This manual is integrant and essential to the product. Carefully read the instructions contained herein as they provide important hints for use and maintenance safety.

This device is to be used only for the purposes it has been designed to. Other uses should be considered improper and dangerous. The manufacturer is not responsible for possible damages caused by improper, erroneous and irrational uses.

Enertronica Santerno S.p.A. is responsible for the product in its original setting.

Any changes to the structure or operating cycle of the product must be performed or authorized by Enertronica Santerno S.p.A..

Enertronica Santerno S.p.A. assumes no responsibility for the consequences resulting by the use of non-original spare-parts.

Enertronica Santerno S.p.A. reserves the right to make any technical changes to this manual and to the product without prior notice. If printing errors or similar are detected, the corrections will be included in the new releases of the manual.

The information contained herein is the property of Enertronica Santerno S.p.A. and cannot be reproduced. Enertronica Santerno S.p.A. enforces its rights on the drawings and catalogues according to the law.
Safety Precautions

Thank you for purchasing Sinus H Profibus-DP Communication Module

SAFETY PRECAUTIONS

● To prevent injury and danger in advance for safe and correct use of the product, be sure to follow the Safety Instructions.

● The instructions are divided as ‘WARNING’ and ‘CAUTION’ which mean as follow.

  ! WARNING  This symbol indicates the possibility of death or serious injury.

  ! CAUTION  This symbol indicates the possibility of injury or damage to property.

● The meaning of each symbol in this manual and on your equipment is as follows.

  ! This is the safety alert symbol.

  ! This is the dangerous voltage alert symbol.

● After reading the manual, keep it in the place that the user always can contact easily.

● Before you proceed, be sure to read and become familiar with the safety precautions at the beginning of this manual. If you have any questions, seek expert advice before you proceed. Do not proceed if you are unsure of the safety precautions or any procedure.

⚠️ WARNING

● Be cautious about dealing with CMOS elements of option board. It can cause malfunction by static electricity.

● Connection changing like communication wire change must be done with power off. It can cause communication faulty or malfunction.

● Be sure to connect exactly between Inverter and option board. It can cause communication faulty or malfunction.

● Check parameter unit when setting parameter. It can cause communication faulty.
# Table of Contents

Chapter 1. Introduction .................................................................................................................. 1
  1.1 What is Profibus-DP Communication Module? ................................................................. 1
  1.2 Components ....................................................................................................................... 1

Chapter 2. Profibus-DP Communication Module ........................................................................... 2
  2.1 Technical Specification of Profibus-DP Communication .................................................. 2
  2.2 Layout of Profibus-DP Communication Module .............................................................. 3
  2.3 General Specification of Profibus-DP Connector .............................................................. 4
  2.4 Installation ......................................................................................................................... 5
  2.5 Network Cable Specifications ............................................................................................ 7
  2.6 Maximum Distance according to the Baud rate ............................................................... 8

Chapter 3. Status Diagnostic and LED Indication ........................................................................ 9
  3.1 LED display feature ............................................................................................................ 9
  3.2 LED information & Troubleshooting ................................................................................ 10

Chapter 4. Inverter Parameter ..................................................................................................... 13
  4.1 Profibus-DP Communication Parameter List .................................................................... 13
  4.2 Description of Profibus-DP Communication Parameters ............................................... 14
    4.2.1 Version of Communication module ............................................................................. 14
    4.2.2 Station ID setting ......................................................................................................... 14
    4.2.3 LED indication for communication status ................................................................. 15
    4.2.4 The number of Para Status setting ............................................................................ 16
    4.2.5 Para Status 1~8 .......................................................................................................... 17
    4.2.6 Number of Para Control setting ................................................................................. 18
    4.2.7 Para Control 1~8 ........................................................................................................ 19
    4.2.8 Comm Update ............................................................................................................ 20

Chapter 5. GSD File (Electronic Data Sheets) ............................................................................. 21
Chapter 1. Introduction

This Profibus-DP communication module allows the Sinus H inverter to be connected to Profibus network.

