SIEMENS AG. SIMATIC LOGO! Series

Ethernet Driver

V1.0 or higher

Supported version TOP Design Studio



CONTENTS

We would like to thank our customers for using M2I's "Touch Operation Panel (M2I TOP) Series". Read this manual and familiarize yourself with the connection method and procedures of the "TOP and external device".

1. System configuration

Page 2

Describes the devices required for connection, the setting of each device, cables, and configurable systems.

2. External device selection Page 3

Select a TOP model and an external device.

3. TOP communication setting Page 4

Describes how to set the TOP communication.

4. External device setting

Page 9

Describes how to set up communication for external devices.

5. Supported addresses Page 14

Refer to this section to check the addresses which can communicate with an external device.



1. System configuration

The system configuration of TOP and "SIEMENS AG. – LOGO! Series Ethernet" is as follows:

Series	Module	Link I/F	Communication method	System setting	Cable
SIMATIC LOGO!	LOGO! 8 (0BA8) Series	PROFINET Interface on Base Module	Ethernet TCP	3.1 Settings example 1 (Page 4)	Twisted pair cable*Note 1)

*Note 1) Twisted pair cable

- Refer to STP (Shielded Twisted Pair Cable) or UTP (Unshielded Twisted Pair Cable) Category 3, 4, 5.

- Depending on the network configuration, you can connect to components such as the hub and transceiver, and in this case, use a direct cable.

■ Connectable configuration

• 1:1 connection (one TOP and one external device) connection



• 1:N connection (one TOP and multiple external devices) connection





2. External device selection

■ Select a TOP model and a port, and then select an external device.

