



LS GPL-DV4C Programmable Logic Controller Installation Guide

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Programmable Logic ControllerSmart I/O Pnet
C/N: 10310000542
Installation GuideGPL-DV4C/DC4C



10310000542

This installation guide provides simple function information or PLC control. Please read carefully this data sheet and manuals before using products. Especially read precautions then handle the products properly.

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Safety Precautions

■ Meaning of warning and caution label

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

It may also be used to alert against unsafe practices



WARNING

- ① Do not contact the terminals while the power is applied.
- ② Be sure there are no foreign metallic matters.
- ③ Do not manipulate the battery(charge, disassemble, hitting, short, soldering).



CAUTION

- ① Be sure to check the rated voltage and terminal arrangement before wiring
- ② When wiring, tighten the screw of terminal block with the specified torque range
- ③ Do not install the flammable things on surroundings
- ④ Do not use the PLC in the environment of direct vibration
- ⑤ Except expert service staff, do not disassemble or fix or modify the product
- ⑥ Use the PLC in an environment that meets the general specifications contained in this datasheet.
- ⑦ Be sure that external load does not exceed the rating of output module.
- ⑧ When disposing of PLC and battery, treat it as industrial waste.
- ⑨ I/O signal or communication line shall be wired at least 100mm away from a highvoltage cable or power line.

Operating Environment

- To install, observe the below conditions.

No	Item	Specification			Standard
1	Ambient temp.	0 ~ 55℃			—
2	Storage temp.	-25 ~ 70℃			—
3	Ambient humidity	5 ~ 95%RH, non-condensing			—
4	Storage humidity	5 ~ 95%RH, non-condensing			—
5	Vibration Resistance	Occasional vibration		—	—
		Frequency	Acceleration		
		5≤f<8.4	—	3.5mm	10 times in each direction for X, Y, Z
		8.4≤f≤150	9.8 (1g)	—	
		Continuous vibration			
		Frequency	Frequency	Frequency	
		5≤f<8.4	—	1.75mm	
		8.4≤f≤150	4.9 (0.5g)	—	

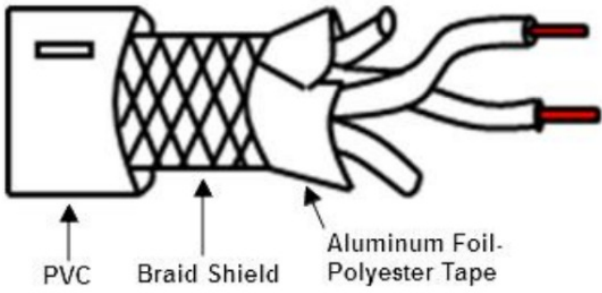
Accessories and Cable Specifications

■ Check Profibus Connector contained in the box

1. Usage : Profibus Communication Connector
2. Item : GPL-CON

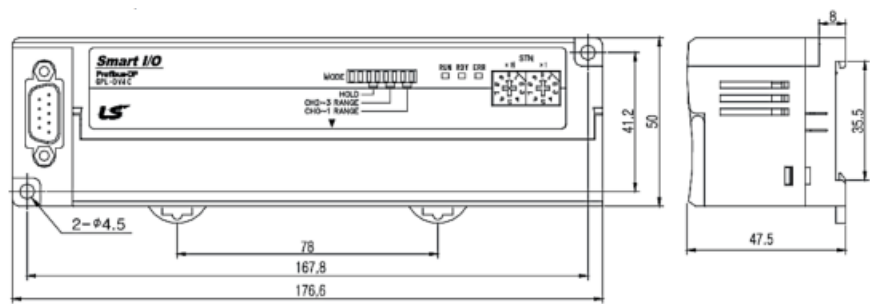
■ When using Pnet communication, shielded twisted pair cable shall be used with consideration of communication distance and speed.

1. Manufacturer : Belden or the maker of equivalent material specification below
2. Cable Specification

Classification	Description	
AWG	22	 <p>PVC Braid Shield Aluminum Foil-Polyester Tape</p>
Type	BC (Bare Copper)	
Insulation	PE (Polyethylene)	
Diameter(inch)	0.035	
Shield	Aluminum Foil-Polyester, Tape/Braid Shield	
Capacitance(pF/ft)	8.5	
Characteristic impedance(Ω)	150 Ω	

Dimension (mm)

■ This is front part of the product. Refer to each name when operating the system. For more information, refer to user’s manual.



■ LED Details

Name	Description
RUN	Displays the status of power
RDY	Displays the communication status of Comm. Module
ERR	Displays the abnormal err of comm.. module

Analog Performance Specification

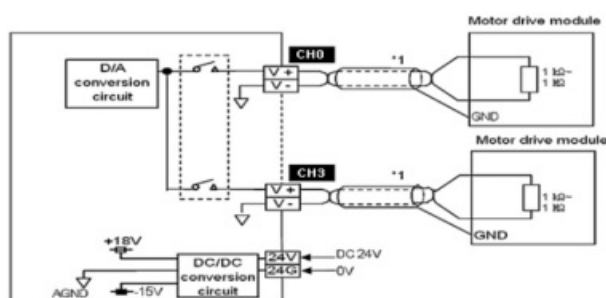
■ This is analog performance specifications of the product. Refer to each name when driving the system. For more information, refer to user manual.

