

# **SanRex**

## **Thyristor Type Power Adjusting Unit**

**CALPOTE**  
**UF** series

Device Net communication unit

U F – D N

INSTRUCTION MANUAL

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## Attachment

Device Net communication unit UF-DN USER MANUAL

## FORWARD

Thank you very much for having purchased the "Device Net communication unit UF-DN for Thyristor Type Power Adjusting Unit **UF series**".

The operators and other persons concerned are all requested to read this Operating Manual thoroughly and to operate this conversion board as instructed therein so that it can fulfill its functions perfectly.

Keep this Operating Manual carefully at any easily accessible place so that it can be referred to at any time when required.

In the following explanation, the Device Net communication unit will abbreviate it to "UF-DN".

## 1. PRECAUTIONS BEFORE USE

### 1.1 Confirmation of the Product

Check if the following items are all provided.

- o UF-DN 1unit
- o Screw for UF-DN installation 1pcs

### 1.2 The thing which has prepare

#### (1) Device Net cable

##### ① Cable

Device Net uses either the THIN Cable or the THICK Cable settled by the specifications and constructs the main line.

It can also be used the cable of both on the same network combination.

You can use of either type cable is determined by the main line network length or the data transmission speed.

The description of each cable is shown as below.

##### (a) THICK Cable

The THICK Cable, is composed of two shielded pairs twisted on a common axis, and is composed of the covered drain by a braided shield in the center. Usually, the THICK Cable is used as a main line if you need length.

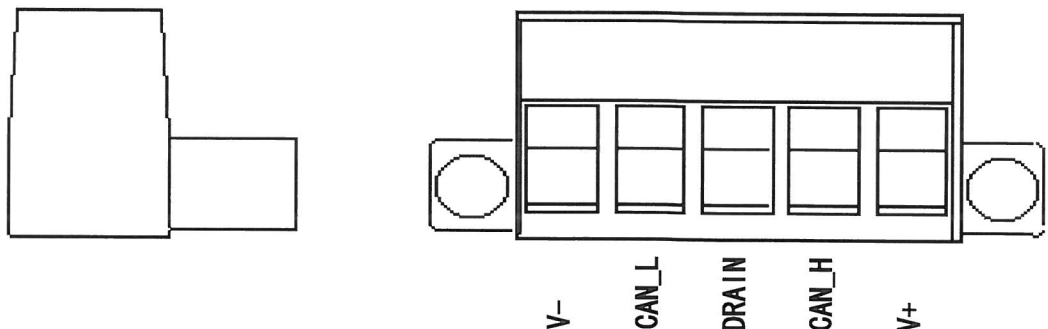
##### (b) THIN Cable

The THIN Cable is narrower than the THICK Cable, are flexible. Usually, it is used as the branch line. But it can be used as a short-distance main line.

#### ② Connection connector

Plug MSTB 2.5/5-STF-5.08AU  
Made by PHOENIX CONTACT

#### ③ Wiring method



#### (2) Connection resistance

Device Net needs to attach the terminal resistances to both ends of main line.

##### ① Connection resistance

resistance 1/4W 121Ω ±1% metal film resistance

##### ② Notice on the installation

(a) Please do not absolutely attach the terminal resistances to the node.

If they attach the terminal resistances to the node, problems may happen at network dead end and it leads to break down.

(Impedance might be too high or too low.)

(b) Please do not attach the terminal resistances to the branch line's ends.

### 1.3 How to install UF-DN

- (1) UF-unit has a cover for a communication connection is located on the side of the cut in The nippers etc. (Fig. 1.3 (1))
- (2) UF-DN wires are connected, UF-unit connects. (Fig. 1.3 (2))
- (3) UF-DN hooked to process it into two, UF-unit Connect. (Fig. 1.3 (3))
- (4) The UF-unit and the UF-DN, UF-DN using a secure mounting screws are included. (Fig. 1.3 (4))

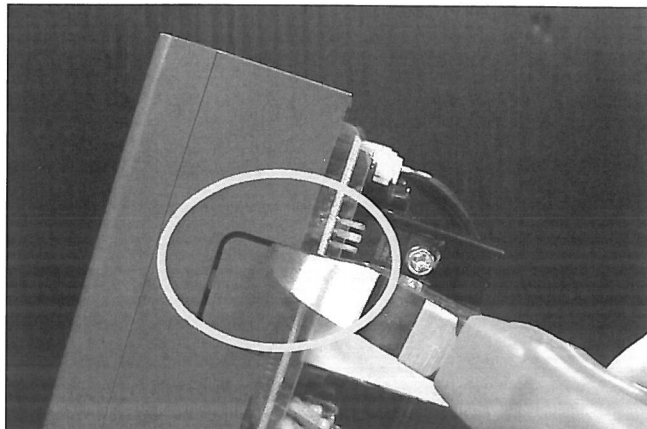


Fig. 1.3 (1)