PLC select [Eth	ernet]						
Filter : [All]			\sim		Search :		
						Model	○ Vendor
Vendor		Model					
M2I Corporation	^	8	S7-300/40	00 Series			
MITSUBISHI Electric Corpor	ration		S7-200 Se	eries			
OMRON Industrial Automat	tion		C7 1000/	1500 Garden			
LS Industrial Systems			57-12007.	1500 Series			
MODBUS Organization			LOGO! Se	ries			
SIEMENS AG.							
Rockwell Automation							
CE Espus Automation							
PANASONIC Electric Works							
YASKAWA Electric Corpora	tion						
YOKOGAWA Electric Corpo	ration						
Schneider Electric Industrie	s						
KDT Systems							
RS Automation	~						
elect Device				Back	Ne	ext	× Cancel
elect Device PLC Setting[LOGO! 5	Series]			Back	Ne	ext	X Cancel
elect Device PLC Setting[LOGO! 5 Alias Name : P	Series]			Back ind IP : Auto	Ne Ne	ext	X Cancel
elect Device PLC Setting[LOGO! 5 Alias Name : P Interface : E	Series] LC1 :thernet			Market Back	Ne	ext	X Cancel
elect Device PLC Setting[LOGO! S Alias Name : P Interface : E Protocol : C	Series] LC1 ithernet DP Communica	ation(COTF		ind IP : Auto	Ne Ne	Com	X Cancel
elect Device PLC Setting[LOGO! S Alias Name : P Interface : E Protocol : C String Save Mode : F	Series] LC1 :thernet DP Communica	ation(COTF	E >) > nge	Back	Ne Ne	Com	X Cancel
elect Device PLC Setting[LOGO! S Alias Name : [P Interface : [E Protocol : [C String Save Mode : [F USe Redundancy	Series] LC1 Ethernet DP Communica	ation(COTF	e e e e e e	Back ind IP : Auto	Ne	Com	* Cancel
elect Device PLC Setting[LOGO! S Alias Name : P Interface : E Protocol : C String Save Mode : F USE Redundancy Operate Conditon : AND	Series] LC1 thernet DP Communica irist LH HL	ation(COTF	E → y) → nge	ind IP : Auto	Ne Ne	Com	* Cancel
elect Device PLC Setting[LOGO!S Alias Name : P Interface : E Protocol : C String Save Mode : F USe Redundancy Operate Condition : NO Change Condition : T	Series] LC1 thernet DP Communication irst LH HL	ation(COTF Cha) v nge (Second	ind IP : Auto	Ne Ne	Com	Manual
elect Device PLC Setting[LOGO! S Alias Name : P Interface : E Protocol : C String Save Mode : F Use Redundancy Operate Condition : ND Change Condition : T	Series] LC1 Ethernet DP Communica DP Commun	ation(COTF	→ → y) ← nge ↓ (Second	Back		Con	* Cancel
elect Device PLC Setting[LOGO! 5 Alias Name : P Interface : E Protocol : C String Save Mode : F Use Redundancy Operate Condition : AND Change Condition : T Primary Option	Series] LC1 :thernet DP Communica DP Communica irist LH HL we Out ondition	ation(COTF Cha) ∨ nge (Second	Back	► Ne	Com	x Cancel
elect Device PLC Setting[LOGO! S Alias Name : P Interface : E Protocol : C String Save Mode : F Use Redundancy Operate Condition : AND Change Condition : T Primary Option IP	Series] LC1 :thernet DP Communica irst LH HL meOut ondition 192 (2) 1	ation(COTF Cha 5) v nge (Second	Back		Com	x Cancel
elect Device PLC Setting[LOGO! S Alias Name : P Interface : E Protocol : C String Save Mode : F USE Redundancy Operate Condition : AND Change Condition : TI Primary Option IP Ethernet Protocol	Series] LC1 Ethernet DP Communica PC Communica PC Communica Inst LH HL meOut ondition 192 (2) 1 192 (2) 1 17CP ~	ation(COTF Cha	>) ∨ nge (Second	Back		Com	x Cancel
elect Device PLC Setting[LOGO! S Alias Name : P Interface : E Protocol : C String Save Mode : F Use Redundancy Operate Condition : AND Change Condition : TI IP Ethernet Protocol Timeout	Series] LC1 Ethernet DP Communica irist LH HL weOut ondition 192 (*) [1 TCP ~ 300 (*)	ation(COTF Cha 5 168) v nge (Second	Back		Com	x Cancel
elect Device PLC Setting[LOGO! S Alias Name : P Interface : E Protocol : C String Save Mode : F USE Redundancy Operate Condition : ND Change Condition : T Primary Option IP Ethernet Protocol Tmeout Send Wait [Series] LC1 tithernet P Communication irst LH HL meOut ondition 192 (C) 192 (ation(COTF Cha 5 (168)] msec) > nge (Second	Back		Com	x Cancel
elect Device PLC Setting[LOGO! S Alias Name : P Interface : E Protocol : C String Save Mode : F Use Redundancy Operate Condition : NO Change Condition : T Primary Option IP Ethernet Protocol Timeout Send Wait Base Module	Series] LC1 thernet P Communication irst LH HL meOut ondition 192 (C) 12 TCP ~ 300 (C) 300 (C) 50 (ation(COTT Cha 5 Cha 68 C	>) ∨ nge (Second	Back			x Cancel
elect Device PLC Setting[LOGO! S Alias Name : P Interface : E Protocol : C String Save Mode : F Use Redundancy Operate Condition : NND Change Condition : T I Primary Option IP Ethernet Protocol Timeout Send Wait Base Module [Series] LL1 thernet P Communica irst LH HL meOut ondition 192 (C) 1 192 (C) 1 192 (C) 1 1 192 (C) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ation(COTT Cha 5 ¢	y) ∨ nge (Second	Back			X Cancel
elect Device PLC Setting[LOGO! S Alias Name : P Interface : E Protocol : C String Save Mode : F Use Redundancy Operate Condition : MD Change Condition : T Primary Option IP Ethernet Protocol Timeout Send Wait Base Module [Series] LC1 thernet P Communica irst LH HL meOut ondition 192 (C) 192	ation(COTT Cha 5 68	y) ∨ nge (Second	Back		Com	x Cancel
elect Device PLC Setting[LOGO! S Alias Name : P Interface : E Protocol : C String Save Mode : F Use Redundancy Operate Condition : AND Change Condition : T Primary Option IP Ethernet Protocol Timeout Send Wait Base Module	Series] LC1 thernet P Communication irst LH HL meOut ondition 192 (C) 192 (C)	ation(COTT Cha 5	C (Second	Back		Com	x Cancel
elect Device PLC Setting[LOGO! S Alias Name : P Interface : E Protocol : C String Save Mode : F Use Redundancy Operate Condition : AND Change Condition : T P Primary Option IP Ethernet Protocol Send Wait Ease Module	Series] LC1 thernet DP Communication irst LH HL meOut ondition 192 (C) 192 (C	ation(COTT Cha 5 () msec]	D D D C C C C C C C C C C C C C	Back		Com	x Cancel

Settings		Contents			
TOP	Model	Check the TOP display and proc	neck the TOP display and process to select the touch model.		
External device	Vendor	Select the vendor of the externa Select "SIEMENS AG."	I device to be connected to TOP	2	
	PLC	Select the external device to be connected to the TOP.			
		Model	Interface	Protocol	
		LOGO! Series	Ethernet	OP Communication(COTP)	
		Please check the system configuration in Chapter 1 to see if the external device you want to connect is a model whose system can be configured.			



