PROXIMITY TAG READER PROGRAMMING AND INSTALLATION GUIDE

DIGITAL PKR

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Main Functions
The main functions of the PKR Proximity Reader are the following:

GeneralDescription

Introduction
The PKR Proximity Key Reader - available in a number of models for the installation and functioning of
the power and switching models of the premises under surveillance - needs to be connected with 4 cables to the bus 485 of ProSYS centrals 16, 40, and 128, and it will allow you to proceed with the insertion and deactivation of the alarm system through proximity tags.
Each of these tags is associated to a system user code (max 99) and, when it is put close to the reader, it inserts one or more partitions of the system according to the insertion levels that have been assigned to a specific user code.
The programming of the readers and tags is performed from the system keyboard with LCD display without any additional programming device. The system accepts a maximum of 16 Proximity Readers and each of them can be individually customized for the insertion of the full system or of specific partitions only.
The following instruction describe the

Technical programming of PKS readers performed by the Installation company, the programming activity for the User and instructions for the activation and deactivation of the system with tags.

• Alarm activation from one or more remote stations inside or outside the protected areas.
• One or more partitions, up to a maximum of 4, can be inserted with a single tag and any combination can be selected. For example, it is possible to insert partition 1 and 4, or partition 1, 2 or 3 only, etc.
• With the same tag various partitions can be inserted according to the running reader.
• All system partitions can be inserted comprehensively.
• In the event the alarm has a single partition, both the partial and total insertion can be performed with the tag (press ⊙ on the keyboard).
• The same activation keys can be used on different systems, such as home and office systems.

Installation and programming from the Technical Menu

Reader Preparation and relevant Wiring
Encode the reader that you want to install with the dedicated microswitches in order to assign an ID address. The maximum amount of readers that can be connected to the central is 16, starting from ID 1. Please refer to the below table to prepare the microswitches for the address of destination.

MICROSWITCHESOF ID ADDRESS

← BUS GRN (Green wire)
← BUS YEL (Yellow wire) BUS BLK (Black wire) BUS RED (Red wire)
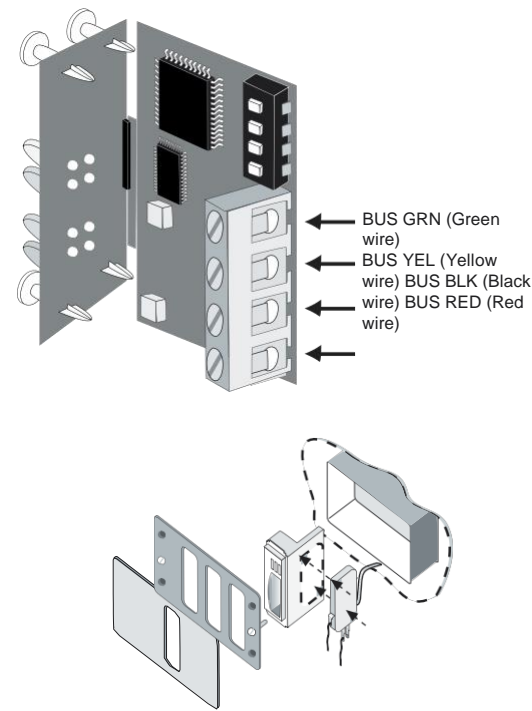
| Modules of Micro-Switches Expansion | Program the identification ID number of each device arranging the microswitches as shown in the below table. The additional addresses from 9 to 16 are exclusively dedicated to keyboards and key modules. |

| Each expansion module shall have a ID number for system identification. To properly arrange the microswitches, see the table on the right.	Microswitches					Microswitches			
	ID	1	2	3	4	ID	1	2	3	4
	01	off	off	off	off	09	off	off	off	ON
	02	ON	off	off	off	10	ON	off	off	ON
	03	off	ON	off	off	11	off	ON	off	ON
	04	ON	ON	off	off	12	ON	ON	off	ON
	05	off	off	ON	off	13	off	off	ON	ON
	06	ON	off	ON	off	14	ON	off	ON	ON
	07	off	ON	ON	off	15	off	ON	ON	ON
	08	ON	ON	ON	off	16	ON	ON	ON	ON

