SanRex

Thyristor Type Power Adjusting Unit

CALPOTE

UF series

CC-Link communication unit

UF－CL

INSTRUCTION MANUAL

TABLE OF CONTENTS

Attachment

CC-Link communication unit UF-CL USER MANUAL

FORWARD

Thank you very much for having purchased the "CC-Link communication unit UF-CL 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 CC-Link communication unit will abbreviate it to "UF-CL".

1．PRECAUTIONS BEFORE USE

1．1 Confirmation of the Product

Check if the following items are all provided.

o UF-CL 1unit

o Screw for UF-CL installation 1pcs

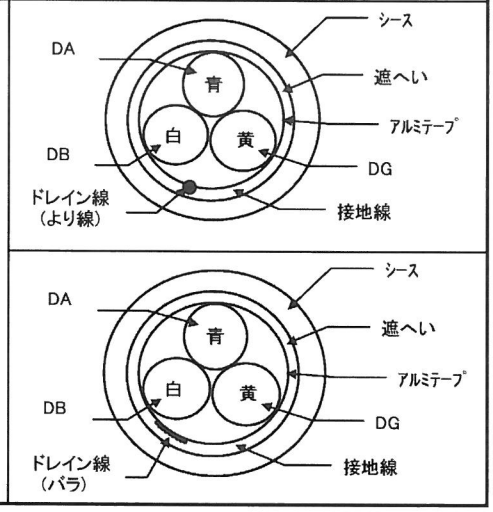
1．2 The thing which has prepare

(1) CC-Link cable

① Cable

CC-Link uses the special cable settled by the specifications and constructs main line.
The description of each cable is shown as below.

表3．1 CC-Link専用ケーブル仕様（Ver.1.10）

項目			仕様
ケーブル種類			シールド付3芯ツイストケーブル
仕上外径			8．0 mm以下
ドレイン線			20本/0.18mm または24本/0.18mm 接地線編組とアルミテープ間に より線またはバラで挿入
電気特性	導体抵抗（20℃）		37．8Ω／km
	絶縁抵抗		10000 MΩ・km 以上
	耐電圧		DC500V1分
	静電容量 （1kHz）		60 nF／km以下
	特性インピーダンス	1 MHz	110±15Ω
		5 MHz	110±6Ω
	減衰量 （20℃）	1 MHz	1．6 dB／100m以下
		5 MHz	3．5 dB／100m以下
断面			

機器との接続

表3．2 絶縁体の色と接続端子の対応

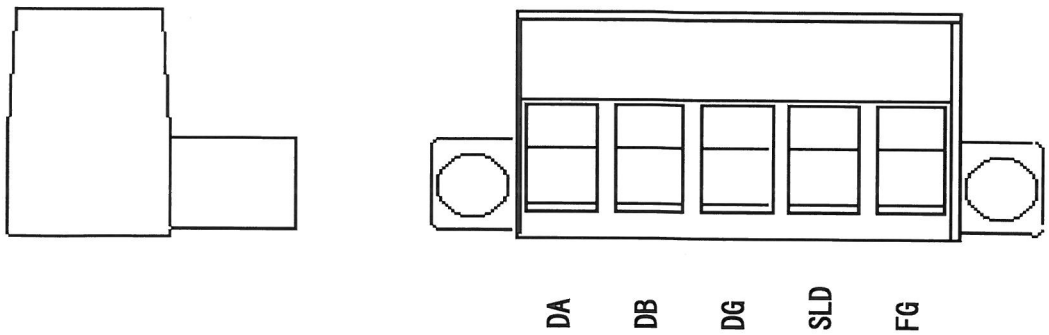
絶縁体の色	機器側
青	DA
白	DB
黄	DG
接地線(シールド)	SLD

② Connection connector

Plug ＭＳＴＢ２．５／５－ＳＴＦ－５．０８ＡＵ

Made by PHOENIX CONTACT

③ Wiring method



(2) Connection resistance

CC-Link needs to fit terminal resistances at the both ends of main line.

① Connection resistance

resistance　　1／2W　110Ω　±5%

② Notice on the installation

(a) The terminal resistances should be fit at dead ends of main line.
If they are fit at station, problems may happen at network dead end and it leads to break down. (Impedance might be too high or too low.)

(b) The terminal resistances should not be fit at branch line's ends.