3. TOP communication setting

The communication can be set in TOP Design Studio or TOP main menu. The communication should be set in the same way as that of the external device.

3.1 Communication setting in TOP Design Studio

(1) Communication interface setting

- [Project > Project Property TOP Settings] → [Project Options > "HMI Settings Use" Check > Edit > Ethernet]
 - Set the TOP communication interface in TOP Design Studio.



Items	ТОР	External device	Remarks
IP Address*Note 1) Note 2)	192.168.0.50	192.168.0.51	
Subnet Mask	255.255.255.0	255.255.255.0	
Gateway	192.168.0.1	192.168.0.1	

*Note 1) The network addresses of the TOP and the external device (the first three digits of the IP, <u>192</u>. <u>168</u>. <u>0</u>. 0) should match.

*Note 2) Do not use duplicate IP addresses over the same network.

* The above settings are examples recommended by the company.

Items	Description
IP Address	Set an IP address to be used by the TOP to use over the network.
Subnet Mask	Enter the subnet mask of the network.
Gateway	Enter the gateway of the network.



(2) Communication option setting

- [Project > Project Property > PLC Settings > ETHERNET(1) > "PLC1 : LOGO! Series"]
 - Set the options of the LOGO! Series Ethernet communication driver in TOP Design Studio.

Project Option		×
Change HMI[H] Kald PLC [A] Change PLC[C] K Delete PLC[D]		
Change Finding Add Fill () Add Fill () Dente Fill () Option Module Setting Option Module Module Option Module Option Module		mm Manual
	Apply	Close

* The above settings are examples recommended by the	e company.
------------------------------------------------------	------------

Items	Settings	Remarks
Interface	Select "Ethernet".	Refer to "2. External
Protocol	Select the communication protocol between the TOP and an external device.	device selection".
IP	Enter the IP address of the external device.	
Ethernet Protocol	Selects an Ethernet protocol TCP between the TOP and an external device.	Fixed
TimeOut (ms)	Set the time for the TOP to wait for a response from an external device.	
SendWait (ms)	Set the waiting time between TOP's receiving a response from an external	
	device and sending the next command request.	
Base Module	Select the series of the external device.	



3.2. Communication setting in TOP

* This is a setting method when "Use HMI Setup" in the setting items in "3.1 TOP Design Studio" is not checked.

■ Touch the top of the TOP screen and drag it down. Touch "EXIT" in the pop-up window to go to the main screen.



(1) Communication interface setting

■ [Main screen > Control Panel > Ethernet]

	ō	Ethernet ×
Run	🔯 System	Port Ethernet Port : ETH1 • 0 • Det ion
	PLC Se	MAC Address : 00:15:1D:05:38:C5 IP Address : 192.168.0.50
VNC Viewer	<u>ا</u>	Subnet Mask : 255.255.255.0 Gateway : 192.168.0.1
	Ethernet	DNS (1) : DNS (2) :
Screen shot	Diagnostic M	Ethernet Primary IP : 192.168.0.50 MRAM Analysis
		Bridge Mode : Use Bridge
	[System]	Check duplicate Apply Cancel Close

Items	ТОР	External device	Remarks
IP Address*Note 1) Note 2)	192.168.0.50	192.168.0.51	
Subnet Mask	255.255.255.0	255.255.255.0	
Gateway	192.168.0.1	192.168.0.1	

*Note 1) The network addresses of the TOP and the external device (the first three digits of the IP, <u>192</u>, <u>168</u>, <u>0</u>, 0) should match.

*Note 2) Do not use duplicate IP addresses over the same network.

* The above settings are examples recommended by the company.

Items	Description
IP Address	Set an IP address to be used by the TOP to use over the network.
Subnet Mask	Enter the subnet mask of the network.
Gateway	Enter the gateway of the network.