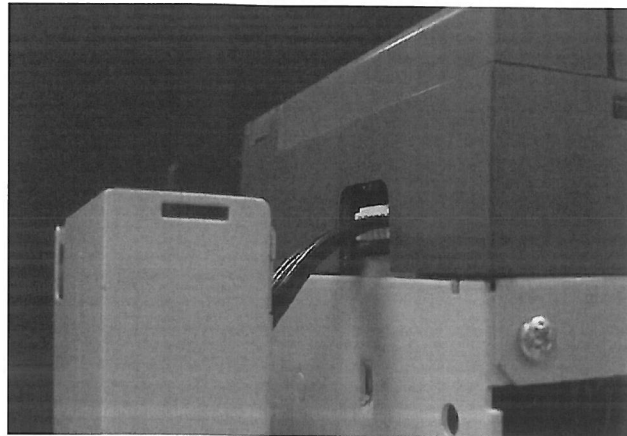


Fig. 1.3 (2)

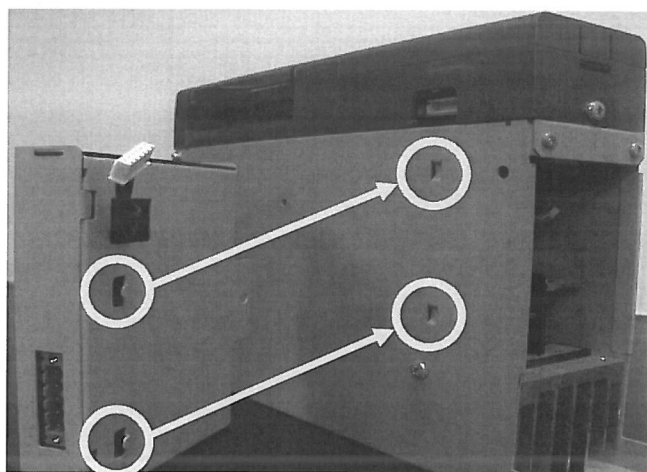


Fig. 1.3 (3)

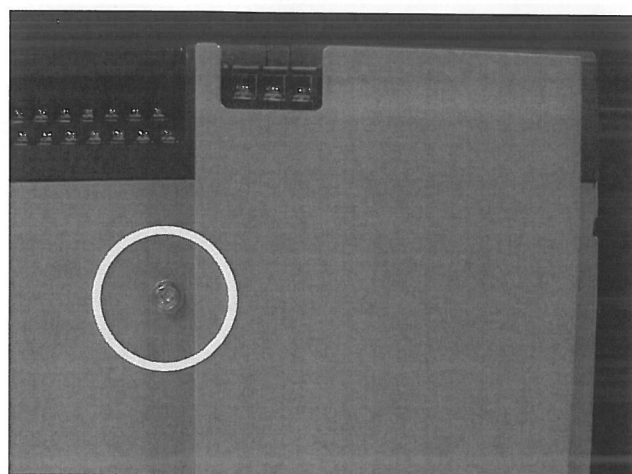
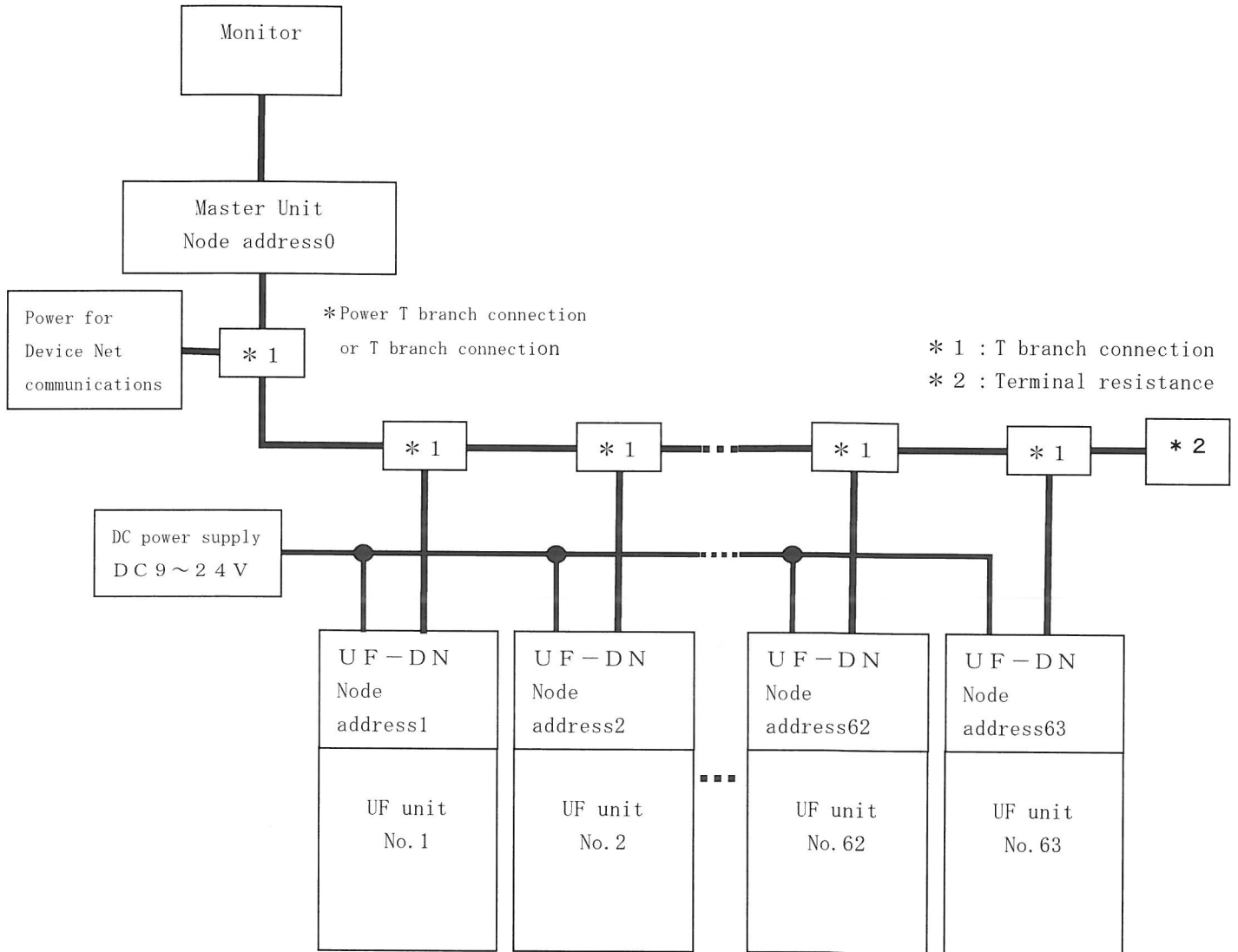


