Chapter 4 Performance specification

4.1 Performance Specification

Following presents performance specification of GLOFA Dnet I/F module

Item			Performance Spec.
Transmission spec.	Comm. speed		125/250/500kbps
	Comm. Distance(Thick)[1]		500/250/100m
	Max. Drop length	125 kbps	6m(Max. extension 156m)
		250 kbps	6m(Max. extension 78m)
		500 kbps	6m(Max. extension 39m)
	Data Packet		0~8 Byte
	Network Structure		• Trunk/Drop Line • Power/Signal line in the network
	Bus type[2]		• Multi slave/Multi casting • Peer-to-Peer type • Poll, Strobe, COS/Cyclic type
	Max. Node number		Maximum 64 Identifier of MAC ID/MAC Respectively 32 I/O per node (Max. 2,048 points)
	System type		Node insert/remove on the status of power on is possible
	Rated Voltage		DC 24V
	Diagnosis function		Check duplicated station/Detect abnormal station / Check CRC error/Using of ScanList
Basic Spec.	Internal power consumption		Less than G4L-DUEA:285mA / Less thanG6L-DUEA:230mA Less than G0L-DSQA:240mA / Less than G0L-DSIA:160mA
	Weight		G4L-DUEA:203g / G6L-DUEA:92g G0L-DSQA:380g / G0L-DSIA:310g

Remark

1) Transmission distance of Dnet I/F module is in inverse proportion to data transmission rate, when you use Thin cable, transmission distance is limited to 100m without any relation with data transmission rate..

2) The type of Strove, COS/Cyclic on Bus type will be served later.

3) Please discuss about production and installation of cable with professional maker.

4.2 Cable Specification

4.2.1 Cable Specification (ex:Allen-Bradley product)

· **Cable Specification**

Item	Class 2 Thick/Thin Cable	
Maker	Allen-Bradley	Dual use of Trunk/Drop
Type of Cable	Round	
Std. output voltage	30V/100VA	
Max. Ampere tolerance Ampere Tolerance	100VA/24V or 4A	
Out diameter	12.2mm/6.9mm	
The number of core wire	5 wires	

Class 2 Thick/Thin Cable	
Spool Size	50m/150m/300m/500m

· **Signal name of Cable**

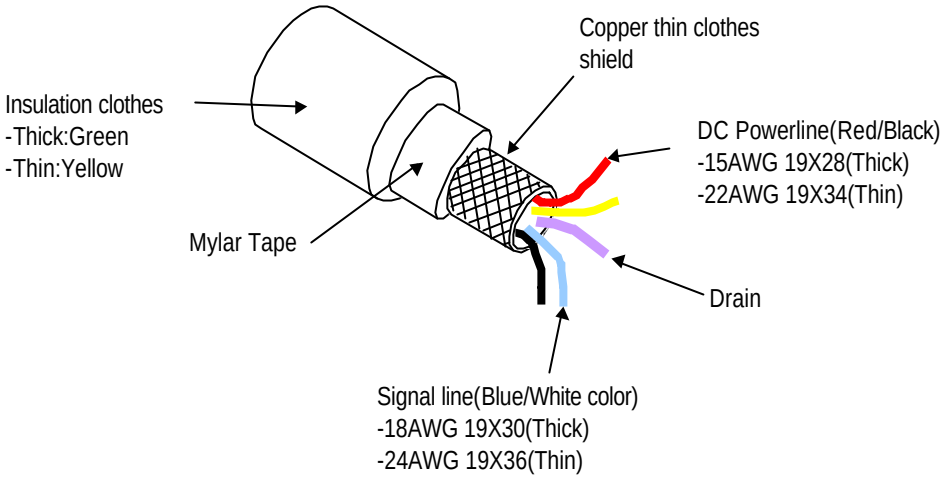
Dnet I/F module of cable has 5 wires like following. It consists of Twist pair cable for supplying of DC 24V power, Twist Pair cable for signal line, and shield line, etc.. Both thick or thin cable can be used for trunk/drop line.

Line Color	Signal Name	Contents
White	CAN_H	Signal
Blue	CAN_L	Signal
Bare	Drain	Shield
Black	V-	Power
Red	V+	Power

· **Maximum Transmission distance based upon the type of cable**

Transmission speed	Max. Distance	
	Thick cable	Thin cable
125kbps	500m	100m
250kbps	250m	100m
500kbps	100m	100m

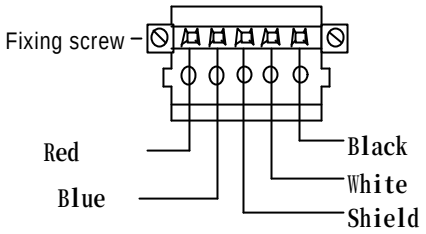
· **Figure**


Copper thin clothes
shield
Insulation clothes
-Thick:Green
-Thin:Yellow
DC Powerline(Red/Black)
-15AWG 19X28(Thick)
-22AWG 19X34(Thin)
Mylar Tape
Drain
Signal line(Blue/White color)
-18AWG 19X30(Thick)
-24AWG 19X36(Thin)

