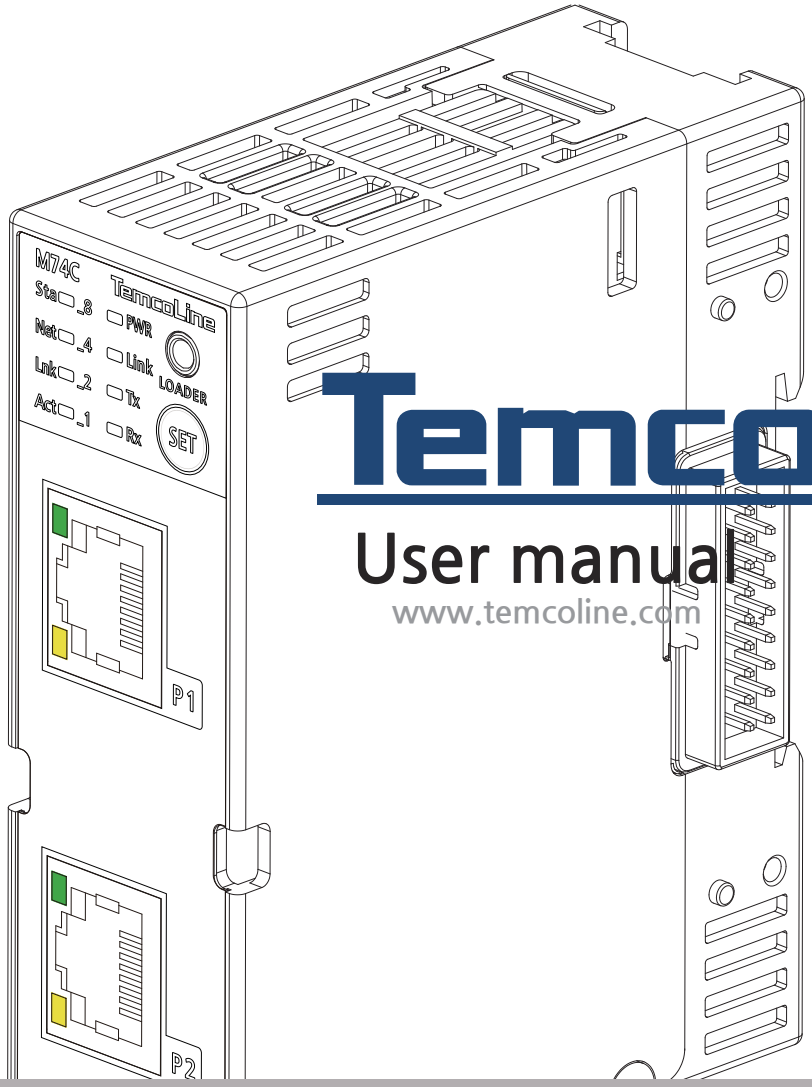
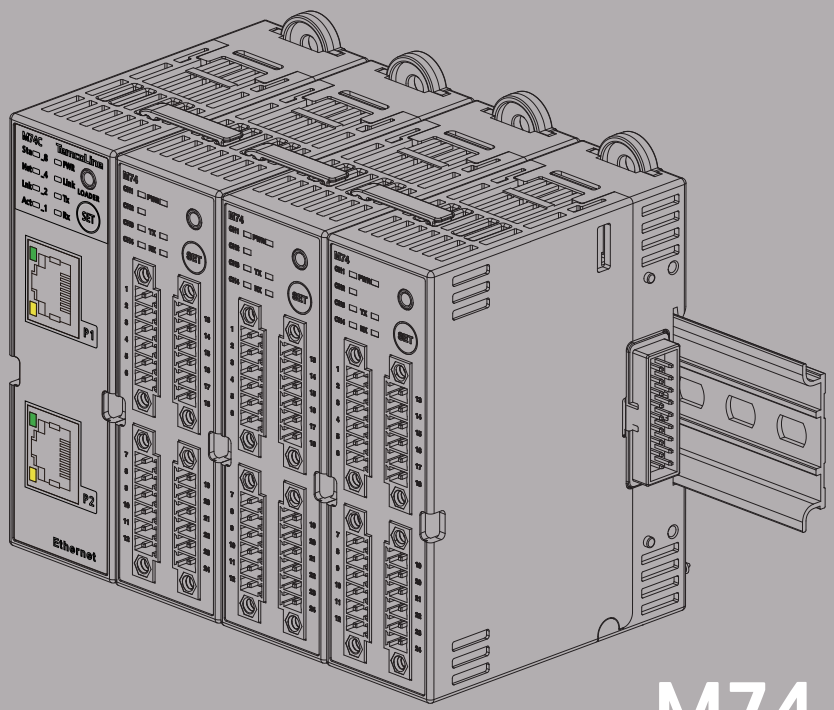


TemcoLine®

User manual

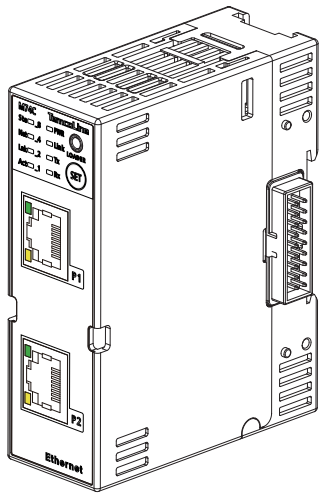
www.temcoline.com

M74C



M74 SERIES

Rev.11



Thank you for purchasing Temcoline's M74C communication module.

This manual explains installation, functions, operation and handling.
Please be sure to read this manual thoroughly before use.
If you encounter any difficulties,
please contact our customer service center at 1588-5439.

The M74C communication module can manage up to 31 M74 series products and boasts a fast access(input response) speed of 22ms per unit via internal bus communication. It also supports Ethernet (Modbus-TCP) and RS-485 communications as standard.

Pay attention to the followings!

1. Use the products under the conditions specified in this manual.
2. The product is designed to be used installed on a control panel.
3. Supply power input with an insulated, limited voltage/current or Class 2, SELV power supply.
4. Do not wire communication lines and power lines together, and be sure to use twisted pair wires for communication lines.
5. Ensure the prescribed space around the product to allow heat to escape.
6. Do not use near devices that generate strong magnetic force and high-frequency noise.
7. This product can be used under the following environment condition.
   1) Indoor
   2) Below 2,000m altitude
   3) Pollution Degree 2
   4) Installation Category II

※ The manufacturer takes no responsibility for direct or indirect damages caused by careless operation or operation under unpredictable or risky environments.

Safety requirements!

Safety requirements are intended to prevent accidents and dangers through the proper use of the products, so please heed them at all times.
The safety requirements are divided into "cautions" and "warnings", which indicate the following.

⚠ WARNING

Serious injury or death may be caused if instructions are not observed.

⚠ CAUTION

Failure to observe these instructions may cause damage to the instrument or some injury to the user.