(2) Communication option setting

■ [Main screen > Control Panel > PLC]

	õ	1001	PLC	×	
	🔯 System	Driver(ETH)	PLC1(LOGO! Series) 🔻		
Kun		Interface	Ethernet 🔹		
		Protocol	OP Communication(CC -		
VNC	PLC	Bind IP	Auto		
VNC		IP	192 🖨 168 🖨 0 🌩 51 🖨		
Viewer	പ	Ethernet	TCP		
	Ethernet	Timeout	300 🖨 msec		
	Ethernet	Send Wait	0 🖨 msec		
Screen		Base Modu	OBA8 -		
shot	Intli				
	Diagnostic				
	[System]	Diagnostic	Ping Test	Apply Cancel	
	l				

 \ast The above settings are $\underline{examples}$ recommended by the company.

Items	Settings	Remarks
Interface	Select "Ethernet".	Refer to "2. External
Protocol	Select the communication protocol between the TOP and an external device.	device selection".
IP	Enter the IP address of the external device.	
Ethernet Protocol	Selects an Ethernet protocol TCP between the TOP and an external device.	Fixed
TimeOut (ms)	Set the time for the TOP to wait for a response from an external device.	
SendWait (ms)	Set the waiting time between TOP's receiving a response from an external	
	device and sending the next command request.	
Base Module	Select the series of the external device.	



3.3 Communication diagnostics

■ Check the interface setting status between the TOP and an external device.

- Touch the top of the TOP screen and <u>drag</u> it down. Touch "EXIT" in the pop-up window to go to the main screen.
- Check if the port (ETH1/ETH2) settings you want to use in [Control Panel > Ethernet] are the same as those of the external device.
- Diagnosis of whether the port communication is normal or not
- Touch "Communication diagnostics" in [Control Panel > PLC].
- The Diagnostics dialog box pops up on the screen and determines the diagnostic status.

ОК	Communication setting normal
Time Out Error	Communication setting abnormal
	- Check the cable, TOP, and external device setting status. (Reference: Communication diagnostics sheet)

Communication diagnostics sheet

- If there is a problem with the communication connection with an external terminal, please check the settings in the sheet below.

Items	Conte	Check		Remarks		
System	How to connect the sy	stem	OK	NG	1 Custom configuration	
configuration	Connection cable name		OK	NG	1. System configuration	
ТОР	Version information		OK	NG		
	Port in use		OK	NG		
	Driver name		OK	NG		
	Other detailed settings		OK	NG		
	Relative prefix	Project setting	OK	NG	2. External device selection	
		Communication diagnostics	ОК	NG	3. Communication setting	
	Ethernet port setting	IP Address	OK	NG		
		Subnet Mask	OK	NG		
		Gateway	OK	NG		
External device	CPU name		OK	NG		
	Communication port n	ame (module name)	OK	NG		
	Protocol (mode)		ОК	NG		
	Setup Prefix		OK	NG	4 External device setting	
	Other detailed settings		OK	NG	4. External device setting	
	Ethernet port setting	IP Address	OK	NG		
		Subnet Mask	OK	NG		
		Gateway	OK	NG		
	Check address range		ОК	NG	5. Supported addresses (For details, please refer to the PLC vendor's manual.)	



4. External device setting

Set as below using "LOGO Soft Comfort V8.0".

For more detailed setting method than that described in this example, refer to the PLC user manual.



Do not use duplicate IP addresses over the same network.

Connection Settings (Set in Diagram Mode)

Step 1. Tools > Click Ethernet Connections and run "Configure Ethernet Connections".



Step 2. Right click "Ethernet Connections" → Click "Add server connection" to add server connectionsetting.



External device connection manual for TOP Design Studio

		대한민국대표 터치패널 Touch Operation Panel
File Edit Format View Tools Window Hel	D	
Diagram Mode Network Project		
Tools 🔹	Diagr Configure Ethernet Connections	
✓ Diagrams	Module Address	G GF SF L 🗌 🔲 🗍 🤤 🔍 📿 🔛
💣 Add New Diagram		
P Circuit Diagram1	IP Address 192.168. 0.51	
	다 C Subnet Mask: 255.255.255.0	
	Default gateway	
	Ethernnet connections	
	Ethernet Connections	
	Connection (Server)	
✓ Instructions		
Detructions		
	· · · · ·	
▼ Onstants		
👻 🛅 Digital	/••••	
E Cursor kou		
EUGU! TD Function key		
Shift register bit		
Io Status 0 (Iow)		
hi Status 1 (high)		
Output		
		2
Vpen connector		•••••••••••••••••••••••••••••••••••••••
		>
Selection		OBA8, Standard 100%

Step 3. Double click "Connection1" then set in pop-up window as shown below.