When the proximity reader has been coded, IF REQUESTED, install a tamperproof switch as shown in the below picture and make sure that the metal stick of the switch pushes against the internal wall on the back of the recessed box (box type 503). Connect the tamper to a 24-hour area of the central station in order to report Reader tampering attempt.
Connect the 4 clamps of the reader to the cental bus. See the following pictures.

Reader Programming
The proximity reader is a module that has to be configured as all other modules of the system.

In order to add one or more readers to the system, once they are set up (ID address) and connected to the bus, proceed as follows.
On an LCD keyboard digit * 71 to enter the technical programming mode and insert the manufacturer code 0116 (ProSYS 16), 0140 (ProSYS 40), 0128 (ProSYS 128). Keyboard display view:

| PROGRAMMING: PLEASE WAIT... | PROG. TECHNIQUE: ↓ 1) SYSTEM. |
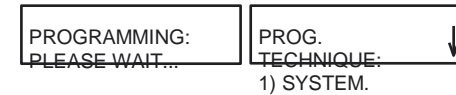
Now digit 7, 1, 9, 1. The following information will be displayed:

| KEY READER: ID=1 TYPE=NO |
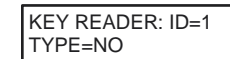
Use UP-arrow and DOWN-arrow to position the cursor on the ID number field of the reader that needs to be to be Added or Canncelled to/from the system. The first reader shall be programmed with the first ID number "01". Please make sure that
the microswitch bank of the key reader is set on ID=01, as described above. With the cursor on the field "TYPE" press the button ⊙ and select PKR among the following options:

• NO (no key reader) (used to cancel the module)
• DKR (Digital Key Reader)
• PKR (Proximity Key Reader)

As soon as the selection has been made, press the button to confirm and following information will be displayed:

| READ. ID KEY=01 IMMEDIATE INSERT? N |
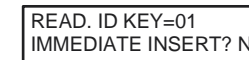
Press ⊙ and select **[Y]** (Yes) if you want to instantly insert the system from this reader and eliminate the output lag time or N (No) if you need to keep the said lag time because the reader is located inside the room.
As soon as the selection has been made, press **#/6** to confirm and the following information will be displayed:

| P=12345678 PKR= 01 SSSSSSSSSS= Si |
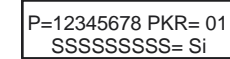
By moving with the arrows below the numbers from 1 to 8 (1 to 4 for ProSYS 16 and 40 central stations), press ⊙ and select **[Y]** (Yes) or **[.]** (No) to add or eliminate the partitions that can be controlled from this reader.
Directly digit the numbers in order to turn the partitions on or off without using the STAY button and the arrows to move. Press to confirm and proceed to the next screen:
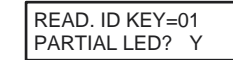
| READ. ID KEY=01 LED READY? Y |
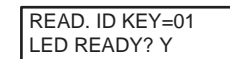
With the button select **[Y]** (Yes) if you want to display the system status of Ready for Insertion or N (No) if you do not need to display such information, and press to confirm and proceed to the next screen:

| READ. ID KEY=01 INSERTED LED? Y |

With the button select Y (Yes) if you want to display on this reader the status of Inserted System (red LED) or N (No) if you do not need such information, then

---

press **#/6** to confirm and proceed to the next screen:

| READ. ID KEY=01 PARTIAL LED? Y |

Select Y (Yes) on this reader to display the status of the System Inserted as Partial (yellow LED) N (No) if the information is not required,

press **#/6** to confirm and switch to the nex display:

| READ. ID KEY=01 EXCLUSION LED? Y |
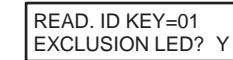
Press ⊙ and select **[Y]** (Yes) if you want to display the exclusion status (blue LED) on this reader (if there are excluded areas) N (No) if you do not need to display such information, and press **#/6** to confirm and proceed to the next screen:
When you are done press **[*]** in order to come back to the previous menu levels.