1．3 How to install UF-CL

(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-CL wires are connected, UF-unit connects. (Fig. 1．3 (2))
(3) UF-CL hooked to process it into two, UF-unit Connect. (Fig. 1．3 (3))
(4) The UF-unit and the UF-CL, UF-CL using a secure mounting screws are included. (Fig. 1．3 (4))

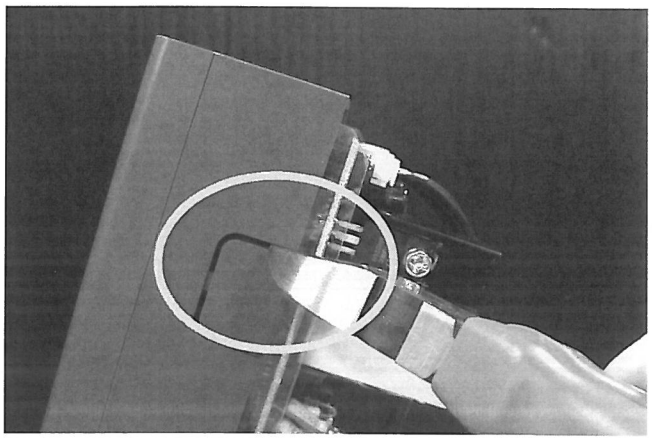


Fig. 1．3 (1)

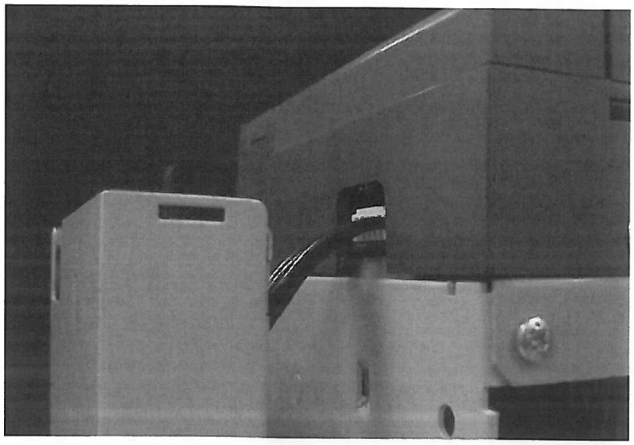


Fig. 1．3 (2)

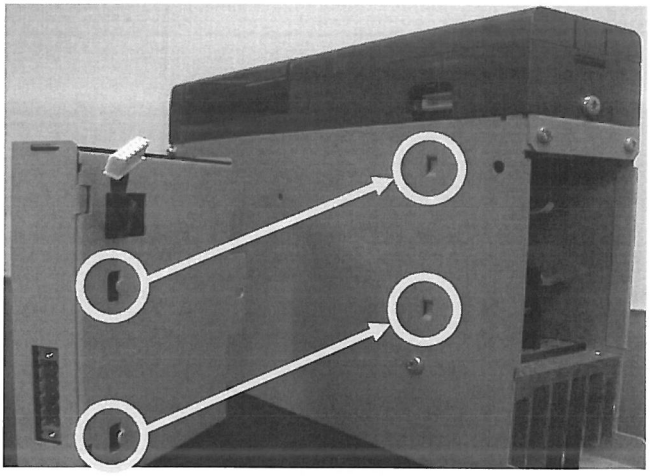


Fig. 1．3 (3)