1.1 What is Profibus-DP Communication Module?

A controlling and monitoring of inverter can be controlled by PLC sequence program of or a Profibus Master Module. It helps the installation cost reduced since multiple inverters are implemented by one communication line. In addition, the wiring is so simple that the installation time will be reduced and the maintenance will be improved. Factory automation can be also easily operated by Mixed-used development of auxiliary devices of PLC and other control systems such as PC for controlling the inverter.

1.2 Components

This product - P/N ZZ0176101 - is consisting of these kinds of parts:

- Profibus-DP Communication Module for Sinus H: 1 each
- Brass Bar(M3xL23): 1 each
- Brass Bar(M3xL17.3): 1 each
- Fixed Screw(M3xL8): 1 each
- Profibus connector: 1 each
Chapter 2. Profibus-DP Communication Module

2.1 Technical Specification of Profibus-DP Communication

<table>
<thead>
<tr>
<th>Device Type</th>
<th>Profibus DP Slave</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto Baud rate Detect</td>
<td>Supported</td>
</tr>
<tr>
<td>Synchronization Mode</td>
<td>Supported</td>
</tr>
<tr>
<td>Freeze Mode</td>
<td>Supported</td>
</tr>
<tr>
<td>Max. Input Length</td>
<td>8 words</td>
</tr>
<tr>
<td>Max. Output Length</td>
<td>8 words</td>
</tr>
<tr>
<td>Baud rate Support</td>
<td>9.6K, 19.2K, 93.75K, 187.5K, 500K, 1.5M, 3M, 6M, 12M</td>
</tr>
<tr>
<td>Modular Station</td>
<td>Supported</td>
</tr>
<tr>
<td>Max. Module</td>
<td>2</td>
</tr>
<tr>
<td>Max. Connectable Number of Nodes</td>
<td>Max. 32 nodes without repeater (including master module)</td>
</tr>
<tr>
<td>LED</td>
<td>3 LEDs (ONLINE, ERR, and CPU)</td>
</tr>
<tr>
<td>Communication Connector</td>
<td>9Pin D-sub</td>
</tr>
</tbody>
</table>

Table 1: Technical Data
2.2 Layout of Profibus-DP Communication Module

Figure 1: Profibus-DP Communication Module
2.3 General Specification of Profibus-DP Connector

Figure 2: Profibus Connector

<table>
<thead>
<tr>
<th>PROFIBUS Connector</th>
<th>Pin</th>
<th>Signal</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>M24</td>
<td>24V output GND</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>RxD/TxD-P</td>
<td>Transmitter/Receiver data Plus</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>CTRL-P</td>
<td>Control signal for a repeater</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>DGND</td>
<td>Signal GND</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>VP</td>
<td>5V for terminating resistance</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>P24</td>
<td>24V output Plus</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>RxD/TxD-N</td>
<td>Transmitter/Receiver data Negative</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>CTRL-N</td>
<td>Control signal for a repeater</td>
</tr>
</tbody>
</table>

Note: The product only provides No.3, 5, 6 and 8 signals.

Table 2: Signal Description
2.4 Installation

Warning: Connect a communication network after the power supply is off. If Profibus-DP communication module is removed or installed, the power supply should be switched off. Otherwise, the Sinus H inverter will be damaged entirely. Take off Profibus-DP communication module from the product after the power supply is totally discharged.

- Unfasten the front cover fixing bolt to remove the front cover and remove I/O cover((1), (2)) from a dedicated inverter for communication.

- Remove the keypad (3).

- Unfasten a screw from I/O board and fasten the prepared brass bar (4) and (5).
Mount Profibus-DP communication Module (6) and fasten the removed screw (7) and the included screw (8).

Install the keypad (9) at first and the communication module cover (10) in order.

Install the front cover (11) again. And installation is completed.
## 2.5 Network Cable Specifications

<table>
<thead>
<tr>
<th>Classification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWG</td>
<td>22</td>
</tr>
<tr>
<td>Conductor Material</td>
<td>BC-Bare Copper</td>
</tr>
<tr>
<td>Insulation Material</td>
<td>PE-Polyethylene</td>
</tr>
<tr>
<td>Insulation Tension</td>
<td>0.035 inch</td>
</tr>
<tr>
<td>Inner Shield Material</td>
<td>Aluminum Foil-Polyester, Tape/Braid Shield</td>
</tr>
<tr>
<td>Electrostatic Capacity</td>
<td>8500pF/ft</td>
</tr>
<tr>
<td>Specific Impedance</td>
<td>150Ω</td>
</tr>
<tr>
<td>Total number of Conductors</td>
<td>2 Core</td>
</tr>
</tbody>
</table>

Table 3: Network Cable Specifications
2.6 Maximum Distance according to the Baud rate

The total BUS length of a network configuration is differed according to the baud rate. The communication quality is not guaranteed when the total distance exceeds the total BUS length limit as below.