4.3 Connector Specification

4.3.1 Example of Connector Specification

· **5-PIN Connector(for outside connection)**

Color	Signal name	Purpose	5-Pin Plug
White	CAN_H	Signal line	
Blue	CAN_L	Signal line	
Bare	Drain	Shield line	
Black	24V(-)	Power line	
Red	24V(+)	Power line	

* Product example

Maker : PHOENIX CONTACT

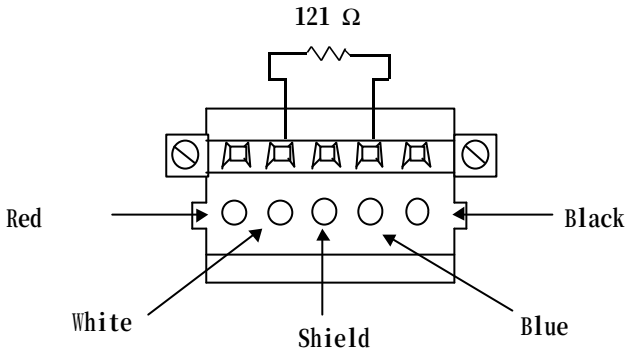
TYPE : MSTB 2.5 / 5-STF - 5.08

4.4 Terminal Resister

4.4.1 Terminal Resister

· **Terminal Resister**

- Attach 121Ω, 1%, 1/4W resister on both ends of network.
- Connect to CAN_H and CAN_L signal line of connector.



Remark

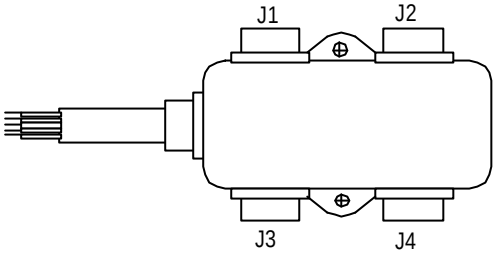
1) Terminal resister must be attached on both ends side of Trunk line of Network necessarily, attach it on both ends side of tab in case consisted with device port tab. If terminal resister is missing then it does not work communication normally.
2) You do not needed to attach additional terminal resister on port tab if there is already terminal resister exist.

4.5 Tab/Distributor

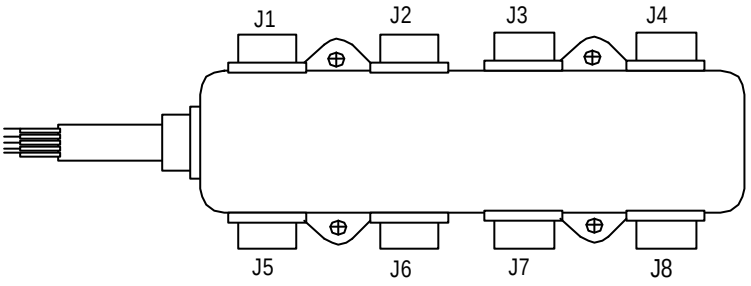
4.5.1 Specification of Tab/Distributor

· **4-Port/8-Port Tab (ex.:Allen-Bradley product)**

- Maximum 4 to 8 number of it is possible to connect and disconnect through connecting to trunk line of device port tab.

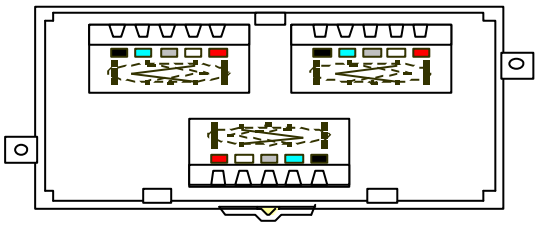


4-Port Tab

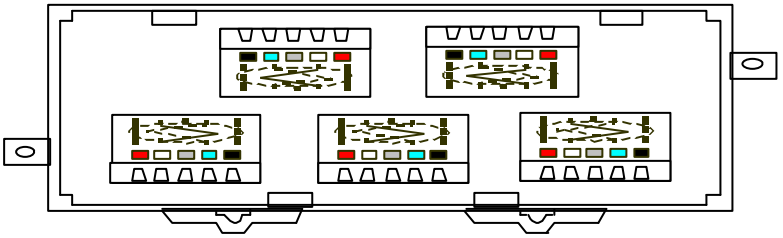


8-Port Tab

· **1trunk(Ttrunk)/3trunk tab (ex.:OMRON product)**



1 trunk tab



3 trunk tab