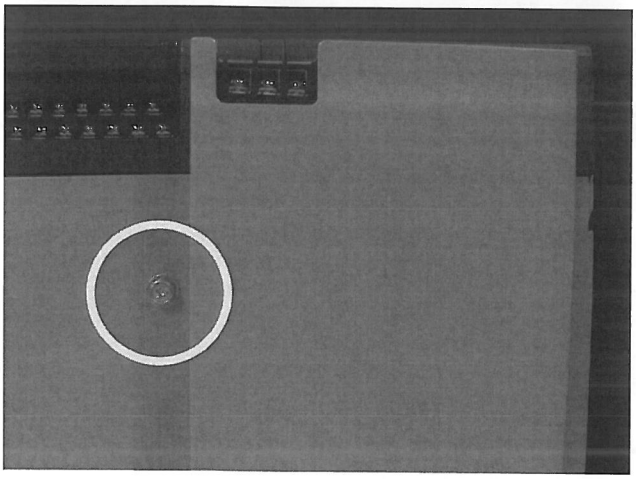
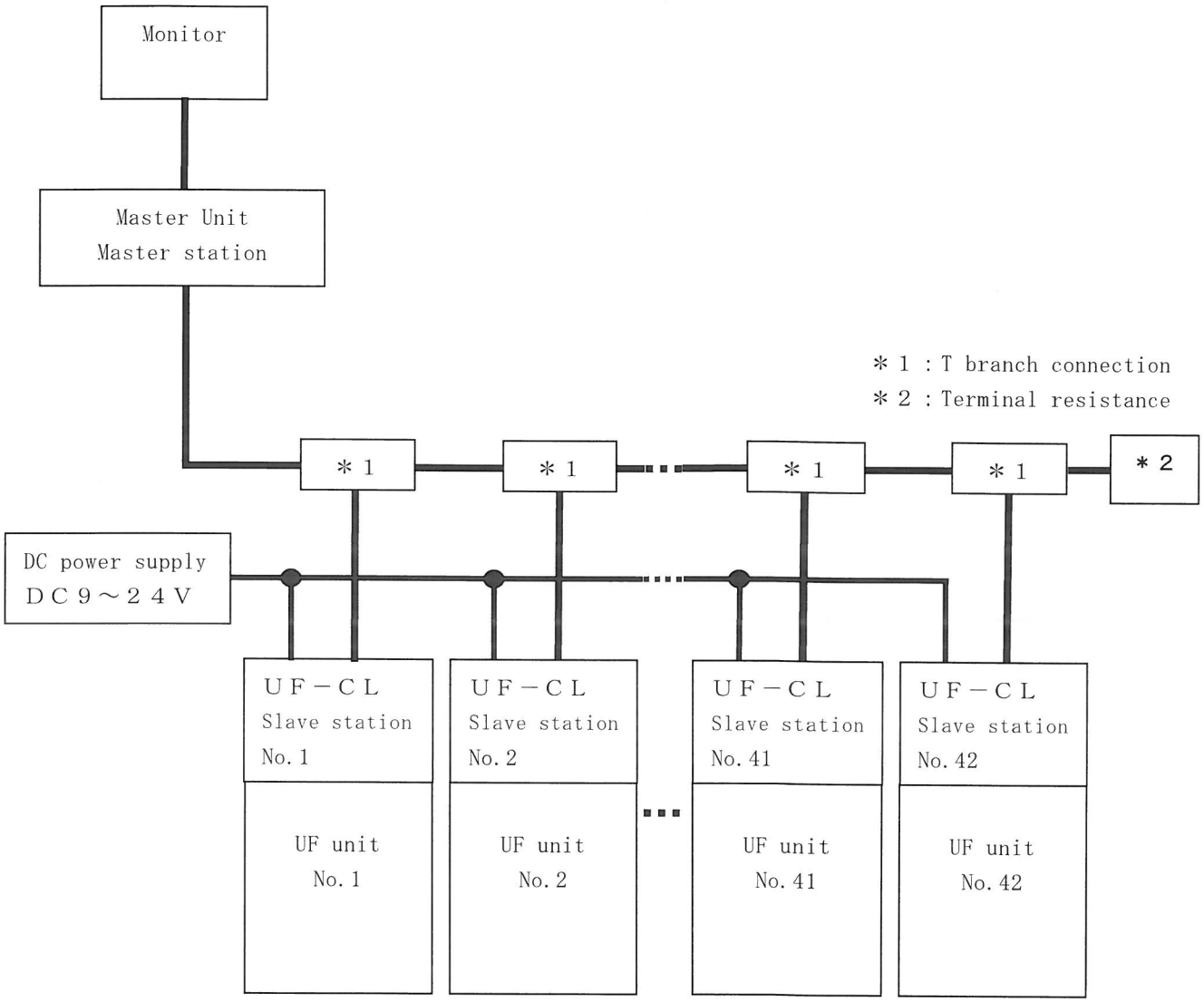


Fig. 1．3 (4)

2. TO CONNECT TO UF-CL



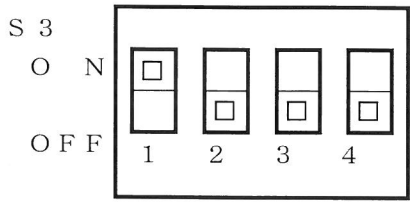
The UF-unit can be connected up to 42 units.
Be sure to fit the terminal resistances at the both ends of the main cable.