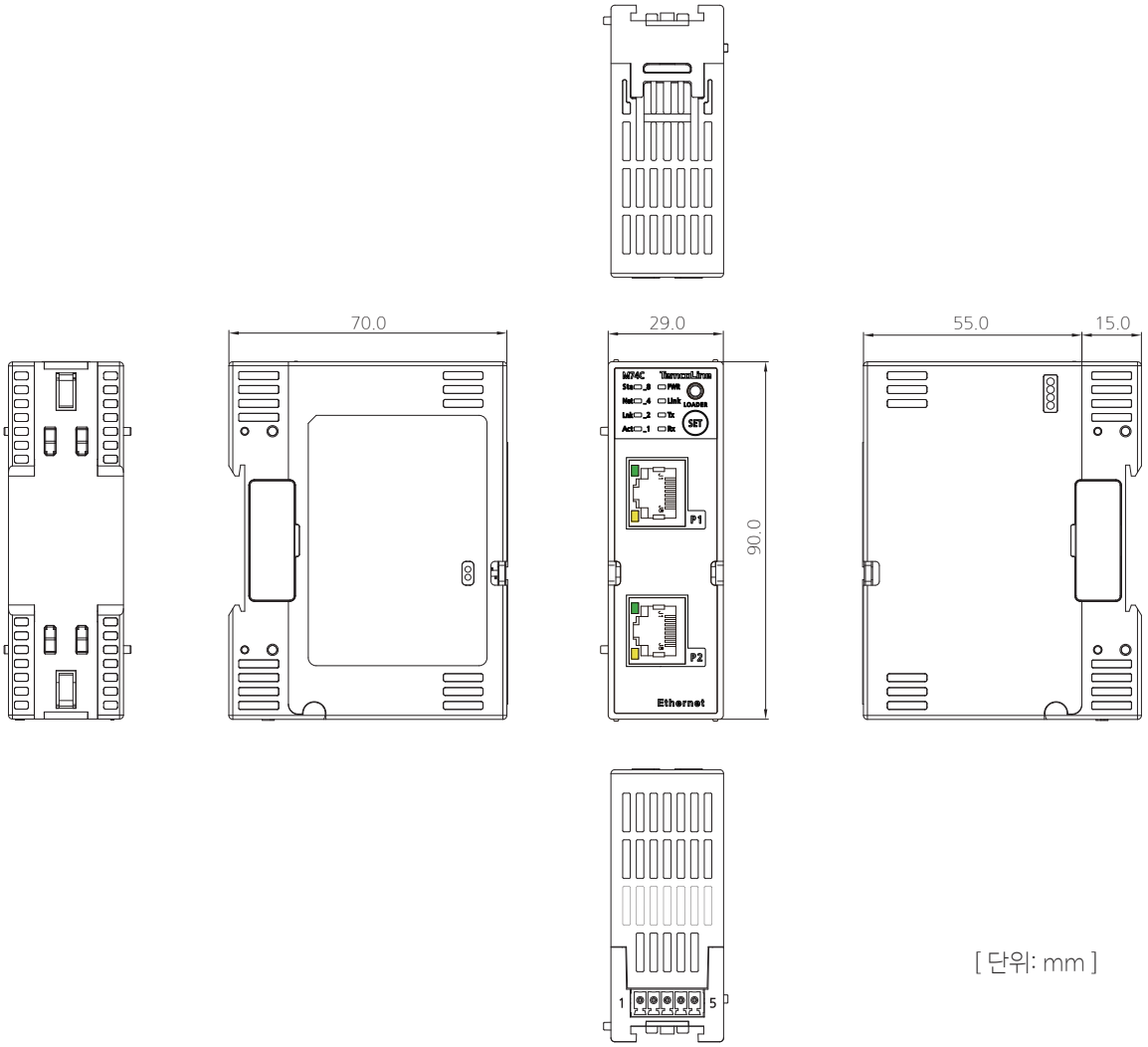
WARNING

1. Use a separate safety device when this product is used to control a device that could harm lives or expensive property in the event of a malfunction or a breakdown. (This may cause fires, deaths, or damage to property.)
2. Do not use this controller at place where there are flammable or explosive gas. (It may cause a fire or explosion.)
3. Before turning the power on, please check that wiring is correct to the number of terminal. (It may cause a fire.)
4. Do not perform wiring, inspection, or maintenance work while the power is connected. (It may cause a fire.)
5. Do not touch the terminals when it is power on. (There is a risk of malfunction.)
6. Please use it after installing it on the panel. (There is a risk of malfunction and fire.)
7. Do not disassemble, modify or repair the product. (There is a risk of malfunction and fire.)

CAUTION

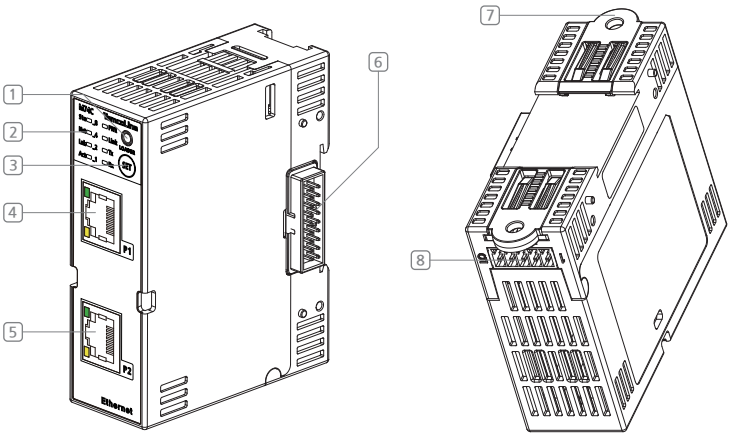
1. Please conduct an inspection when water has entered the product. (It may cause short circuits, fires, and malfunction.)
2. This controller should be used indoors. (It may shorten the controller's life or give an electric shock.)
3. Observe the rated voltage and specification. (It may cause a fire or shorten the controller's life.)
4. Be careful that any of foreign materials do not inflow into the controller. (It may cause a fire or malfunction of the controller.)
5. Do not give direct vibration or shock to the controller. (It may cause of malfunction of the controller.)
6. Do not use organic solvents when cleaning, and clean with a dry towel. (There is a risk of deformation and fire.)
7. When inputting or making other connections, turn off the power, check the polarity, and then connect. (There is a risk of damage and explosion.)

External dimensions



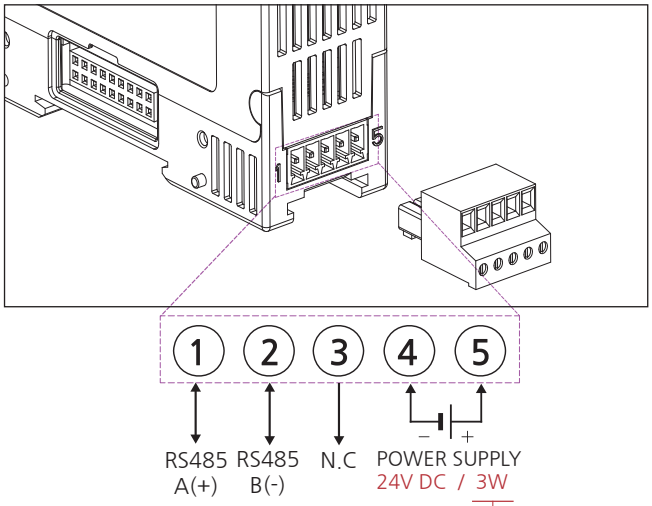
[단위: mm]

Functions and names of appearance



1. PC Loader Jack
2. Communication status and station number check lamp
3. Keys for setting various functions and communication parameters
4. RJ45 Ethernet Port 1
5. RJ45 Ethernet Port 2
6. M74 series interface connector
7. DIN rail fixing lock
8. Power supply and RS-485 communication connector

Main power supply and RS-485 wiring diagram



※ The power shown is for the M74C only.
Please note that the actual power consumption is the sum of the number of connected "(M74 series × number)"

1. Be careful about the connection direction when connecting power and communication.
2. Use power line thickness of AWG 24 or larger.

