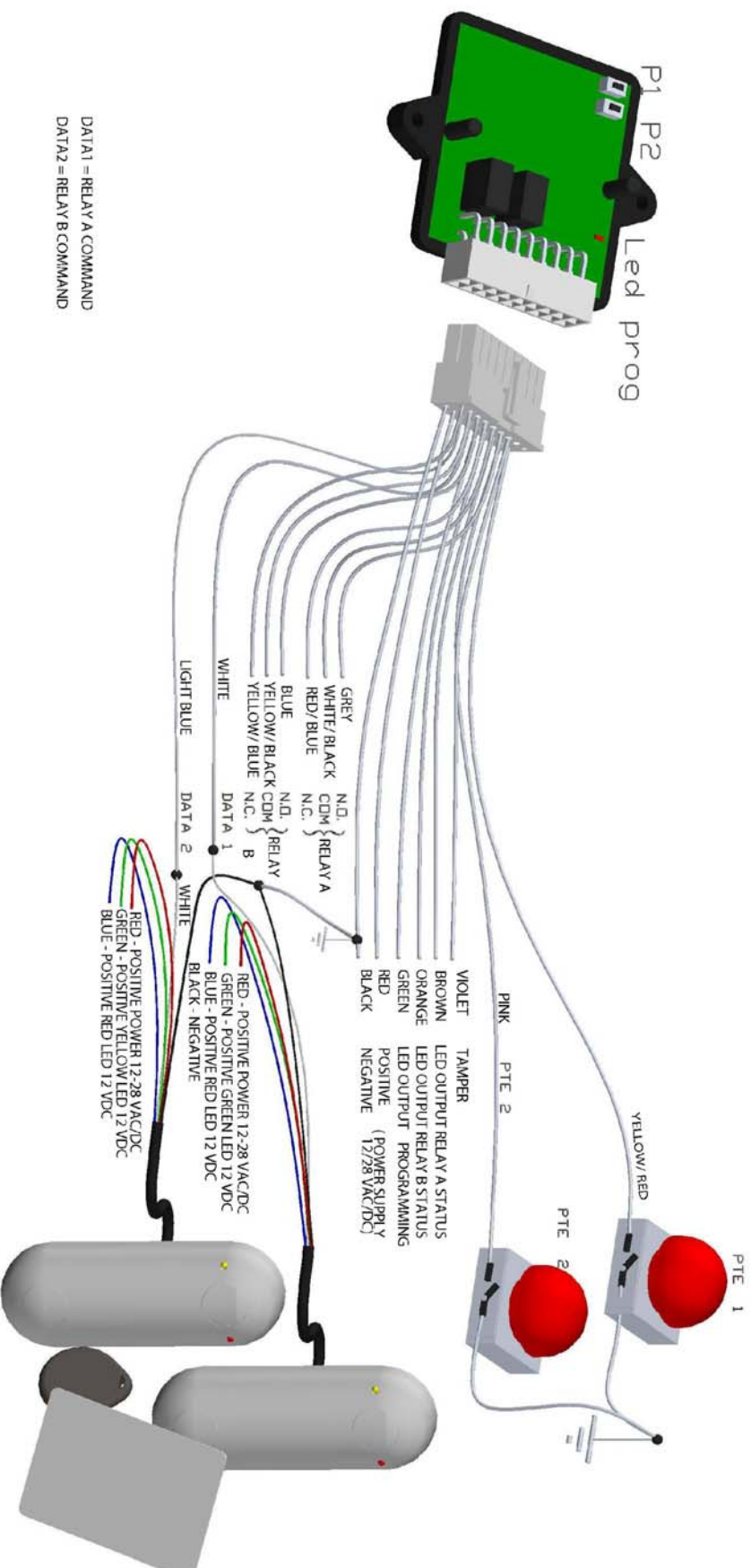
The card reacts to the burglary by producing an ALARM TAMPER transistorized (50mA), that lasts 30 sec. This happens if within 30 sec, you approach to the reader some tags which are not in memory or not enabled to that relay.

By approaching a valid tag the alarm TAMPER is being switched off.

#### **DATA MANAGEMENT**

By using the tool QK-DMSWF and a normal PC it's possible to read, alter, duplicate, register and print the content of the internal memory of the control board.

# WIRING DIAGRAM



DATA1 = RELAY A COMMAND  
DATA2 = RELAY B COMMAND