<table>
<thead>
<tr>
<th>Baud rate</th>
<th>Max. Segment Length</th>
<th>Max. Extension Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 Mbps</td>
<td>1,000 m / 3,278 feet</td>
<td>10,000 m / 32,786 feet</td>
</tr>
<tr>
<td>6 Mbps</td>
<td>1,000 m / 3,278 feet</td>
<td>10,000 m / 32,786 feet</td>
</tr>
<tr>
<td>3 Mbps</td>
<td>1,000 m / 3,278 feet</td>
<td>10,000 m / 32,786 feet</td>
</tr>
<tr>
<td>1.5 Mbps</td>
<td>1,000 m / 3,278 feet</td>
<td>10,000 m / 32,786 feet</td>
</tr>
<tr>
<td>500 kbps</td>
<td>400 m / 1,311 feet</td>
<td>4,000 m / 13,114 feet</td>
</tr>
<tr>
<td>187.5 kbps</td>
<td>200 m / 655 feet</td>
<td>2,000 m / 6,557 feet</td>
</tr>
<tr>
<td>93.75 kbps</td>
<td>100 m / 327 feet</td>
<td>1,000 m / 3,278 feet</td>
</tr>
<tr>
<td>19.2 kbps</td>
<td>100 m / 327 feet</td>
<td>1,000 m / 3,278 feet</td>
</tr>
<tr>
<td>9.6 kbps</td>
<td>100 m / 327 feet</td>
<td>1,000 m / 3,278 feet</td>
</tr>
</tbody>
</table>

Table 4: Maximum Distance according to the Baudrate
Chapter 3. Status Diagnostic and LED Indication

3.1 LED display feature

The Profibus DP Module has 3 kinds of LEDs, referring to the below table colored by LEDs for troubleshooting and diagnostics.

Figure 3: LED display

<table>
<thead>
<tr>
<th>LED</th>
<th>Color</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>Green</td>
<td>LED turns “On” when the communication module is installed on the inverter and the power is generated.</td>
</tr>
<tr>
<td>ERR</td>
<td>Red</td>
<td>LED turns “On” if there is something wrong in the Profibus-DP communication module.</td>
</tr>
<tr>
<td>ONLINE</td>
<td>Green</td>
<td>LED always turns “On” when Profibus-DP communication module is on-line status.</td>
</tr>
</tbody>
</table>

Table 5: LED Indication
# 3.2 LED information & Troubleshooting

<table>
<thead>
<tr>
<th>LED</th>
<th>LED Status</th>
<th>Module Status</th>
<th>Cause</th>
<th>Troubleshooting</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>OFF</td>
<td>Failure in power supply</td>
<td>Power supply unplugged or contact failure between the inverter and Profibus-DP module.</td>
<td>Check power supply. Check the inverter’s malfunction. Check the connection between Profibus-DP module and the connector of inverter.</td>
</tr>
<tr>
<td></td>
<td>Blinking every second</td>
<td>Normal</td>
<td>Normal operation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OFF</td>
<td>Normal</td>
<td>Normal operation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Blinking every 1 second (with CPU LED together)</td>
<td>The communication is interrupted.</td>
<td>The communication is not available between the inverter and the communication module.</td>
<td>Check inverter’s malfunction. Check the connection between Profibus-DP module and the connector of inverter.</td>
</tr>
<tr>
<td>Blinking every 1 second (contrary to CPU LED)</td>
<td>CONFIG ERROR</td>
<td>Master’s configuration Data is different from Profibus-DP module’s configuration.</td>
<td>Check the configuration data set on Master and the internal configuration data at the inverter.</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>OFF</td>
<td>Off-Line</td>
<td>Master doesn’t work for communication in the network.</td>
<td>Start the communication from Master.</td>
<td></td>
</tr>
<tr>
<td>The connection of connector has a problem.</td>
<td>Check the connection between the pin number of connector and the termination resistor.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There is no master in the network.</td>
<td>It can be possible there is no designated master or master has a problem.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wrong setting of station ID.</td>
<td>Check if the station ID set in the designated Profibus option module is the same as the station ID set</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Chapter 3. Status Diagnostic and LED Indication