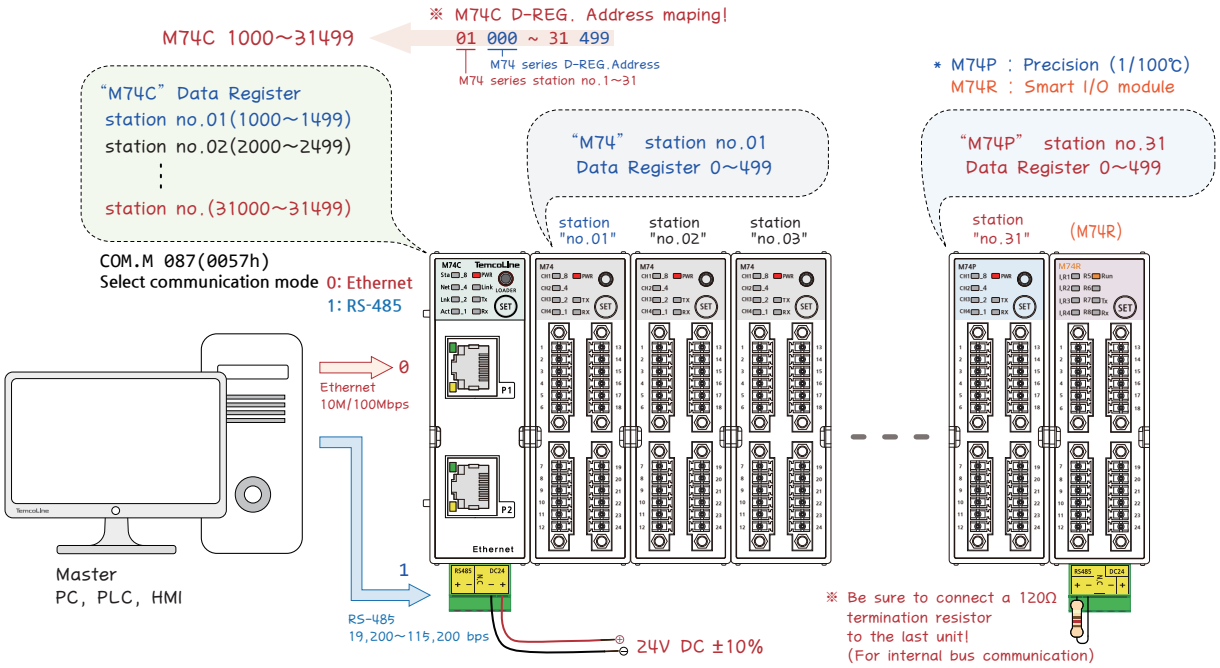
※ For communication modules, please note that the power specifications are determined by the number of dependent M74 series units.

M74C Communication Module Features and Configuration

special feature

1. The industry's smallest structure and fastest user interface.
2. Manage up to 32 M74 series products and have fast access (input response speed) of 22ms per unit.
3. Main communication Ethernet (10M/100Mbps) and RS-485 (19,200~115,200 bps) are supported as standard.
4. Easy expandability achieved with built-in RJ45 Ethernet (10/100BaseT) 2 Ports.
5. M74 series station number and register address integrated mapping structure, no need for separate register map.
6. With user-defined functions, you can select eight surveillance-specific registers (PV, SV, MV, and five others) and assign them to four groups of areas (100~199, 200~299, 300~399, and 400~499), enabling fast real-time monitoring.

Basic configuration



Ratings and Specifications

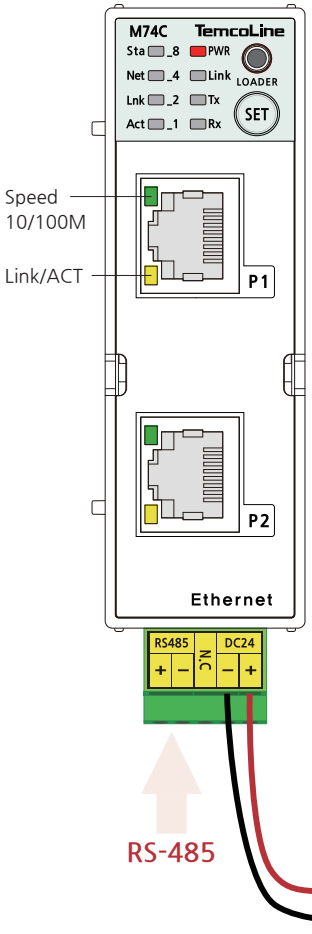
Model : M74C (Communication module)

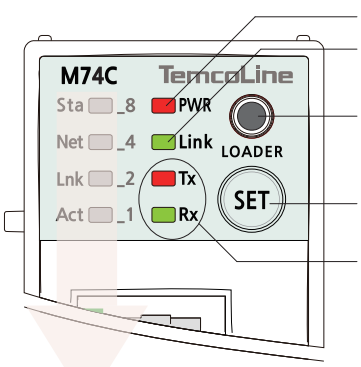
Model			M74C
Power supply			24V DC
Permissible voltage range			90 to 110% of rated voltage
Power consumption			Less than 3W (at maximum load)
Display type			None- parameter setting and monitoring is available at external devices
Communication specifications	Connection to upper level devices	P1 (Ethernet)	Ethernet (10/100BaseT) Protocol : Modbus TCP (Support function code : 03 Read Holding, 06 Write Single, 16 Write Multiple Registers)
		P2 (Ethernet)	Ethernet (10/100BaseT) Protocol : Modbus TCP (Support function code : 03 Read Holding, 06 Write Single, 16 Write Multiple Registers)
		RS-485	Protocol : Modbus-ASCII, RTU (Comm. speed : 19,200 ~ 115,200 bps) Modbus - ASCII/RTU (Support function code : 03 Read Holding, 06 Write Single, 16 Write Multiple Registers)
	Internal BUS	RS-485 (Fixed)	Protocol : Modbus-RTU, Communication speed 115,200 bps (Fixed) Parity bit (Even), Data bit (8-bit), Stop bit (1-bit)
			※ Interface Settings (M74, M74P) However, the M74R is dependent on the M74 or M74P, so no settings are required! M74 series communication settings (fixed) Protocol : Modbus-RTU, Communication speed 115,200 bps Parity bit (Even), Data bit (8-bit), Stop bit (1-bit) [Caution!] Be sure to set "RSPN (Response Time)" to 0 (0 ms)!
	PC Loader (Fixed)		Protocol : Modbus-RTU, Communication speed 19200 bps (Fixed) Parity bit (Even), Data bit (8-bit), Stop bit (1-bit)
Maximum number of connections		Internal bus	31 per M74C (M74 series, M74R are not included as they are dependent on the M74 series.)
		External	In RS-485 Mode, up to 32, in Ethernet Mode, depending on IP address allocation.
EEPROM life (Power failure compensation)			Approximately 4 million write cycles, data retention of over 200 years
Insulation resistance			100 MΩ (500 V DC megger)
Insulation type			Double insulation or reinforced insulation (mark: ⧈, dielectric strength between the measuring input part and the power part: 1 kV)
Dielectric strength			Between the charging part and the case : 1,000 V AC 50/60 Hz for 1 min
Vibration			0.75mm amplitude at frequency of 5 to 55Hz in each X, Y, Z direction for 2 hours
Noise immunity			Square shaped noise by noise simulator (pulse width 1 μs) ±1 kV
Ambient temperature			-10 to 50 ℃, storage: -20 to 60 ℃ (no freezing or condensation)
Ambient humidity			35 to 85%RH, Storage: 35 to 85%RH (no freezing or condensation)
Unit weight (Packaged)			Total weight in packaging : approximately 187 g (body 105 g)