NOTE: If you need to "cancel" the Module, select "NO" on the option "Type" and press **#/6**
The following information will be displayed:

| KEY READER: ID=1 TYPE=NO | ** DELETE? ** ARE YOU SURE? N |

Press the button **#/6** to return to the previous display OR press the button ⊙ to select **[Y]** (Yes) and to confirm deletion. Repeat the above described procedure for the other Key Readers that need to be programmed.
NOTE:
1. The display options PARTIAL and EXCLUSION are turned on when the reader is running a single partition.
2. In the event a reader looses the connection with the central station, the breakdown condition is displayed on the "Breakdown Display" and on the "List of Events" of the LCD keyboard, the readers activates the simultaneous blinking lights of the first 3 LEDs.
3. In the event the option Forced Key Insertion is activated (System Menu -> SIS Controls) the insertion with the
proximity tag will exclude the open areas completely. Such areas are permanently excluded and reset for the subsequent system release.

User codes, Tags and relevant programming

Proximity tags have an internal univocal code (4294 Millions of possible combinations) which is written on the ProSYS memory during the Proxy Tag registration on the Code Changing menu.
The user code does not need to be programmed on the central station to register a tag **(except for the tag associated to the user "cleaner")**. Each tag has to be assigned to a specific user. It is not possible to assign more
tags to the same user.

Tags are separately identified on the memory though the assigned user numbers. The user may also assign
a code to the user number assigned to the tag, in order to proceed with activation or deactivation, also from the keyboard.


Partition Assignement to the Users of Proximity Tags

When the readers have been programmed, set up the user options for as many users as the number of tags in use
The option to program for the user codes dedicated to the proximity tags is the following:

• User Partition Assignment. This option defines the partitions that can be controlled by the user and relevant associated tag.

During the technical programming, if on the first line of the screen
it is displayed "TECNICAL "PROG.", press 4 and then 2 to display:

| COD./ PARTITION: COD.= 01 |

Use the buttons UP-arow and DOWN-arrow to position the cursor on the first number of the User code. Insert the User Code number in order to associate it to a key and press **#/6** to assign one or more partitions.
The following information will be displayed:

| P = 12345678 C = xx S. . . . . . . |
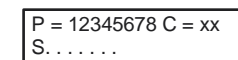
On the above display, assign the partitions of the pending User shall be in control. Accrdingly, use the button to switch between **[Y]** (Yes) and **[.]** (No)

and the UP- arrow and DOWN-arrow to move right or left under the partition numbers. Note that a
"non-partitioned" system" refers to a single partition system, namely "Partition 1"
Press **#/6** to switch to the next User Code. If required, repeat the previous steps to program the partitions of other User Codes to be used
for the digital activation keys. When you are done, press **[*]** to come back to the previous menu.

To exit the technical programming function, when "TECHNICAL PROGRAMMING" is displayed on the first line, press 0 and to save
data and go back to the User Mode.

Programming from the User Menu

Proximity tag storage and relevant user assignment

The proximity tag storage and the relevant assignment of the system users is made from the user menu.
Remind that the maximum number of tags that can be programmed corresponds to the maximum number of active available users of the central station in use:

ProSYS 16: up to 30 tags
ProSYS 40: up to 60 tags
ProSYS 128: up to 99 tags
The tag registration device is the first of the PKR installed readers (if more than one).

If there are PKR readers only on the BUS the storage reader is ID.1. If also DKR readers are available, to read digital keys, the PKR reader for tag storage is that with the lower ID number.