<table>
<thead>
<tr>
<th>Status</th>
<th>ON</th>
<th>On-Line</th>
<th>Network, Station, Parameterization and Configuration are normal.</th>
<th>from the keypad of inverter in Configuration tool and station ID is unique in the network.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Check if it exceeds the length limit of segment. Check if the connections with Segment are over 32 stations including a repeater. Check if the connections with network are over 126 stations including repeater.</td>
<td></td>
</tr>
</tbody>
</table>

Table 6: Diagnostics according to LED Status
# Chapter 4. Inverter Parameter

## 4.1 Profibus-DP Communication Parameter List

<table>
<thead>
<tr>
<th>Code Number</th>
<th>The name of Parameter</th>
<th>Initial Value</th>
<th>Range</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-06</td>
<td>FBus S/W Ver</td>
<td></td>
<td>-</td>
<td>It indicates the version of Profibus-DP communication module.</td>
</tr>
<tr>
<td>CM-07</td>
<td>FBus ID</td>
<td>1</td>
<td>1 ~ 125</td>
<td>Set up the station of Profibus-DP module.</td>
</tr>
<tr>
<td>CM-09</td>
<td>FBus Led</td>
<td></td>
<td>-</td>
<td>Shows the ON/OFF data of the LED on Profibus-DP communication module.</td>
</tr>
<tr>
<td>CM-30</td>
<td>ParaStatus Num</td>
<td>3</td>
<td>0~8</td>
<td>Set up the Status number for use.</td>
</tr>
<tr>
<td>CM-31</td>
<td>Para Status-1</td>
<td>0x000A</td>
<td>0~0xFFFF</td>
<td></td>
</tr>
<tr>
<td>CM-32</td>
<td>Para Status-2</td>
<td>0x000E</td>
<td>0~0xFFFF</td>
<td></td>
</tr>
<tr>
<td>CM-33</td>
<td>Para Status-3</td>
<td>0x000F</td>
<td>0~0xFFFF</td>
<td></td>
</tr>
<tr>
<td>CM-34</td>
<td>Para Status-4</td>
<td>0x0000</td>
<td>0~0xFFFF</td>
<td></td>
</tr>
<tr>
<td>CM-35</td>
<td>Para Status-5</td>
<td>0x0000</td>
<td>0~0xFFFF</td>
<td></td>
</tr>
<tr>
<td>CM-36</td>
<td>Para Status-6</td>
<td>0x0000</td>
<td>0~0xFFFF</td>
<td></td>
</tr>
<tr>
<td>CM-37</td>
<td>Para Status-7</td>
<td>0x0000</td>
<td>0~0xFFFF</td>
<td></td>
</tr>
<tr>
<td>CM-38</td>
<td>Para Status-8</td>
<td>0x0000</td>
<td>0~0xFFFF</td>
<td></td>
</tr>
<tr>
<td>CM-50</td>
<td>Para Ctrl Num</td>
<td>2</td>
<td>0~8</td>
<td>Set up Control number for use.</td>
</tr>
<tr>
<td>CM-51</td>
<td>Para Control-1</td>
<td>0x0005</td>
<td>0~0xFFFF</td>
<td></td>
</tr>
<tr>
<td>CM-52</td>
<td>Para Control-2</td>
<td>0x0006</td>
<td>0~0xFFFF</td>
<td></td>
</tr>
<tr>
<td>CM-53</td>
<td>Para Control-3</td>
<td>0x0000</td>
<td>0~0xFFFF</td>
<td></td>
</tr>
<tr>
<td>CM-54</td>
<td>Para Control-4</td>
<td>0x0000</td>
<td>0~0xFFFF</td>
<td></td>
</tr>
<tr>
<td>CM-55</td>
<td>Para Control-5</td>
<td>0x0000</td>
<td>0~0xFFFF</td>
<td></td>
</tr>
<tr>
<td>CM-56</td>
<td>Para Control-6</td>
<td>0x0000</td>
<td>0~0xFFFF</td>
<td></td>
</tr>
<tr>
<td>CM-57</td>
<td>Para Control-7</td>
<td>0x0000</td>
<td>0~0xFFFF</td>
<td></td>
</tr>
</tbody>
</table>
### Chapter 4. Inverter Parameter