※ When using Ethernet communication (Modbus-TCP),
the M74C (communication module) always functions as a Modbus-TCP Server (Slave).
By default, only one client can connect to the server (Server) using the same IP address and port (502).
In other words, multi-client connections are not supported.

Front indicators and features

1) Front indicator





Power supply check lamp (Red)

Link (Connection status between Ethernet Chip and internal Switch (Green))

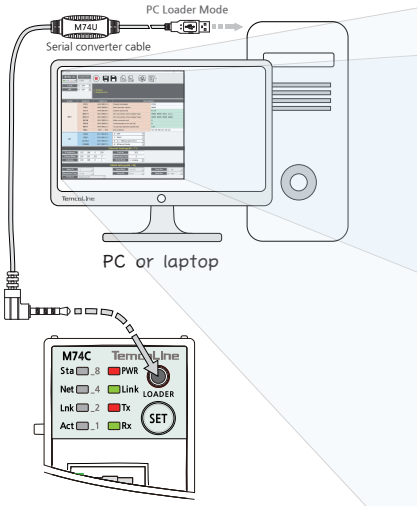
Loader jack
Parameter setting via PC using the separately sold M74U Serial to USB Converter

Function setting and main RS-485 communication setting keys

RS-485 Data transmission (Tx), reception (Rx) lamp
When external communication is in Ethernet mode, the internal BUS communication status is displayed.
In external communication RS-485 mode, the communication status with the upper level is displayed.

Status LED Lamp		Function and status description
Sta	Red	Immediately after initial power-on, internal BUS communication is in standby or communication failure state.
	Orange	When the internal bus communication error rate with the M74 series is less than 5%.
	Green	When the internal bus communication error rate with the M74 series is 0%
Net	Red	The upper (Master) interface is being used in RS-485 mode.
	Orange	The status of the upper (Master) interface has changed during communication. (Applies when power is cycled!)
	Green	The upper (Master) interface is being used in Ethernet mode.
LnK	Red	There is an error or it is not initialized (Contact Temgoline Customer Service)
	Orange	Ethernet TCP server status “SOCKET_LISTEN(14h)” (Waiting)
	Green	Ethernet TCP server status “SOCKET_ESTABLISHED(17h)” (Connected)
Act	Red	Ethernet Chip set error (Recycle power or contact customer service)
	Yellow	Data communication at normal speed.
	Green	Green when carrier is present, off when carrier is absent.