① Check accept all connection requests

② TSAP : 10.00

File Edit Format View Tools Window Help	
当 ± 13 ⇒ □ = × X □ □ 5 (* 1 □ = 10 ○ 10	
Diagram Mode Network Configure Ethernet Connections X	
Tools	
	<u>Q</u> 2 #
Add Connection1	
B th Cirr Local Properties (Server) TSAP: 20.00	· · · · · · · · · •
Connect with an Operator Panel (OP) Accept all connection requests Only this connection:	
Remote Properties (Client)	
Keep Alive Enable the Keep Alive function for this connection	
Keep Alive Interval:	
OK Cancel Help	
v Status u (Iow)	
A Status 1 (high) OK Cancel Help	• • • • • • • • • • • • • • • • • • • •
	>
Selection 🗖 OBA8, Standard	100%

Step 4. Run Tool > Transfer > PC \rightarrow LOGO! then after downloading setting information, RUN.



Connection Settings (Set in Network Project)

Step 1. Run "Go Online" to locate the module connected to the network, and then "Upload".

File Edit Form	at Vi	ew Tools Window He	p		
📑 ± 🖻 🍉			S (a	📾 📰 🔜 🛍 he	
Diagram M	ode	Network Project			
Tools		•	Netwo	rk view 🛄	
✓ Network	Proje	ect	📑 Ado	l New Device ጆ Go Online 🚿 Go Offline 🍳 Zoom In 🤤 Zoom Out	
💸 Project					^
- Add N	ew D	evice		Unknown_1 192.168.0.51	
	Ж	Cut	Ctrl+X		_
	Ð.	Сору	Ctrl+C		_
	•	Paste	Ctrl+V		\equiv
	×	Delete	Delete		
✓ Instruction		Rename	F2		~
		Add client connection Add server connection.		m Editor	
		Import			
		Export			
		Upload			
		Download			
		VO Status			
		Properties			
				100%	

Step 2. Right click module \rightarrow click "Add server connection" to add server connection setting.

<u>File Edit Forn</u>	nat <u>V</u> i	iew <u>T</u> ools <u>W</u> indow <u>H</u> e	lp	
📑 🛨 📑 竱		🎩 🗙 🗶 🛅 🛍) (a	
Diagram N	lode	Network Project		
Tools		•	Netwo	ork view 🛄 🔢 👝 🗖
✓ Network	Proje	ect	📑 Ad	d New Device ጆ Go Online 🚿 Go Offline 🔍 Zoom In 🔍 Zoom Out
💸 Project				
Add N	lew D	evice		
Se Se	ttinas			Unknown_1
Br Un	iknow	/n_1		192.168.0.51
	Х	Cut	Ctrl+X	
	Ē.	Сору	Ctrl+C	
	•	Paste	Ctrl+V	
	×	Delete	Delete	
v Instructi		Rename	F2	
🛅 Instructi	i	Add alight approation		
🝷 🛅 Cons		Add client connection		
🗕 🛨 🔁 Di		Add server connection		M A # 리패카 + # # 이 여 🔤 년 🗋 🖽 🍳 🤤 🖉 🛗
		Import		
F		Export		known_1 x
		Upload		· · · · · · · · · · · · · · · · · · ·
<mark>lo</mark>		Download		
<mark>hi</mark>		VO Status		
		Proventing.		
<		Properties		
				100%



Step 3. Set in pop-up window as shown below.

1 Check accept all connection requests

② TSAP: 10.00

Connection	-					_	x
Device name IP Address TSAP	Unknown_1 192.168. 0.51 20.00 Connect with Client	an Operator	r Panel (OP) ver		Accept all	connection 10.00 © Client	Server
Data transfer					F	\dd data trai	nsfer information 👔
IU Addi 1 VB	'8SS		igth (Bytes)	Direction	Address		Length (Bytes)
	-			-		ОК	Cancel Help

Step 4. Run Tool > Transfer > PC \rightarrow LOGO! then after downloading setting information, RUN.

■ IP Settings

Step 1. Tools > Transfer > Click Access control.