In the event there are LCD keyboards with integrated proximity reader, the storage is made from the keyboard.

Please note that the proximity tags used by PKR readers are the same ones used on keyboards with integrated proximity reader.

For tags registration proceed as follows: When the keyboard display is showing the system status, press [*]. The following information will be displayed:

```
USER FUNCTIONS
1) EXCLUSIONS      ↓
```
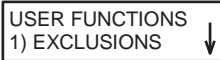
Press 5 and, when requested, insert the Grand Master user code of the producer, 1234 (123400 when a 6 digits code is requested) (or any other code that enables user codes programming) and press #/6 to confirm. The following information will be displayed:

```
CHANGE CODES
1) USER CODES      ↓
```
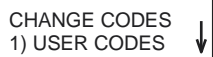
Press the DOWN-arrow until you reach the following screen:

```
CHANGE CODES       ↕
5) PROX TAG
```

Press #/6 to display:

```
PROXIMITY TAG
1) RE (WRITE)      ↓
```
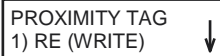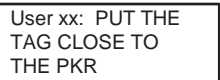
please remind to select the same user codes that were previously assigned to the partitions under technical programming (previous paragraph "Partition Assignment to Users Codes dedicated to Proximity Tags")

When the user number has been selected by using the arrows, press #/6 to display the following information.

```
User xx: PUT THE
TAG CLOSE TO
THE PKR
```

or, if an LCD keyboard with proximity reader (LCDP) is available

```
User xx: PUT THE
TAG CLOSE TO
THE LCDP
```
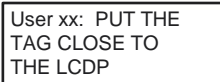
If the PKR is used for programming, reach the reader coded as reader 1 (ID address 1) or the PKR reader with the lowest address number

put the tag at a distance of 2 or 3 centimeters. Please note that the first three LEDs of reader 1 (or that with the lowest number) will flash in sequence (Red, Green, Yellow, Red, etc.) highlighting that the reader is ready for tag programming. As a confirmation for the tag programming the keyboard buzzer will produce a sound signal and the reader LEDs will turn off.

On the keyboard the display will show for a few seconds the confirmation of the tag programming and
the subsequent user number to proceed with further tag programming.

Note: after approximately 2 minutes, if during the programming procedure the tag to be programmed is not inserted, the keyboard will exit the User Function Menu.

Repeat this operation for each user that needs to be assigned to proximity tags.

When all the codes of all users have been programmed, press [*] to display the following:

```
PROXIMITY TAG
1) RI (WRITE)      ↓
```
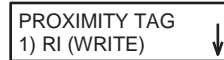
WARNING: The writing operations and tag cancellation must be exclusively performed from reader 1 or, if
also DKR readers are available, from thee reader with the lowest ID number. If an LCD keyboard with integrated proximity reader is available (LCDP) the cancellation procedure is automatically assigned to the keyboard.

If a tag needs to be cancelled, you can choose one of this 2 options:
• User cancellation
• Tag cancellation
In the first case you need to know who is the user assigned to the tag that needs to be cancelled, the tag is not required.

In the second case the tag is put close to the reader during the cancellation process in order to be cancelled from the central station memory.

To access the above mentioned cancellation procedures proceed as follows:

From the previous screen press Down-arrow in order to display:

```
PROXIMITY TAG:
2) CANC. FROM user ↕
```
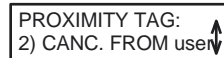
Press #/6 and insert the user code (or move on it with the down arrow) for which you want to eliminate the assigned proximity tag and then press #/6 again to confirm and proceed to the next screen:

```
* * * DELETE* * *
ARE YOU SURE ? N
```

Press 🔘 to switch between [N] (No) and [Y] (Yes) and press #/6 to confirm the cancellation of the tag associated to the selected user number.
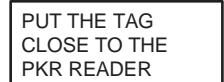
If you want to cancel Tags with the Cancel option on the tag, proceed as follows:

```
PROXIMITY TAG
1) RI (WRITE)      ↓
```

