

## Mitsubishi Q Series Ethernet (3E Frame)

### HMI Factory Setting:

Baud rate: 192.168.0.1

Controller Station Number: 1025

Control Area / Status Area: D-0 / D-10

### Connection

Standard jumper Cable/ Network Cable without jumper (Auto-detected by HMI)

### Definition of PLC Read/Write Address

#### a. Registers

| Type                   | Format       | Read/Write Range | Data Length | Note                           |
|------------------------|--------------|------------------|-------------|--------------------------------|
|                        | Word No. (n) |                  |             |                                |
| Input                  | X-n          | X-0 - X-1FFF     | Word        | Hexadecimal, <a href="#">2</a> |
| Output                 | Y-n          | Y-0 - Y-1FFF     | Word        | Hexadecimal, <a href="#">2</a> |
| Direct Input           | DX-n         | DX-0 - DX-1FFF   | Word        | Hexadecimal, <a href="#">2</a> |
| Direct Output          | DY-n         | DY-0 - DY-1FFFF  | Word        | Hexadecimal, <a href="#">2</a> |
| Latch Relay            | L-n          | L-0 - L-32767    | Word        | <a href="#">2</a>              |
| Annunciator            | F-n          | F-0 - F-32767    | Word        | <a href="#">2</a>              |
| Edge Relay             | V-n          | V-0 - V-32767    | Word        | <a href="#">2</a>              |
| Step Relay             | S-n          | S-0 - S-8191     | Word        | <a href="#">2</a>              |
| Link Relay             | B-n          | B-0 - B-7FFF     | Word        | Hexadecimal, <a href="#">2</a> |
| Special Link Relay     | SB-n         | SB-0 - SB-7FF    | Word        | Hexadecimal, <a href="#">2</a> |
| Internal Relay         | M-n          | M-0 - M-32767    | Word        | <a href="#">2</a>              |
| Special Internal Relay | SM-n         | SM-0 - SM-2047   | Word        | <a href="#">2</a>              |
| Timer Value            | TN-n         | TN-0 - TN-23087  | Word        | <a href="#">2</a>              |
| Retentive Timer Value  | SN-n         | SN-0 - SN-23087  | Word        |                                |
| Counter Value          | CN-n         | CN-0 - CN-23087  | Word        |                                |
| Data Register          | D-n          | D-0 - D-4500000  | Word        |                                |
| Special Data Register  | SD-n         | SD-0 - SD-2047   | Word        |                                |
| Index Register         | Z-n          | Z-0 - Z-19       | Word        |                                |
| File Register          | R-n          | R-0 - R-32767    | Word        |                                |

| Type                  | Format       | Read/Write Range  | Data Length | Note                              |
|-----------------------|--------------|-------------------|-------------|-----------------------------------|
|                       | Word No. (n) |                   |             |                                   |
| File Register         | ZR-n         | ZR-0 – ZR-9999999 | Word        | <a href="#">3</a>                 |
|                       |              | ZR-0 – ZR-98967F  | Word        | Hexadecimal,<br><a href="#">3</a> |
| Link Register         | W-n          | W-0 – W-657F      | Word        | Hexadecimal                       |
| Special Link Register | SW-n         | SW-0 – SW-7FF     | Word        | Hexadecimal                       |

**b. Contacts**

| Type                    | Format      | Read/Write Range       | Note                              |
|-------------------------|-------------|------------------------|-----------------------------------|
|                         | Bit No. (b) |                        |                                   |
| Input                   | Xb          | X-0 – X-1FFF           | Hexadecimal                       |
| Output                  | Yb          | Y-0 – Y-1FFF           | Hexadecimal                       |
| Direct Input            | DX-b        | DX-0 – DX-1FFF         | Hexadecimal                       |
| Direct Output           | DY-b        | DY-0 – DY-1FFF         | Hexadecimal                       |
| Latch Relay             | L-b         | L-0 – L-32767          |                                   |
| Annunciator             | F-b         | F-0 – F-32767          |                                   |
| Edge Relay              | V-b         | V-0 – V-32767          |                                   |
| Step Relay              | S-b         | S-0 – S-8191           |                                   |
| Link Relay              | B-b         | B-0 – B-7FFF           | Hexadecimal                       |
| Special Link Relay      | SB-b        | SB-0 – SB-7FF          | Hexadecimal                       |
| Internal Relay          | M-b         | M-0 – M-32767          |                                   |
| Special Internal Relay  | SM-b        | SM-0 – SM-2047         |                                   |
| Timer Contact           | TS-b        | TS-0 – TS-23087        |                                   |
| Timer Coil              | TC-b        | TC-0 – TC-23087        |                                   |
| Retentive Timer Contact | SS-b        | SS-0 – SS-23087        |                                   |
| Retentive Timer Coil    | SC-b        | SC-0 – SC-23087        |                                   |
| Counter Contact         | CS-b        | CS-0 – CS-23087        |                                   |
| Counter Coil            | CC-b        | CC-0 – CC-23087        |                                   |
| Data Register           | D-n.b       | D-0.0 – D-4500000.15   |                                   |
| File Register           | R-n.b       | R-0.0 – R-32767.15     |                                   |
| File Register           | ZR-n.b      | ZR-0.0 – ZR-9999999.15 | <a href="#">3</a>                 |
|                         |             | ZR-0.0 – ZR-98967F.F   | Hexadecimal,<br><a href="#">3</a> |
| Link Register           | W-n.b       | W-0.0 – W-4047FF.F     | Hexadecimal                       |



- 1) Before using this communication protocol, the user needs to set communication module via GX Developer programming tools. For more detailed information regarding the setting method, please refers to Mitsubishi PLC User Manual.
- 2) The device address must be the multiple of 16.
- 3) This program supports both hexadecimal /decimal for File Register **ZR**, it can be done through set extra parameter 2 which default value is hexadecimal.