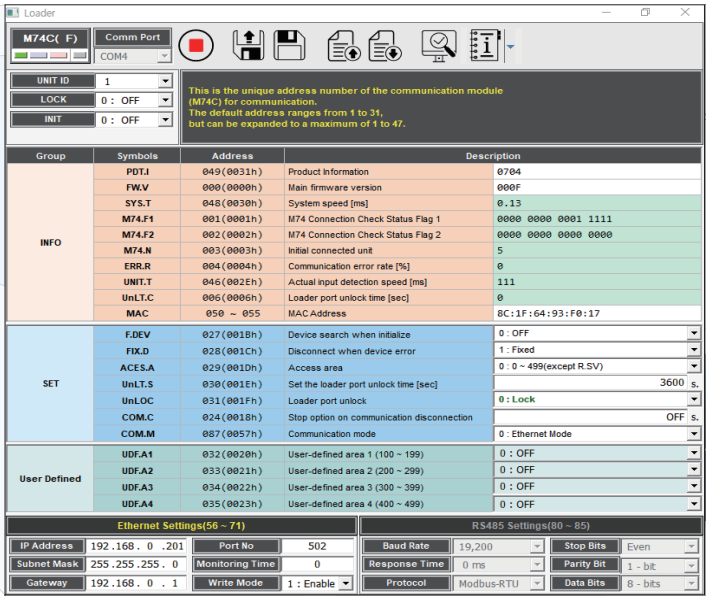
2) Loader interface



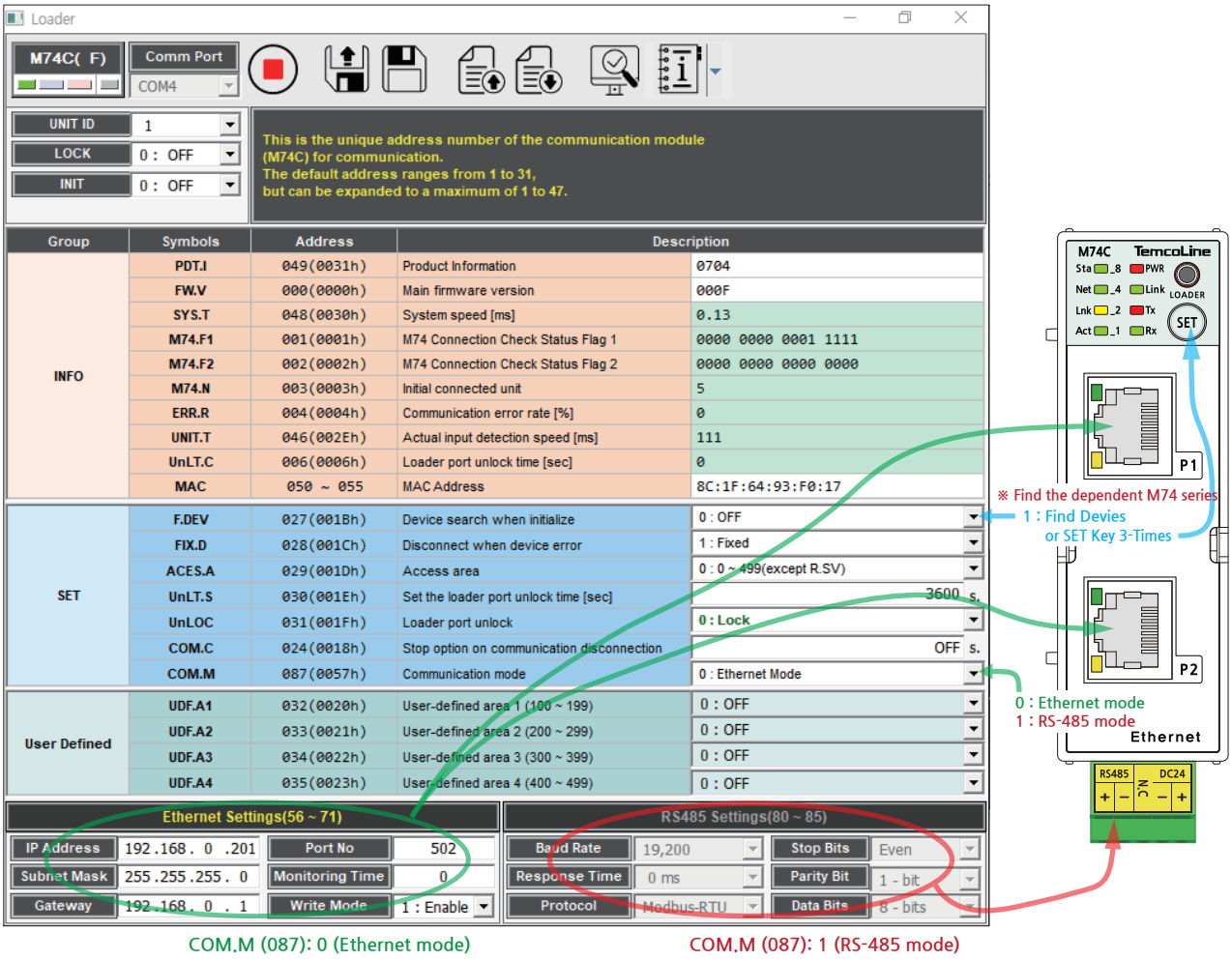
① Install M74 Master on your PC

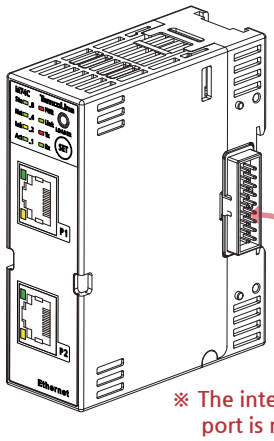
② Connect the Loader Cable “M74U”

③ Run M74 Master and enter Loader mode



3) Function and setting parameters





※ The interface on the right port is recommended!

① INFO (System Information Check Register)

Displays product and system information in real time.

- **M74.F1,F2 (001..2):** Displays the currently connected M74 series.
  (Displayed in the order of bit15 (station no.16) ~ bit0 (station no.0))
- **M74.N (003):** Number of devices (M74 series) confirmed to be connected after running Find Device (F.DEV).
- **UNIT.T (046):** Displays the actual input detection speed of the dependent M74 series.
  (Input detection(response) speed = dependent M74 series × 22.5 ms)

RS-485 internal BUS(Fixed!) Up to 32 M74 series
Modbus-RTU, 115,200 bps
Parity bit(Even), Data bit(8-bit), Stop bit(1-bit)

② SET (Function setting parameters and execution registers)

- **F.DEV (027):** Find Device(M74 series), This function allows you to connect 1 to 31 M74 series devices to the right of the M74C during initial installation and to recognize the connected devices.
  (The station no. can be set between 1 and 31,
  and there are no rules for the order or value of the station no!)

- **FIX.D (028):** After device discovery is complete, a function to select whether to automatically exclude(Skip) a dependent unit (M74) from communication when the unit has a serious communication error or malfunctions during normal use.
  - ▶ 0 (Auto) : Communication at high speed, except for problematic units.
  - ▶ 1 (Fixed) : Communication is performed at low speed by continuing to perform communication requests even when there is a problem unit.

- **ACES.A (029):** The communication module (M74C) manages and integrates all data from the dependent M74 series, reading and writing data register areas in real time. To provide an optimal, efficient, and fast environment for actual user environments, memory access methods are divided into four levels, allowing users to select one.
  - ▶ 0 (0 ~499, excluding S.RV) : This mode manages all data in the M74 series in the fastest and most efficient way. Access time is as fast as 22.5 ms (recommended!)
  - ▶ 1 (0~499) : All data, including S.RV (100, 200, 300, 400), is accessed in real time. This is inefficient, has an access time of 45 ms, and is not recommended.
  - ▶ 2 (800~899) : All configurable parameters within addresses 0-499, including the user-defined area (addresses 800-899), are supported, with an access time of 45 ms. While the user-defined area can be used effectively, access times are long.
  - ▶ 3 (ALL) : Accesses all areas, including the user-defined area (addresses 800-899). This is the least efficient mode and has the longest access time at 90 ms. We recommend avoiding this mode if possible.

- **UnLT.S (030):** The unlock time of the dependent M74 loader port can be set up to 18,000 seconds.

- **UnLOC (031):** This is the unlock switch for the dependent M74 loader port.
  - ▶ 0 (Lock) : This is the default state. In this state, only data can be checked through the M74 loader port, and changes are prohibited.
  - ▶ 1 (Unlock) : When the switch is unlocked to “1”, data can be checked and changed via the M74 loader port for the time set in "UnLT.S (030)".
  - ※ You can check the remaining time for the current unlock in “UnLT.C (006)” of the INFO group.

- **COM.C (024):** Select whether to stop all channels (All.STP(058)) of the dependent unit (M74) when communication is lost.
  - ▶ 0 : OFF, 1 ~ 3600 s. : Stop each unit after the set time when communication is lost.
  - -1 ~ -3600 s. : When communication is disconnected, each unit stops after the set time, and then operates upon reconnection.

- **COM.M (087):** You can select the main communication method to communicate with an external master device.
  - ▶ 0 (Ethernet mode) : It uses Ethernet as the main communication and provides two Ethernet (10/100BaseT) ports.
  - ▶ 1 (RS-485 mode) : It uses RS-485 for main communication, and can manage up to 32 units from the master.
  - ※ If you change the main communication method settings, you must power it back on to apply!

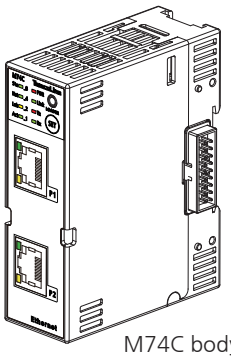
③ User-defined registers

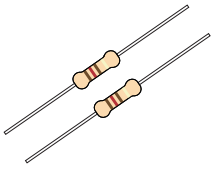
User-defined registers are allocated into four groups of 100 each : A1 (100-199), A2 (200-299), A3 (300-399), and A4 (400-499).
Each of the eight monitoring registers (PV, SV, MV, CT.A, and four others) can be selected and read simultaneously, enabling fast, real-time monitoring, especially when interfacing with a PLC.
(Up to 25 M74 unit monitoring data can be processed simultaneously.)

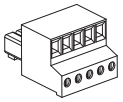
- **UDF.A1 (032):** User Defined Area 1 (Addresses 100 to 199) 0: OFF, Select from 1 to 8 types.
- **UDF.A2 (033):** User Defined Area 2 (Addresses 200 to 299) 0: OFF, Select from 1 to 8 types.
- **UDF.A3 (034):** User Defined Area 3 (Addresses 300 to 399) 0: OFF, Select from 1 to 8 types.
- **UDF.A4 (035):** User Defined Area 4 (Addresses 400 to 499) 0: OFF, Select from 1 to 8 types.
  - ▶ 0 : OFF, 1 : PV, 2 : SV, 3 : MV, 4 : CT.A, 5 : H.MIN / MV.H, 6 : H.DAY / MV.C 7 : CH.STS, 8 : ALM.STS
  - ※ When using this function, the maximum number of M74 series connections is limited to 30 units.