LOGO!Soft Comfort			the same of	-	THE LOOP		
<u>File Edit Format View</u>	Tools	<u>W</u> indow <u>H</u> elp	5				
📑 ± 🖻 🦻 🖩 昌		Transfer		-) E	PC -> LOGO!	Ctrl+D	
Diagram Mode Tools V Diagrams	9	Determine LOG Select Hardwa Compare	iO! F2 re Ctrl+H Ctrl+Min	us	LOGO! -> PC Start LOGO! Stop LOGO! Svnchronize clock with EM	Ctrl+U	6 5 L 🗌 🗆 📖 🍳 Q, 🥜 🄡
Add New Diagram Circuit Diagram1	BTO- SIM	Simulation Simulation Para	F3 ameters		Show FW version Clear User Program and Password		
	Connect Mod	Connect Moder Disconnect Mo	em odem		Configure Network Address Configure Master/Slave Mode		
	000	Parameter VM	Mapping		Set Clock Summer time/Winter time		······
Instructions		Options	1		Set LOGO! TD Power-on Screen		7
 					Hours counter		
Cursor k	ey Th Eu	notion kou	· · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	VO Status Diagnostic		
Shift register bit					Dynamic server IP filters]
PC> LOGU!							🛂 🔤 UBAO, Standard 100%



Step 2. After updating Accessible LOGO! list, select LOGO! module to connect to.

Marker Inter	rface					×
Interfa	ace					
	Connect t	hrough: Ethernet	▼ Re	altek PCIe GBE Fa	mily Controller	•
Targe	et					
		<u> </u>		Test		
		_		Test		
		Target IP ad	dress: 192.168. 0.	100	Address book	
	Accessibl	e LOGO!:				ø
	Name	IP Address	Subnet Mask	Gateway	MAC address	Status
	-	192, 168, 0, 100	255, 255, 255, 0	0,0,0,0	EU-DC-AU-03-4D-65	Yes
					OK Cano	el Help

Step 3. In Online settings > Assign IP Address > New IP settings column, enter new setting module IP address, then Click "Assign IP address".

LOGO! settings		x
Offline settings Onl	ine settings	
Connect to LOGO!	Current IP address	
Assign IP address	IP Address: 192.168. 0.100	
Set Clock	Subnet Mask: 255.255.255. 0	
Operating mode	Default gateway	
Clear program and		
TD power-on scree		
Hours Counter	New IP settings	
Upload data log	IP Address: 192.168. 0.51	
Diagnostics	Subnet Mask: 255.255.255.0	
Summer/winter tin	Default gateway	
Access control set		
Clock Sync with El	Assign IP address	
CIUCK SYIC WILLEN		
		eip

Step 4. Reset power to the LOGO! module.



5. Supported addresses

The devices available in TOP are as follows:

The device range (address) may differ depending on the CPU module series/type. The TOP series supports the maximum address range used by the external device series. Please refer to each CPU module user manual and be take caution to not deviate from the address range supported by the device you want to use.

LOGO! 8 (0BA8)

Device	Bit Address	Word Address	Remarks
Digital Input	1001 ~ 1064	1001 ~ 1049	
Analog Input	AI001.00 ~ AI016.15	AI001 ~ AI016	
Digital Output	Q001 ~ Q064	Q001 ~ Q064	
Analog Output	AQ001.00 ~ AQ016.15	AQ001 ~ AQ016	
Digital Flag	M001 ~ M064	M001 ~ M049	
Analog Flag	AM001.00 ~ AM064.15	AM001 ~ AM064	
Network Input	NI001 ~ NI128	NI001 ~ NI113	
Network Analog Input	NAI001.00 ~ NAI064.15	NAI001 ~ NAI064	
Network Output	NQ001 ~ NQ128	NQ001 ~ NQ113	
Network Analog Output	NAQ001.00 ~ NAQ032.15	NAQ001 ~ NAQ032	
Variable Memory	V00000.00 ~ V01023.7	VW00000 ~ VW01022	

LOGO! 8 (0BA8) VM Mapping Address

Device	VM Address	Range
Digital Input	1024 ~ 1031	8 Bytes
Analog Input	1032 ~ 1063	32 Bytes
Digital Output	1064 ~ 1071	8 Bytes
Analog Output	1072 ~ 1103	32 Bytes
Digital Flag	1104 ~ 1117	14 Bytes
Analog Flag	1118 ~ 1245	128 Bytes
Network Input	1246 ~ 1261	16 Bytes
Network Analog Input	1262 ~ 1389	128 Bytes
Network Output	1390 ~ 1405	16 Bytes
Network Analog Output	1406 ~ 1469	64 Bytes