Fig. 1.3 (4)

## 2. TO CONNECT TO UF-DN



The UF-unit can be connected up to 63 units.

Be sure to fit the terminal resistances at the both ends of the main cable.

The UF-DN please connected the DC power supply (DC9~24V).

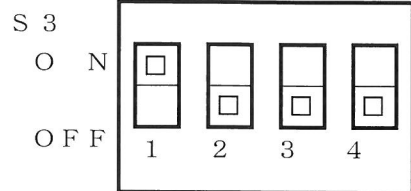
The current capacity is required 0.2A per one vehicle.

### 3. HOW TO SET S3 OF THE UF-UNIT

The UF-unit take the front cover, inside it has S3. If use the UF-DN, the unit number setting S3 is must be in "No.1".

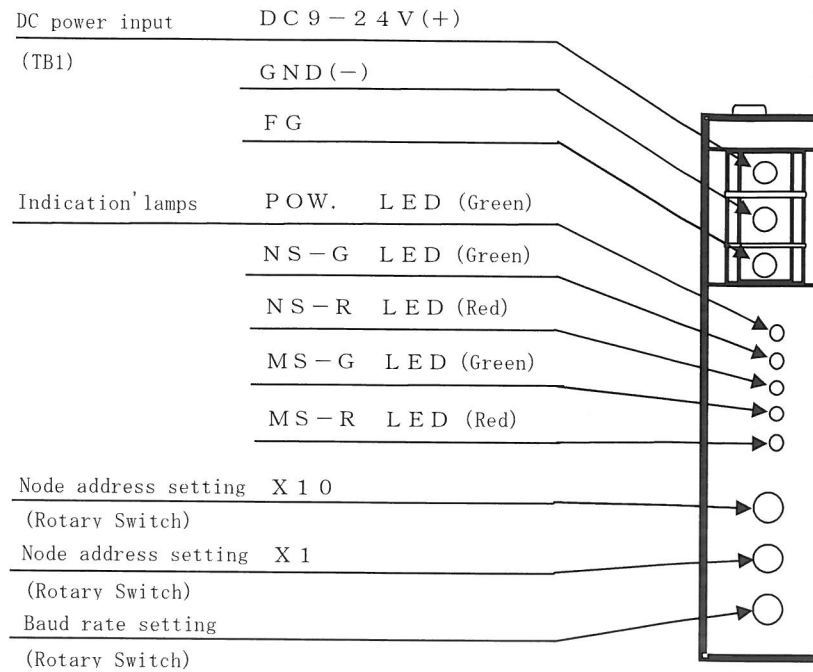
S3 default setting is set "No.0".