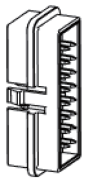
Initial setup and overall configuration

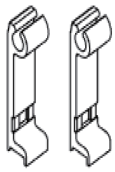
1) Components

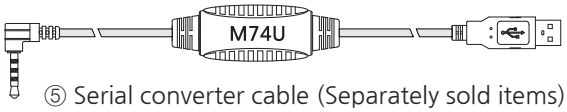

M74C body


① For RS-485
2 120Ω termination resistors


② RS-485
& 1 power connector


③ Internal bus
1 connection connector


④ 2 module fixing B/K



⑤ Serial converter cable (Separately sold items)

① **Terminating resistor for RS-485** : This part comes with two pieces.
One is used as a termination resistor for the internal bus for internal communication with the M74 series, and the other is used as a termination resistor when external communication is configured as RS-485.

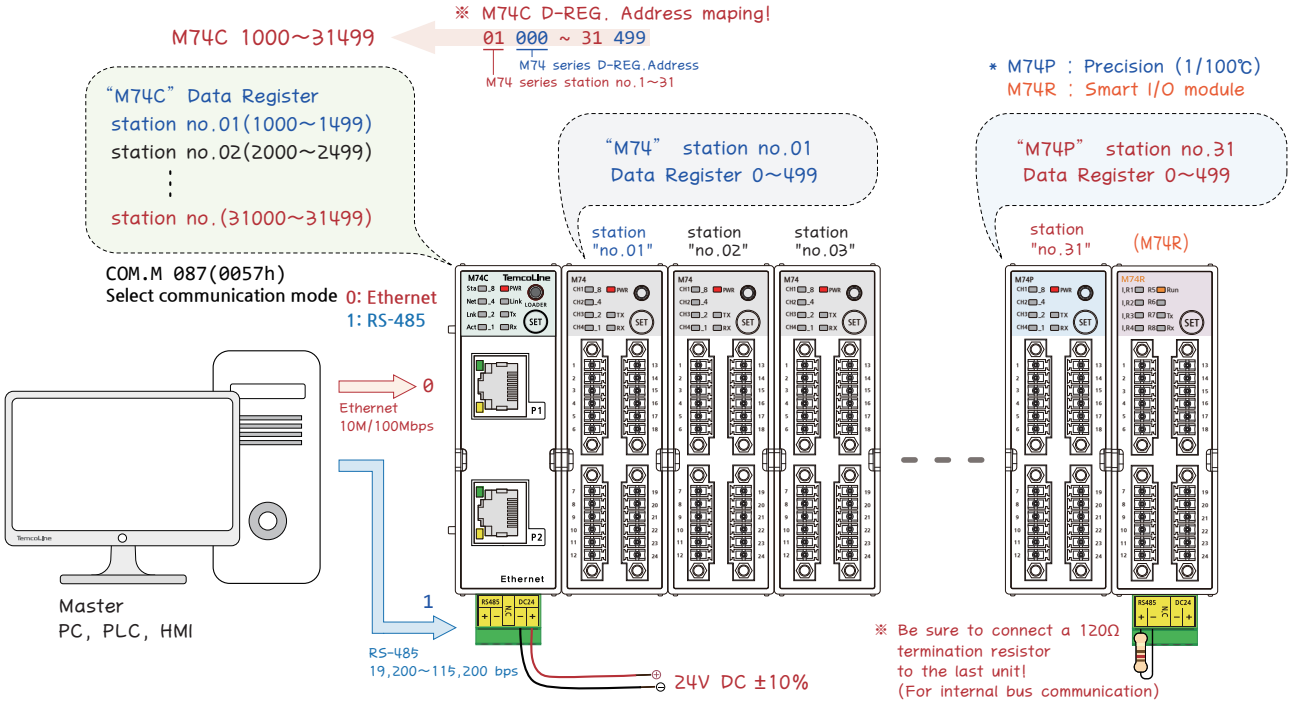
② **RS-485 & power connector** : Used as a power supply and external communication RS-485 terminal.

③ **Internal bus connection connector** : Used for communication and power (24V DC) sharing interface with M74 series.

④ **B/K for module fixing** : An auxiliary device that fixes the joint to improve vibration and mechanical durability after joining.

⑤ **M74U serial cable** : This product is absolutely necessary for internal setup before use and must be purchased separately.

2) Overall configuration

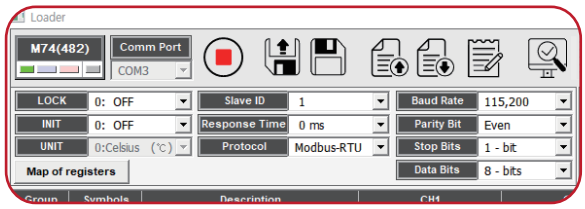


3) Initial setup

① Mount up to 31 M74 series units to be used on the right side of the M74C (from the front) and connect the 120Ω termination resistor built into the RS-485 terminal to the power supply connector of the last unit on the far right, as shown in “2) Overall Configuration” on Page 9.

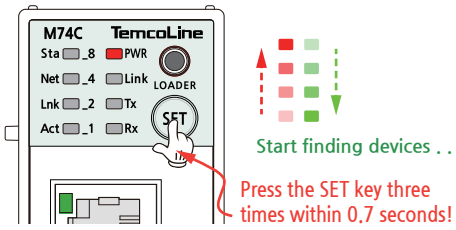
② Insert the power supply connector into the M74C, supply DC24V power, insert the Loader-specific serial cable (M74U) into the M74C Loader port, and set “UnLOC (031) Loader Unlock” to “1” to unlock.

③ Using the Loader-specific serial cable (M74U), configure the communication settings for all units (M74 series) connected to the right side of the M74C as follows.



▶ Protocol : Modbus-RTU, Comm. speed 115,200 bps
▶ Parity bit (Even), Data bit (8-bit), Stop bit (1-bit)
※ Be sure to set “RSPN (Response Time)” to 0 (0 ms)!
▶ Set the unique station number from 1 to 32 so that it does not overlap. (As long as it does not overlap, the order and irregularity do not matter!)

④ If you turn the power off and on, if it is a new product, it will automatically perform an initial device search. If you do not perform the device search function, you can run the device search command directly as follows.



Symbols	Address	Description	
PDT.I	049(0031h)	Product Information	0704
FW.V	000(0000h)	Main firmware version	0009
SYS.T	048(0030h)	System speed [ms]	0.13
M74.F1	001(0001h)	M74 Connection Check Status Flag 1	0000 0000 0111 1111
M74.F2	002(0002h)	M74 Connection Check Status Flag 2	0011 1111 1111 1111
M74.N	003(0003h)	Initial connected unit	7
ERR.R	004(0004h)	Communication error rate [%]	60
UNIT.T	046(002Eh)	Actual input detection speed [ms]	158
UnLT.C	006(0006h)	Loader port unlock time [sec]	2520
MAC	050 ~ 055	MAC Address	8C:1F:64:93:F0:17
F.DEV	027(001Bh)	Device search when initialize	1 : Search 46.9%
FIX.D	028(001Ch)	Disconnect when device error	1 : Fixed
ACES.A	029(001Dh)	Access area	0 : 0 ~ 499(except R.SV)
UnLT.S	030(001Eh)	Set the loader port unlock time [sec]	3600 s.
UnLOC	031(001Fh)	Loader port unlock	1 : Unlock
COM.M	087(0057h)	Communication mode	0 : Ethernet Mode

※ You can run the initial device search directly from the device! In this case, the bar graph showing the device search progress will not be displayed, so you can check the status using connection check status flags 1 and 2.