Item	GPL-DV4C (Voltage output)		GPL-DC4C (Current output)	
Analog output channels	4 channels			
Analog input	1~5V	0~4000	4~20mA	0~8000
	0~5V			
	0~10V	0~8000	0~20mA	
	-10~10V	-8000~8000		
Resolution	1~5V	1.250mV	4~20mA	2.5μA
	0~5V			
	0~10V		0~20mA	
	-10~10V			
Accuacy(Ambient tem.)	±0.3% or less		±0.4% or less	
Conversion speed	10ms/module + Update time			
Absolute max. input	±15V		±25mA	
Insulation method	Photo-coupler insulation between input terminal and PLC power (no insulation between channels)			
Terminal connected	38-point terminal			
Internal consumed current	DC24V, 210mA		DC24V, 240mA	
Weight	314g		322g	

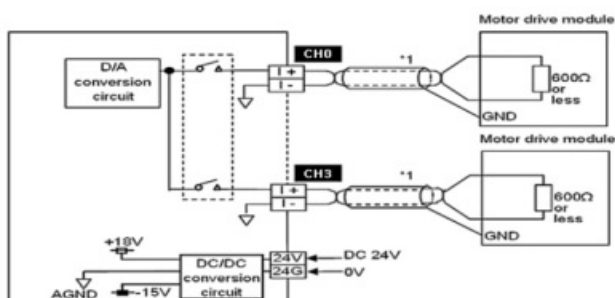
Terminal Block Layout for I/O Wiring

■ This is terminal block layout for I/O wiring. Refer to each name when driving the system.
For more information, refer to user manual.

1) GPL-DV4C



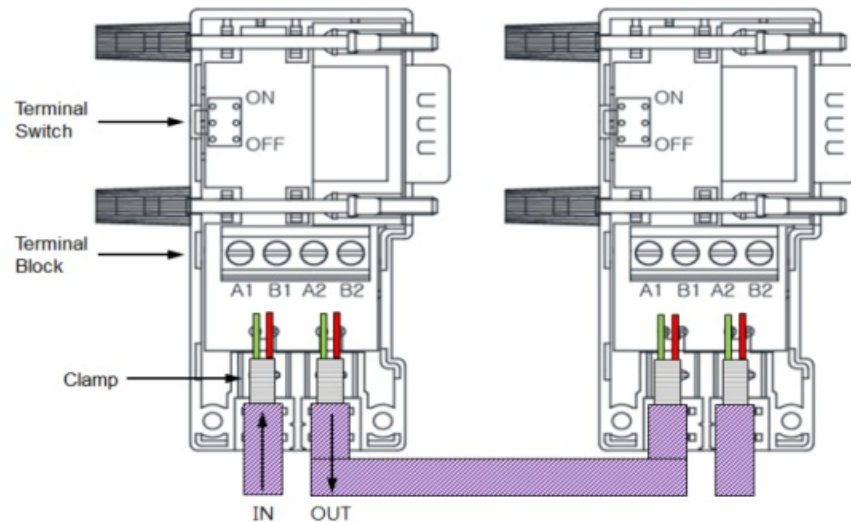
2) GPL-DC4C



Wiring

■ Connector structure and wiring method

1. Input line: green line is connected to A1, red line is connected to B1
2. Output line: green line is connected to A2, red line is connected to B2
3. Connect shield to clamp of shield
4. In case of installing the connector at terminal, install the cable at A1, B1



5. For more information about wiring, refer to user manual.

Warranty

- The warranty period is 36 months from the date of manufacture.
- The initial diagnosis of faults should be conducted by the user. However, upon request, LS ELECTRIC or its representative(s) can undertake this task for a fee. If the cause of the fault is found to be the responsibility of LS ELECTRIC, this service will be free of charge.
- Exclusions from warranty

1. Replacement of consumable and life-limited parts (e.g. relays, fuses, capacitors, batteries, LCDs, etc.)
2. Failures or damages caused by improper conditions or handling outside those specified in the user manual
3. Failures caused by external factors unrelated to the product
4. Failures caused by modifications without LS ELECTRIC's consent
5. Use of the product in unintended ways
6. Failures that cannot be predicted/solved by current scientific technology at the time of manufacture
7. Failures due to external factors such as fire, abnormal voltage, or natural disasters
8. Other cases for which LS ELECTRIC is not responsible

- For detailed warranty information, please refer to the user's manual.
- The content of the installation guide is subject to change without notice for product performance improvement.

LS ELECTRIC Co., Ltd. www.ls-electric.com 10310000542 V4.5 (2024.6)

• E-mail: automation@ls-electric.com

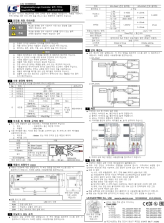
- Headquarter/Seoul Office
- LS ELECTRIC Shanghai Office (China)
- LS ELECTRIC (Wuxi) Co., Ltd. (Wuxi, China)
- LS-ELECTRIC Vietnam Co., Ltd. (Hanoi, Vietnam)
- LS ELECTRIC Middle East FZE (Dubai, U.A.E.)
- LS ELECTRIC Europe B.V. (Hoofddorp, Netherlands)
- LS ELECTRIC Japan Co., Ltd. (Tokyo, Japan)
- LS ELECTRIC America Inc. (Chicago, USA)

Tel: 82-2-2034-4033,4888,4703
 Tel: 86-21-5237-9977
 Tel: 86-510-6851-6666
 Tel: 84-93-631-4099
 Tel: 971-4-886-5360
 Tel: 31-20-654-1424
 Tel: 81-3-6268-8241
 Tel: 1-[800-891-2941](tel:800-891-2941)

- Factory: 56, Samseong 4-gil, Mokcheon-eup, Dongnam-gu, Cheonan-si, Chungcheongnamdo, 31226, Korea



Documents / Resources



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 GPL-DV4C Programmable Logic Controller, GPL-DV4C, Programmable Logic Controller, Logic Controller, Controller

References

- [Electric | The Largest Consumer Energy & Renewables Platform](#)
- [LS ELECTRIC Co., Ltd.](#)
- [User Manual](#)

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