The UF-CL 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

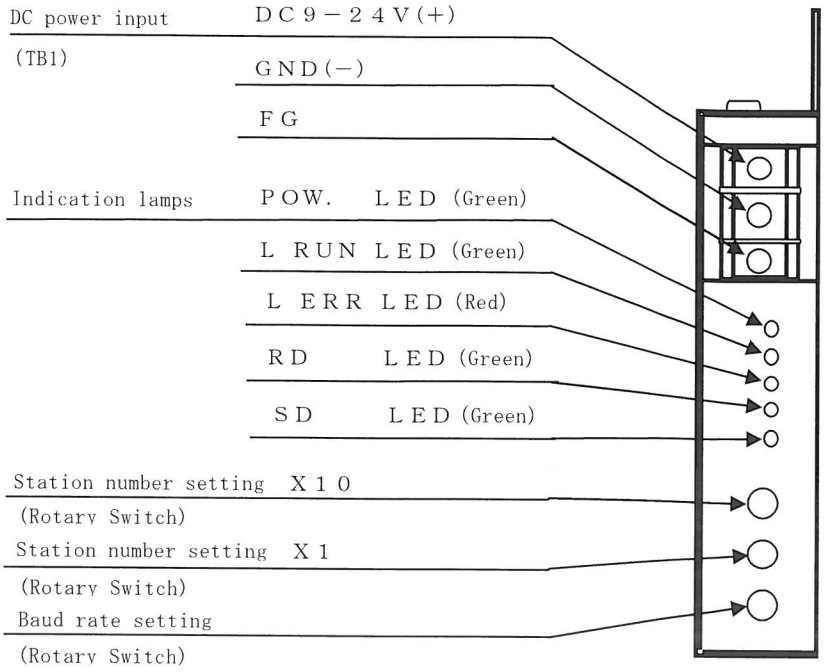
The UF-unit take the front cover, inside it has S3. If use the UF-CL, the unit number setting S3 is must be in "No.1".

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
No. 1	ON	OFF	OFF	OFF

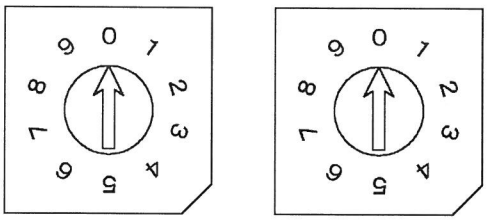
4. HOW TO SET THE UF-CL



4.1 Station number setting

Station number setting sets station number used on the network and the number can set the range of 1～42.

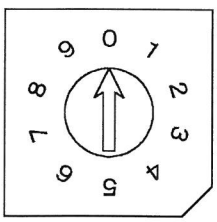
The UF-CL uses one in the station number.



↑Set the tens digit (DSW3)　↑Set the ones digit (DSW2)

4.2 Baud rate setting

Baud rate setting sets transmission speed on network.



(DSW1)

(Baud rate setting value)
0：156Kbps
1：625Kbps
2：2.5Mbps
3：5Mbps
4：10Mbps
Other than those above: ERROR

5. HOW TO SETTING THE SET VALUES FROM UF-CL

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

5.1 How to set the UF-CL

Example

At the UF-CL, 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))

(2) Press the [SEL] key twice, 4-digit display on the left is "L" the display. (Fig. 5.1 (1))

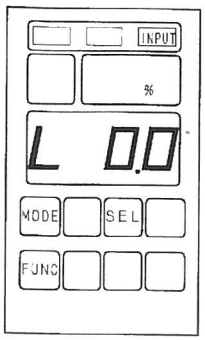


Fig. 5.1 (1)

(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))

(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))

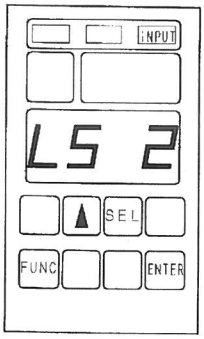


Fig. 5.1 (2)

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

Table 1, by changing the settings on the display panel signal priority, UF-CL 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-CL

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

Attachment

CC-Link communication unit UF-CL USER MANUAL

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