#### Table 7: Inverter Parameters

<table>
<thead>
<tr>
<th>Code Number</th>
<th>The name of Parameter</th>
<th>Initial Value</th>
<th>Range</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-58</td>
<td>Para Control-8</td>
<td>0x0000</td>
<td>0~0xFFFF</td>
<td></td>
</tr>
<tr>
<td>CM-94</td>
<td>Comm Update</td>
<td>0</td>
<td>0:NO 1:YES</td>
<td>Update keypad parameters relating to communication.</td>
</tr>
</tbody>
</table>

**4.2 Description of Profibus-DP Communication Parameters**

**4.2.1 Version of Communication module**

It displays the version of Profibus-DP module installed on the inverter.

**4.2.2 Station ID setting**

<table>
<thead>
<tr>
<th>CM-07</th>
<th>FBus ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-94</td>
<td>Comm Update</td>
</tr>
</tbody>
</table>

The parameter sets the value of Station ID at Profibus-DP module. Station ID can be set up within the range of 1~125 and it cannot be duplicated to write. It needs to check if the settled Station ID is not equal to other Station ID in network. If the value of Station ID is changed, set ‘CM-94(Comm Update)’ to ‘1’ to apply the changed value of Station ID to Profibus-DP Communication module.
4.2.3 LED indication for communication status

Profibus-DP communication module have 3 LEDs, ONLINE, ERR, and CPU on the keypad in order from left to right. It indicates communication status by LED’s On/Off.

(CM-05 Status Example)

<table>
<thead>
<tr>
<th>Reserved</th>
<th>ON-LINE (GREEN)</th>
<th>ERR (RED)</th>
<th>CPU (GREEN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
</tr>
</tbody>
</table>
4.2.4 The number of Para Status setting

<table>
<thead>
<tr>
<th>CM-30</th>
<th>The number of Para Status setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-31</td>
<td>Para Status1~Status8 setting</td>
</tr>
<tr>
<td>~CM-38</td>
<td></td>
</tr>
<tr>
<td>CM-94</td>
<td>Comm Update</td>
</tr>
</tbody>
</table>

This parameter determines that inverter sends how many status information to Master through Profibus-DP communication. It can be set from 0 to 8. Para Status has to be set as the number of Para Status (From CM-31 to CM-38 as preset number). For example, If CM-30 sets to ‘3’, Para Status should be set from CM-31 to CM-33. If CM-30 sets to ‘6’, Para Status should be set from CM-31 to CM-36.
If the number of Para status is changed, set ‘CM-94(Comm Update)’ to ‘1’ to apply the changed number of Para Status to Profibus-DP Communication module.
4.2.5 Para Status 1~8

<table>
<thead>
<tr>
<th>CM-30</th>
<th>Number of Para Status setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-31</td>
<td>Para Status1~Status8 setting</td>
</tr>
<tr>
<td>~ CM-38</td>
<td></td>
</tr>
</tbody>
</table>

It determines that what status information will be sent to Master through Profibus-DP communication. Para Status 1~8 sets in the form of inverter address. It sets up the address for the common inverter area and the inverter keypad parameter. If the keypad parameter address is written, it will be saved in the form of 0x1000 + (‘Group number’ x 0x100) + (‘Code number’).

