



RS485 COMMUNICATION PROTOCOL

# DynaPCN 10-01-00

## RS485 Communication Protocol

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## TRADEMARKS

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## REVISION HISTORY

| REVISION |  | DESCRIPTION   | DATE             |
|----------|--|---------------|------------------|
| 1.0      |  | First release | 28 February 2014 |

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# 1 Introduction

This document integrates the commands of the serial communication protocol (over RS485 GUI) between an user application and the PCN that are not included in the "PCN-1001\_UserMan\_En\_4.0" User Manual.

The communication is based on a Serial Network Protocol (SNP) described in Chapter 4 of the PCN-1001 User Manual. If no serials are available, you can install the RS485 emulator via USB.

This protocol allows to receive and send messages via serial port by the routines SNP\_Recv() and SNP\_Send(). To properly build a packet for this protocol, SNP\_Send() uses BuildSNPCommand().

The following specifications are described for each command:

|                               |  |
|-------------------------------|--|
| <b>Command</b>                | Name of command  |
| <b>Command Description</b>    | Brief description of command purpose                       |
| <b>Parameters</b>             | Format and type of possible parameter(s)                   |
| <b>Parameters Description</b> | Description of parameter(s) : permitted value, default ..  |
| <b>Returns</b>                | Format, type and meaning of possible returned parameter(s) |

## 2 Commands

### 2.1 RESTORE

|                        |                               |
|------------------------|-------------------------------|
| Command                | restore                       |
| Command Description    | Restore PCN at factory system |
| Parameters             |                               |
| Parameters Description |                               |
| Returns                |                               |

### 2.2 GDOORSTATUS

|                        |  |
|------------------------|--|
| Command                | gdoorstatus                                      |
| Command Description    | Gets the door status (enables/disables counting) |
| Parameters             | unsigned char (1 byte)                           |
| Parameters Description | 0 : door close<br>1 : door open                  |
| Returns                |  |

### 2.3 TESTIN0

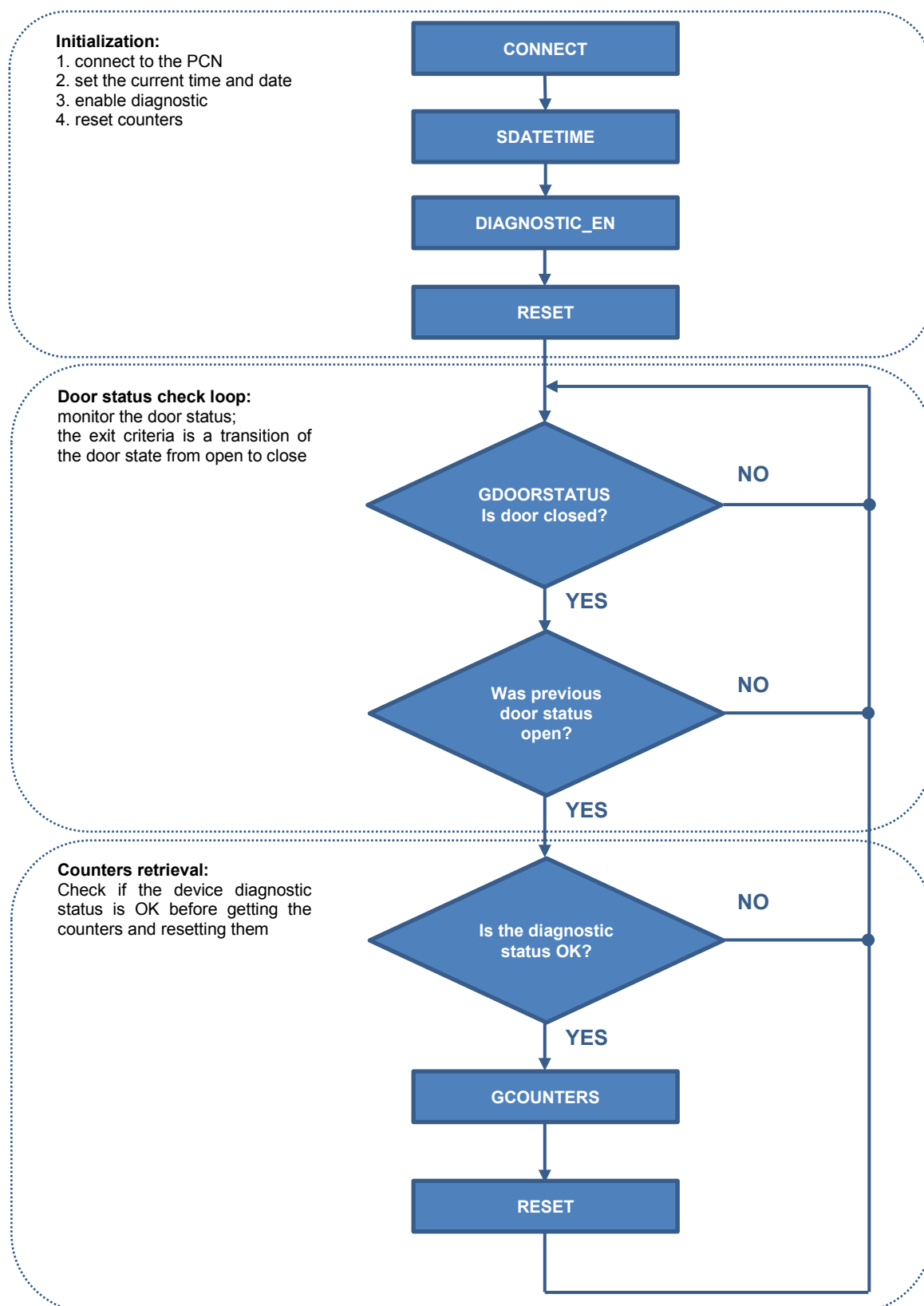
|                        |   |
|------------------------|---|
| Command                | testin0   |
| Command Description    | Tests digital IN 0 functionality                      |
| Parameters             |   |
| Parameters Description |   |
| Returns                | unsigned char (1 byte).<br>1 : signal<br>0: no signal |

### 2.4 TESTIN1

|                        |   |
|------------------------|---|
| Command                | testin1   |
| Command Description    | Tests digital IN 1 functionality                      |
| Parameters             |   |
| Parameters Description |   |
| Returns                | unsigned char (1 byte).<br>1 : signal<br>0: no signal |

### 3 Typical application flow

The following flow chart describes the logic of a typical transportation application where one digital input (0/1) of the PCN is connected to a circuit which retrieves the open/close state of the guarded port, enabling/disabling the counting accordingly.



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## This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slight shadow on the right side, suggesting it's resting on a surface. The top edge of the paper is slightly irregular, like a torn piece of paper.

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