※ There are two ways to execute the device search command, running it from the PC Loader program F.DEV (027) menu or by pressing the SET key on the M74C communication module.

⑤ Once the initial setup is complete, you can check each dependent “M74 series Tx, Rx” lamp or check for any abnormalities in the “ERR.R (004)” communication error rate.

M74C Communication Data Register Map

Modbus-ASCII/RTU, TCP Protocol supported function code

Function Code	Characteristics of function codes	기 능 설 명
03(03h)	Read Holding Registers	You can read the contents of up to 120 consecutive registers.
06(06h)	Write Sigle Register	You can write the desired value to each register one by one.
16(10h)	Write Multiple Registers	You can write the contents of up to 25 consecutive registers.

Communication register allocation of M74C (Communication Module)

00000(0000h) ~ 00099(0063h) : M74C Communication Module Details and Setting Parameters
00100(0064h) ~ 00499(01F3h) : M74C UDF.A1 ~ A4 user-defined area
01000(03E8h) ~ 31999(7CFFh) : 01XXX ~ 31XXX (Station numbers 1 to 31 of M74)

M74C Communication Data Register Map

M74C System information and function setting parameters (Register address 00000 ~ 00049)

M74 Address of register (Hexa.) CH1	CH2	CH3	CH4	Symbols	Function Description	Property (R/W)	Setting range and details	Unit	Default value
000(0000h)				FW.V	Firmware version	R	MCU firmware version (2-Byte)		—
001(0001h)				M74.F1	M74 series Connection Check Status Flag 1	R	bit 15 : M74 Station No.16 (1) bit 14 : M74 Station No.15 (1) : bit 01 : M74 Station No.02 (1) bit 00 : M74 Station No.01 (1)		—
002(0002h)				M74.F2	M74 series Connection Check Status Flag 2	R	bit 15 : M74 Station No.32 (1) bit 14 : M74 Station No.31 (1) : bit 01 : M74 Station No.18 (1) bit 00 : M74 Station No 17 (1)		—
003(0003h)				M74.N	number of connections	R	0 ~ 32		—
004(0004h)				ERR.R	Comm. error rate	R	0 ~ 100	%	—
005(0005h)				FD.PR	F.DEV's progress	R	32 ~ 0 (Down count!)		—
006(0006h)				UnLT.C	M74 Unlock time	R	18000 ~ 0 (Down count!)	sec.	—
007(0007h)				M74.E1	M74 Connection Error Status Flag 1	R	bit 15 : M74 Station No.16 (1) bit 14 : M74 Station No.15 (1) : bit 01 : M74 Station No.02 (1) bit 00 : M74 Station No.01 (1)		—
008(0008h)				M74.E2	M74 Connection Error Status Flag 2	R	bit 15 : M74 Station No.32 (1) bit 14 : M74 Station No.31 (1) : bit 01 : M74 Station No.18 (1) bit 00 : M74 Station No 17 (1)		—
009(0009h)				HB.CNT	Heartbeat Counter	R	0 ~ 32767 → 0 ~ 32767 repeating (sec.) ※ Master checks comms via counter. If you use Heartbeat mode, b0, b1, b2, b3 . . (1s, 2s, 4s, 8s respectively..)	sec.	—
010(000Ah) ~ 023(0017h)				Reserved.					
024(0018h)				COM.C	Stop when communication is lost	R/W	0 : Release, 1 ~ 3600 : Stop -1 ~ -3600 : Stop/Restart	sec.	0
025(0019h)				LOCK	Parameter protection	R/W	0 : Release, 1 : Lock		0
026(001Ah)				INIT	Factory reset	R/W	0 : Off, 1 : Factory reset		0
027(001Bh)				F.DEV	Find device	R/W	0 : Release, 1 : Finding		0
028(001Ch)				FIX.D	Skip on device error	R/W	0 : Auto, 1 : Fixed		0
029(001Dh)				ACES.A	Memory access area	R/W	0 : 0 ~ 499 (Excluding R.SV) 1 : 0 ~ 499, 2 : 800 ~ 899, 3 : ALL		0
030(001Eh)				UnLT.S	Unlock Time Set	R/W	1 ~ 18000	sec.	3600
031(001Fh)				UnLOC	Unlock M74 Loader	R/W	0 : Lock, 1 : Unlock		0
032(0020h)				UDF.A1	User defined area 1	R/W	0 : OFF 1 : PV, 2 : SV, 3 : MV 4 : CT.A, 5 : H.MIN / MV.H, 6 : H.DAY / MV.C 7 : CH.STS, 8 : ALM.STS		0
033(0021h)				UDF.A2	User defined area 2	R/W			0
034(0022h)				UDF.A3	User defined area 3	R/W			0
035(0023h)				UDF.A4	User defined area 4	R/W			0
036(00024h) ~ 045(002Dh)				Reserved.					
046(002Eh)				UNIT.T	Actual input detection speed	R	1 ~ 65535	ms	—
047(002Fh)				SYS.I	System Information	R	Model & Firmware Version		—
048(0030h)				SYS.T	System speed	R	0.01 ~ 655.35	ms	—
049(0031h)				PDT.I	Product Information	R	Model and input channel information		—

※ For the setting parameters (R/W) of communication data registers 024 (18h) ~ 045 (2Dh), changes can only be made through the Loader port.
(In case of main communication port Ethernet and RS-485, only read is possible!)

M74C Communication Data Register Map

M74C Ethernet function setting parameters (Register address 00050 ~ 00071)

M74 Address of register (Hexa.) CH1	CH2	CH3	CH4	Symbols	Function Description	Property (R/W)	Setting range and details	Unit	Default value
050(0032h)				MAC	MAC Address	R	High byte		—
051(0033h)									
052(0034h)									
053(0035h)									
054(0036h)									
055(0037h)							Lower byte		
056(0038h)				DHCP	DHCP	R/W	Not supported		0
057(0039h)				IP	IP Address	R/W	0 ~ 255 (High byte)		192
058(003Ah)							0 ~ 255		168
059(003Bh)							0 ~ 255		0
060(003Ch)							0 ~ 255 (lower byte)		200
061(003Dh)				SUB.M	Subnet Mask	R/W	0 ~ 255 (High byte)		255
062(003Eh)							0 ~ 255		255
063(003Fh)							0 ~ 255		255
064(0040h)							0 ~ 255 (lower byte)		0
065(0041h)				GATE.W	Default Gateway	R/W	0 ~ 255 (High byte)		192
066(0042h)							0 ~ 255		168
067(0043h)							0 ~ 255		0
068(0044h)							0 ~ 255 (lower byte)		1
069(0045h)				PORT.N	TCP Port No.	R/W	0 ~ 65535		502
070(0046h)				COM.W	Commication Write Enable	R/W	0 : Disable, 1 : Enable		1
071(0047h)				EDM.T	Ethernet Data Monitoring Time	R/W	0 ~ 3600	sec	0
072(0048h) ~ 079(004Fh)				Reserved.					