For example, if DI Status of No. 90 at n Group sets to Para Status-1, it should be set to 0x155A.

\[
0x1000 + 0x05 \times 0x100 + 0x5A(Dec\ 90) = 0x155A
\]

<table>
<thead>
<tr>
<th>Group</th>
<th>Group Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>dr Group</td>
<td>1</td>
</tr>
<tr>
<td>bA Group</td>
<td>2</td>
</tr>
<tr>
<td>Ad Group</td>
<td>3</td>
</tr>
<tr>
<td>Cn Group</td>
<td>4</td>
</tr>
<tr>
<td>In Group</td>
<td>5</td>
</tr>
<tr>
<td>OU Group</td>
<td>6</td>
</tr>
<tr>
<td>CM Group</td>
<td>7</td>
</tr>
<tr>
<td>AP Group</td>
<td>8</td>
</tr>
<tr>
<td>(Reserved)</td>
<td>9</td>
</tr>
<tr>
<td>(Reserved)</td>
<td>10</td>
</tr>
<tr>
<td>PRT Group</td>
<td>11</td>
</tr>
<tr>
<td>M2 Group</td>
<td>12</td>
</tr>
</tbody>
</table>
4.2.6 Number of Para Control setting

<table>
<thead>
<tr>
<th>CM-50</th>
<th>Number of Para Control setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-51</td>
<td>Para Control 1 ~ Control 8 setting</td>
</tr>
<tr>
<td>~ CM-58</td>
<td></td>
</tr>
<tr>
<td>CM-94</td>
<td>Comm Update</td>
</tr>
</tbody>
</table>

It determines that Master sends how many control information to inverter through Profibus-DP communication. It can be set up within the range of 0 to 8. Para Control has to be set as the number of Para Control. (From CM-51 to CM-58 as preset number)

For example, If CM-50 sets to ‘2’, Para Control sets from CM-51 to CM-52. If CM-50 sets to ‘5’, Para Control set from CM-51 to CM-55. If the number of Para status is changed, set ‘CM-99(Comm Update)’ to ‘1’ to apply the changed number of Para Control to Profibus-DP communication module.
4.2.7 Para Control 1~8

<table>
<thead>
<tr>
<th>CM-50</th>
<th>Number of Para Control setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-51</td>
<td>Para Control 1~Control 8 setting</td>
</tr>
<tr>
<td>~ CM-58</td>
<td></td>
</tr>
</tbody>
</table>

It determines that what control information will be sent to inverter through Profibus-DP communication. Para Control 1 ~ 8 sets in the form of inverter address. It sets up the address for the common inverter area and the inverter keypad parameter. If the keypad parameter address is written, it will be saved in the form of 0x1000 + (‘Group number’ x 0x100) + (‘Code number’).

For example, if Acc Time of No.3 at dr Group set to Para Control-1, it has to be set to 0x1103. 0x01 x 0x1000 + 0x01 x 0x100 + 0x03 (Dec 3) = 0x1103

<table>
<thead>
<tr>
<th>Group</th>
<th>Group Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>dr Group</td>
<td>1</td>
</tr>
<tr>
<td>bA Group</td>
<td>2</td>
</tr>
<tr>
<td>Ad Group</td>
<td>3</td>
</tr>
<tr>
<td>Cn Group</td>
<td>4</td>
</tr>
<tr>
<td>In Group</td>
<td>5</td>
</tr>
<tr>
<td>OU Group</td>
<td>6</td>
</tr>
<tr>
<td>CM Group</td>
<td>7</td>
</tr>
<tr>
<td>AP Group</td>
<td>8</td>
</tr>
<tr>
<td>Reserved</td>
<td>9</td>
</tr>
<tr>
<td>Reserved</td>
<td>10</td>
</tr>
<tr>
<td>PRT Group</td>
<td>11</td>
</tr>
<tr>
<td>M2 Group</td>
<td>12</td>
</tr>
</tbody>
</table>
### 4.2.8 Comm Update

<table>
<thead>
<tr>
<th>CM-07</th>
<th>Station ID setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-30</td>
<td>The number of Para Status setting</td>
</tr>
<tr>
<td>CM-50</td>
<td>The number of Para Control setting</td>
</tr>
<tr>
<td>CM-94</td>
<td>Comm Update</td>
</tr>
</tbody>
</table>

After changing Station ID, the number of Para Status or the number of Para Control, set the Comm Update to ‘1’. The changed value will be applied to Profibus-DP communication module after setting Comm Update to ‘1’.
Chapter 5. GSD File (Electronic Data Sheets)

The GSD file contains the information on the Profibus-DP communication module. The Profibus configuration software needs a GSD file.
You can download the GSD file from technical support in Enertronica Santerno website (http://santerno.com).