

## Chapter 1 Introduction

### 1.1 How to use this manual

This manual presents the method about general specification, performance and programming techniques for Dnet I/F module of GLOFA-GM communication. It explains about general things like as consists of system and operating method.

When you are to prepare communication program through Dnet I/F module, please refer to following publications

- GLOFA PLC commands for GLOFA PLC
- Instruction for GLOFA PLC
- GLOFA-GM Fnet(Fieldbus) / Mnet(Mini-MAP) : Communication program
- Operating manual of other makers related to DeviceNet

Please be aware of CPU module and version when you are going to consist GLOFA-GM Dnet system.

For the normal Dnet communication you must use the like following version.

- GLOFA PLC GMWIN : Equivelent or higher than Ver 3.3
- GLOFA GM4 CPU : Equivelent or higher than Ver 2.3
- GLOFA GM6 CPU : Equivelent or higher than Ver 1.3

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### 1.2 Precautions

Please be aware to following items when you install this equipment for reliability and safety as a kind of system.

Item	Category	Contents
Temperature	Requirement	<ul style="list-style-type: none"> <li>• By the reason of device handling temperature, environment temperature must be kept as 0 to 55 °C.</li> <li>• Do not be exposed on light directly.</li> </ul>
	Countermeasure	<ul style="list-style-type: none"> <li>• When the temperature is higher than place fan and airconditioner, contrary, if it is lower temperature please make it stable</li> </ul>
Dewing	Requirement	<ul style="list-style-type: none"> <li>• Dew should be protected from mew caused by rapid temperature change.</li> <li>• Please be placed inside control box where capable of waterproofing and protecting vibration.</li> </ul>
	Countmeasure	<ul style="list-style-type: none"> <li>• By the reason of temperature change there could be mewd caused by frequent power On/Off. In this case please be set to power on status while night time.</li> </ul>
Shock	Requirement	<ul style="list-style-type: none"> <li>• Please be set on shock and vibration free zone.</li> </ul>
	Countmeasure	<ul style="list-style-type: none"> <li>• If it is on heavy shock and vibrating area then be prepared with resolving plan like as to place vibration protecting rubber in order not to be impacted to the equipment by shock and vibration.</li> </ul>
Gas	Requirement	<ul style="list-style-type: none"> <li>• Please set on corrosive gas free area</li> </ul>
	Countmeasure	<ul style="list-style-type: none"> <li>• If corrosive gas is leaking from out side, then prepare air filtering system in control room.</li> </ul>
Noise environment.	Requirement	<ul style="list-style-type: none"> <li>• Please be prepared on no trouble zone against electric and magnetic field</li> </ul>
	Countmeasure	<ul style="list-style-type: none"> <li>• Please lay out correct path when doing wiring works</li> <li>• Please check whether the control room is set with soundproofing.</li> <li>• Fluorescent lighting is prohibited and using incandescent is recommended.</li> <li>• When you install power module, keep in mind to ground it on basic electric potential.</li> </ul>

### 1.3. Overview

This operating manual explains technically about master module(G4L-DUEA/G6L-DUEA) and slave module(GOL-DSQA/GOL-DSIA) which are Dnet I/F module of GLOFA PLC system. It was created for making needs possible replacing analog 2-40mA standard which requires high cost with simple digital standard. It is a kind of communication links connecting several kinds of industrial devices like as limite switch, photo electronic sensor, motor controller, invertor, barcode reader, panel display and so on.

It shows low cost , easy installation, excellent compatability with other vendor 's devices and has powerful application ability on network application like as Master/Slave, Multiple master, Peer-to-peer etc ... Dnet uses CAN(Controller Area Network) protocol as itself is thus it makes system response time short, gives high reliability. For the reason of these it gives us lower production cost why because you can use lower price CAN chip as itself is.

GLOFA-GM Dnet I/F module has characteristics like following.

#### **GLOFA-GM Dnet Characteristics :**

- Capable of real time control through communicating with all the lowest input/output equipment on network system.
- One master module can cover to control 63 sets slave module to maximum 2,048 points of I/O control.
- Multi drop and T trunk line connection makes network installation flexible.
- Capable of connection between your company' s master module and all kinds of other companys' slave module
- Reverse connection to the above sequence is possible also.
- Setting MAC Address by Hardware is possible
- It's possible to set comm. speed with hardware(125/250/500kbps).
- Install two sets of master module is possible on GLOFA-GM4 and GM6.  
If you do Predefined Master/Slave Connection communication with using of Scanlist then you can do communicate without any configuration tool
- It makes possible to do connection with several slave I/O  
General I/O, Actuator, Nearby switch, wide switch, valve, Invertor, A/D, D/A module, position control etc..