※ Data can only be changed through the M74C Loader port.

M74C RS-485 Function Setting Parameters (Register address 00080 ~ 00087)

M74 Address of register (Hexa.) CH1	CH2	CH3	CH4	Symbols	Function Description	Property (R/W)	Setting range and details	Unit	Default value
080(0050h)				COM.P	Communication protocol	R/(W)	2 : Modbus-ASCII 3 : Modbus-RTU		3
081(0051h)				BPS	Communication speed	R/(W)	0 : 9,600 bps, 1 : 19,200 bps 2 : 38,400 bps, 3 : 76,800 bps 4 : 115,200 bps		1
082(0052h)				PRTY	Parity bit	R/(W)	0 : NONE, 1 : ODD, 2 : EVEN		2
083(0053h)				STOP	Stop bit	R/(W)	1 : 1-bit, 2 : 2-bit		1
084(0054h)				DTLN	Data length	R/(W)	7 : 7-bit, 8 : 8-bit		8
085(0055h)				ADDR	Station number	R/(W)	1 ~ 48		1
086(0056h)				RSP.T	Response time	R/(W)	Set value (0 ~ 10) × 10 ms	ms	0
087(0057h)				COM.M	Comm. Mode selection	R/(W)	0 : Ethernet mode, 1 : RS485 mode		0
088(0058h) ~ 099(0063h)				Reserved.					

※ Data can only be changed through the M74C Loader port.

M74C User-Defined Register Map

It consists of 4 groups of 100 user-defined registers : A1 (100-199), A2 (200-299), A3 (300-399), and A4 (400-499), and 8 types of monitoring registers (PV, SV, MV, CT.A, and 4 others) can be selected separately and read simultaneously, enabling fast real-time monitoring, especially when interfacing with a PLC. However, when using this function, the maximum number of connections for the M74 series is limited to 30 units (Slave ID. 1 to 30).

M74C User-defined area 1 (Register address 00100 ~ 00199)

Ex.) User Defined Area 1 ← "1: PV"

User Defined Area 1	032(0020h)	0 : OFF, 1 : PV, 2 : SV, 3 : MV, 4 : CT.A, 5 : H.MIN / MV.H, 6 : H.DAY / MV.C, 7 : CH.STS, 8 : ALM.STS		Selection 1 : PV
100(064h) : CH1 PV	101(065h) : CH2 PV	102(066h) : CH3 PV	103(067h) : CH4 PV	Slave ID 01
104(068h) : CH1 PV	105(069h) : CH2 PV	106(06Ah) : CH3 PV	107(06Bh) : CH4 PV	Slave ID 02
108(06Ch) : CH1 PV	109(06Dh) : CH2 PV	110(06Eh) : CH3 PV	111(06Fh) : CH4 PV	Slave ID 03
⋮	⋮	⋮	⋮	⋮
192(0C0h) : CH1 PV	193(0C1h) : CH2 PV	194(0C2h) : CH3 PV	195(0C3h) : CH4 PV	Slave ID 24
196(0C4h) : CH1 PV	197(0C5h) : CH2 PV	198(0C6h) : CH3 PV	199(0C7h) : CH4 PV	Slave ID 25

M74C User-defined area 2 (Register address 00200 ~ 00299)

Ex.) User Defined Area 2 ← "2: SV"

User Defined Area 2	033(0021h)	0 : OFF, 1 : PV, 2 : SV, 3 : MV, 4 : CT.A, 5 : H.MIN / MV.H, 6 : H.DAY / MV.C, 7 : CH.STS, 8 : ALM.STS		Selection 2 : SV
200(0C8h) : CH1 SV	201(0C9h) : CH2 SV	202(0CAh) : CH3 SV	203(0CBh) : CH4 SV	Slave ID 01
204(0CCh) : CH1 SV	205(0CDh) : CH2 SV	206(0CEh) : CH3 SV	207(0CFh) : CH4 SV	Slave ID 02
208(0D0h) : CH1 SV	209(0D1h) : CH2 SV	210(0D2h) : CH3 SV	211(0D3h) : CH4 SV	Slave ID 03
⋮	⋮	⋮	⋮	⋮
292(124h) : CH1 SV	293(125h) : CH2 SV	294(126h) : CH3 SV	295(127h) : CH4 SV	Slave ID 24
296(128h) : CH1 SV	297(129h) : CH2 SV	298(12Ah) : CH3 SV	299(12Bh) : CH4 PV	Slave ID 25

M74C User-defined area 3 (Register address 00300 ~ 00399)

Ex.) User Defined Area 3 ← "3: MV"

User Defined Area 3	034(0022h)	0 : OFF, 1 : PV, 2 : SV, 3 : MV, 4 : CT.A, 5 : H.MIN / MV.H, 6 : H.DAY / MV.C, 7 : CH.STS, 8 : ALM.STS		Selection 3 : MV
300(12Ch) : CH1 MV	301(12Dh) : CH2 MV	302(12Eh) : CH3 MV	303(12Fh) : CH4 MV	Slave ID 01
304(130h) : CH1 MV	305(131h) : CH2 MV	306(132h) : CH3 MV	307(133h) : CH4 MV	Slave ID 02
308(134h) : CH1 MV	309(135h) : CH2 MV	310(136h) : CH3 MV	311(137h) : CH4 MV	Slave ID 03
⋮	⋮	⋮	⋮	⋮
392(188h) : CH1 MV	393(189h) : CH2 MV	394(18Ah) : CH3 MV	395(18Bh) : CH4 MV	Slave ID 24
396(18Ch) : CH1 MV	397(18Dh) : CH2 MV	398(18Eh) : CH3 MV	399(18Fh) : CH4 MV	Slave ID 25

M74C User-defined area 4 (Register address 00400 ~ 00499)

Ex.) User Defined Area 4 ← "4: CT.A"

User Defined Area 4	035(0023h)	0 : OFF, 1 : PV, 2 : SV, 3 : MV, 4 : CT.A, 5 : H.MIN / MV.H, 6 : H.DAY / MV.C, 7 : CH.STS, 8 : ALM.STS		Selection 4 : CT.A
400(190h) : CH1 CT.A	401(191h) : CH2 CT.A	402(192h) : CH3 CT.A	403(193h) : CH4 CT.A	Slave ID 01
404(194h) : CH1 CT.A	405(195h) : CH2 CT.A	406(196h) : CH3 CT.A	407(197h) : CH4 CT.A	Slave ID 02
408(198h) : CH1 CT.A	409(199h) : CH2 CT.A	410(19Ah) : CH3 CT.A	411(19Bh) : CH4 CT.A	Slave ID 03
⋮	⋮	⋮	⋮	⋮
492(1ECh) : CH1 CT.A	493(1EDh) : CH2 CT.A	494(1EEh) : CH3 CT.A	495(1EFh) : CH4 CT.A	Slave ID 24
496(1F0h) : CH1 CT.A	497(1F1h) : CH2 CT.A	498(1F2h) : CH3 CT.A	499(1F3h) : CH4 CT.A	Slave ID 25

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