On the previous screen press the down arrow twice. The following information will be displayed:

```
PROXIMITY TAG:
3) CANC. FROM TAG  ↑
```

Press #/6 to display:

```
PUT THE TAG
CLOSE TO THE
PKR READER
```
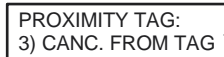
Note: The previous screen may also display the following caption: PUT THE TAG CLOSE TO THE LCD KEYB. if an LCD keyboard with integrated proximity reader is available.

Put the tag close to the PKR reader with ID 1 (or to that with the lowest ID) to cancel the tag.

When you have terminated the tag programming or cancellation operations press [*]||||||times to exit the User Function menu.

Proximity tags functioning

Introduction

The ProSYS insertion system with proximity key can be operated in 3 different ways depending on how the readers and the activation tags have been programmed. The functioning modes are the following:

• Single partition and possibility to proceed with Total or Partial insertion from the tag (or by pressing 🔘 on the keyboard).

• Up to 2,3 or maximum 4 partitions that can be managed separately; it is possible to insert 4 partitions together, a single partition or any combination of the 4.

• All system partitions (if there are more than 4) through the insertion of all partitions but without the possibility to choose which partitions are inserted and which ones are disabled.

The following paragraphs described these 3 types of configuration.

Note: remind that the mentioned configurations can be programmed separately for each reader of the system.

Single Partition - Total or Partial Insertion

This mode of functioning applies to the following 2 cases:

• **The reader is assigned to a single system partition.**

• **The reader is assigned to more than one partition but the activation tags in use is assigned to a single partition.**

To **insert** the system put the tag close to the reader (2 - 3 cm approximately) and wait until the LED turns on. As soon as the LED of the desired functioning mode turns on, distance the tag. The system is inserted.

To **deactivate** the system put the tag close to the reader and wait for the LED to turn off before distancing the tag. The system has been deactivated.

Note: if, when you put the tag closer, the LED lights of the reader start blinking fast and simultaneously, the tag has not been recognized or is not enabled for the requested operation. Retry to bring it closer again or verify whether it has been properly programmed.

If a tag is not saved on the system, when you put it close to the reader for 3 times with the purpose of disinserting the system, a tampering alarm of "False Code" will be triggered.

The following table shows the possible indications and the relevant meaning.

System Status	Reader with a single Partition Red/Yellow/ Green/Blue LED	Notes
Partition Ready	○○ ○●	Steady LED light on
Partition not ready	○○ ○◉	Blinking light Slow
Partition inserted in Total	●○ ○○	Steady LED light on
Partition inserted in Partial	○● ○○	Steady LED light on
Delay in Total Outlet	◉○ ○●	Slow blinking light after distancing the tag from the
Output delay in Partial	○● ○●	Slow blinking light after distancing the tag from the
Partition alarm	◉○ ○○	Blinking ligh Fast

○ LED Off   ● LED On   ◉ LED blinking

Up to a maximum of 4 Partitions - Individual partition Insertion and relevant combination

This mode of functioning applies to the following 2 cases:

• **The Reader has be associated to 4 partitions.**

• **The Reader is associated to 4 partitions but the activation key in use is associated to 2, 3 or 4 partitions.**

Note that you can select and assign to the Reader 4 (ProSYS 16 and 40) or 8 (ProSYS 128) partitions available on the system. The LED on the top displays the partition with the lowest number.

To insert the system put the tag close to the reader and wait for the LED to turn on. As soon as the LED (or LEDs) of the desired functioning mode turns on, distance the tag. The selected partitions have been inserted. Note that the partition LEDs turn on sequentially showing all possible combinations. Distance the tag when the desired combination is displayed, for example partition 1+3 red LED and green LED on.