As follows, the unit number setting S3 of the UF-unit Please set "No.1".



	S 3 - 1	S 3 - 2	S 3 - 3	S 3 - 4
N o . 1	O N	O F F	O F F	O F F

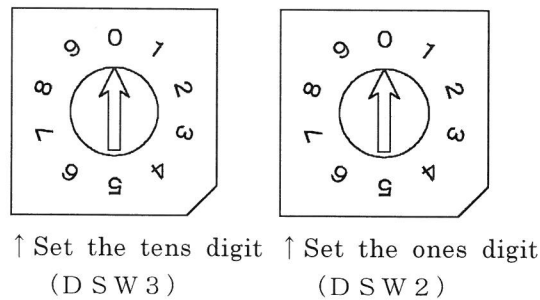
#### 4. HOW TO SET THE UF-DN



##### 4.1 Node address setting

Node address setting sets Node address No. used on the network and the number can set the range of 0~63.

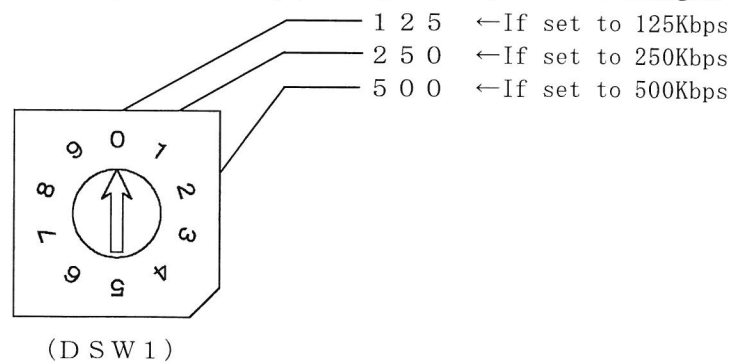
The UF-DN uses one in the Node address.



##### 4.2 Baud rate setting

Baud rate setting sets transmission speed on network.

Three types of settings for 125Kbps/250Kbps/500Kbps can be changed.





## 5. HOW TO SETTING THE SET VALUES FROM UF-DN

If set the UF-DN, the signal display panel priority settings "2" should be set to change.

### 5.1 How to set the UF-DN

#### Example

At the UF-DN, L (Lower point(lower limit)signal) to be able to change settings.

- (1) If the [MODE] key is pressed while the [FUNC] key is being pressed down, the display mode is switched. Press several times, the display-mode of display panels show "INPUT". (Fig. 5.1 (1))

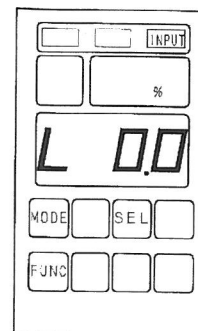


Fig. 5.1 (1)

- (2) Press the [SEL] key twice, 4-digit display on the left is "L" the display. (Fig. 5.1 (1))
- (3) If the [FUNC] key is pressed while the [SEL] key is being pressed down, the display mode is switched. The panels display by pressing the [FUNC] + [SEL] key one times to a 4-digit display on the left the "LS". (Fig. 5.1 (2))

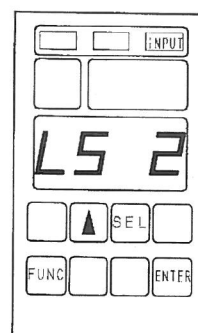


Fig. 5.1 (2)

- (4) Press [▲] several times "2" the display panel. (Fig. 5.1 (2))
- (5) Numeric display will blink, [ENTER] key press and light the key once. (Fig. 5.1 (2))

Priority settings changed by manipulating the signal display panel as an example, UF-DN signals can change the settings

Table 1, by changing the settings on the display panel signal priority, UF-DN can change the signal settings.

Display item	Function
P	Control signal
H	Manual(upper limit) signal
L	Lower point(lower limit)signal
F	Grade signal
E	Soft start time
C	Current limit
U	Heater disconnecting amount
d	Delay time
—	Period time

Table 1

## 6 . COMPUTER AND HOW TO COMMUNICATE WITH THE UF-DN

The personal computer to communicate with the UF-DN, refer to the attached document, please create programs.

Attachment

Device Net communication unit UF-DN USER MANUAL

# MEMO



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The specifications of this product described in this INSTRUCTION MANUAL may, incident  
to any improvement in the product, be subject any change without prior notice.

K00A0087600 2011.05.18