To **deactivate** the system put the tag close to the reader and wait for the LED (or LEDs) to turn off before distancing the tag. Partitions disconnected.

Note: if, when you put the tag closer, the LEDs of the reader start flashing fast and simultaneously, the tag has not been recognized or is not enabled for the requested operation. Retry to put it closer and verify whether it is properly programmed.

If a tag is not registered on the system, when you put it close to the reader for three times and try to
deactivate the system, a tampering alarm of "False Code" will be triggered.
The following table shows the possible indications and the relevant meaning.

System Status	Reader with 4 partitions (Each partition has a dedicated LED)	Notes
Partitions Ready	○	LED Off
Partitions not ready	◉	Blinking light Slow
Partitions Inserted	●	Steady LED light on
Output Delay	◉	Slow blinking light after distancing the tag from the
Partitions alarm	◉	Blinking light Fast

○ LED Off   ● LED On   ◉ LED blinking

Note that the column of the Reader with 4 partitions has a single LED because the signal is individual for each partition. Each partitions corresponds to an LED The partition with the lowest number is indicated by the first LED from the top.

More than 4 partitions- Global insertion of the partitions

This mode of functioning applies to the following 2 cases:

• Both the Digital Reader and the tag are associated to all partitions programmed on the system.

To insert the system put the tag close to the reader (2 - 3 cm) and wait until the Red LED turns on. As soon as the LED turns on, distance the tag. All system partitions are inserted.

Note: if the Red LED is blinking slowly after having inserted the partitions, it means that one of the partitions associated to the reader is not inserted (probably, it was not ready for insertion - green LED blinking light before insertion).

To deactivate the system put the tag close to the reader and wait for the LED to turn off before distancing the tag. All partitions disconnected.

Note: if the tag is enabled to manage up to 4 partitions, during insertion the reader LEDs will allow you to select the partitions for insertion

Note: if the tag is enabled to manage a single partition only, during insertion the reader LEDs will allow you to select Total or Partial for that partition.

Note: if you put the tag close to the reader and the reader LEDs are blinking fast and simultaneously, the tag has not been

read or is not enabled for the requested operation. Retry to put it close and verify whether it is properly programmed.

If a tag is not registered on the system, when you put it close to the reader for three times and try to
deactivate the system, a tampering alarm of "False Code" will be triggered.

The following table shows the LEDs view when the mode of functioning is set on Number of Partitions higher than 4 and relevant explanation.

System Status	Reader with more than 4 Partitions Red/ Yellow/ Green/ Blue LED	Notes
Partitions Ready	○○ ○●	Steady LED light on
Partitions not ready	○○ ○◉	Blinking light Slow
Some Partitions have been	◉○ ○○	Slow blinking light means that only some of the partitions have
All Partitions Inserted	●○ ○○	Steady LED light on, all the assigned partitions have
Output Delay	◉○ ○●	Slow blinking light after distancing the tag from the
Partitions alarm	◉○ ○○	Blinking light Fast

○ LED Off   ● LED On   ◉ LED blinking

Technical Features and Product Codes

TECHNICAL FEATURES

Power supply	13.8 Vcc ± 10 %
Electric absorption	70 mA (180 mA, max)
Max distance for tag reading	6 cm.
Min distance between two	15 cm.
Product characteristics	32 bit (4294 M. of comb.)
Operative frequency	13.56 MHz.
Dimensions (l x h x p)	40 x 43,6 x 22 mm.
Temp. of functioning	from 5°C to 50°C
Humidity	80 %
Temp. of Storage	from - 10° to + 60°C

PRODUCT CODES	DECSRIPTION
RP128PKR300A	Proximity reader for ProSYS BUS, without receptacle outlet and with 2 tags. Freq. 13.56 MHz
RP200KT0000A	Proximity tags for PKR Readers and LCD keyboards with integrated proximity reader (10 pieces pack). Freq. 13.56 MHz