# Pro-face

**Digital**
*Human Machine Interface*

# Device/PLC Connection Manuals

**About the Device/PLC Connection Manuals**

Prior to reading these manuals and setting up your device, be sure to read the "Important: Prior to reading the Device/PLC Connection manual" information. Also, be sure to download the "Preface for Trademark Rights, List of Units Supported, How to Read Manuals and Documentation Conventions" PDF file. Furthermore, be sure to keep all manual-related data in a safe, easy-to-find location.
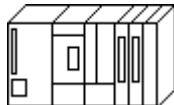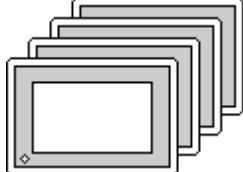
## 5.9    Yaskawa Electric

### 5.9.1    System Structure

The following describes the system structure for connecting the GP to Yaskawa Electric PLCs.

*Reference*    *The Cable Diagrams mentioned in the following tables are listed in the section titled "**5.9.2 Cable Diagrams**".*

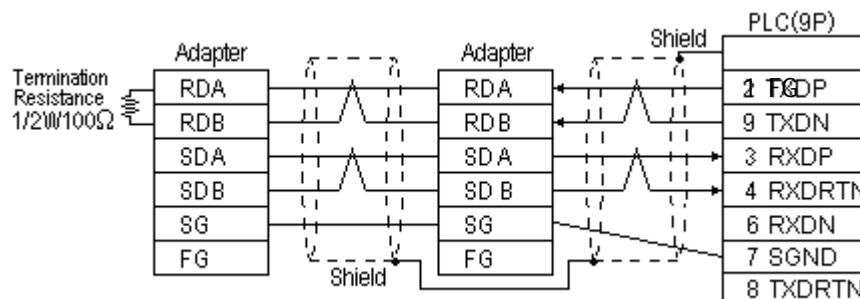### ■ **Memocon-sc Series/GL 120, 130**  (using Link I/F)

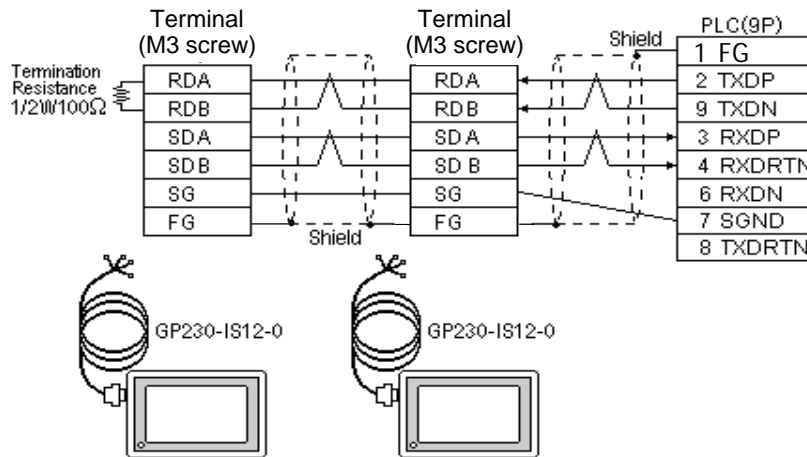| CPU | Link I/F | Cable Diagram | GP |
|---|---|---|---|
|  | Link Unit |  |  |
| GL120<br>GL130 | JAMSC-120NOM27100 | RS-422<br>(Cable Diagram 1) | GP Series |

### 5.9.2    Cable Diagrams

The cable diagrams illustrated below and the cable diagrams recommended by Yaskawa Electric may differ, however, using these cables for your PLC operations will not cause any problems.

#### Cable Diagram 1

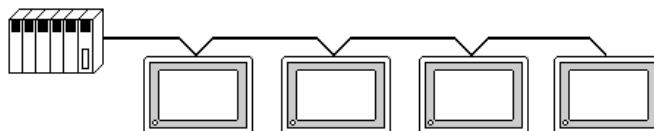• When using Digital's RS-422 connector terminal adapter, GP070-CN10-O.

• When using Digital's Multi-link Cable, GP230-IS12-O



**Careful!**    *Ground your PLC's FG terminal according to your country's applicable standard.  For details, refer to the corresponding PLC manual.*
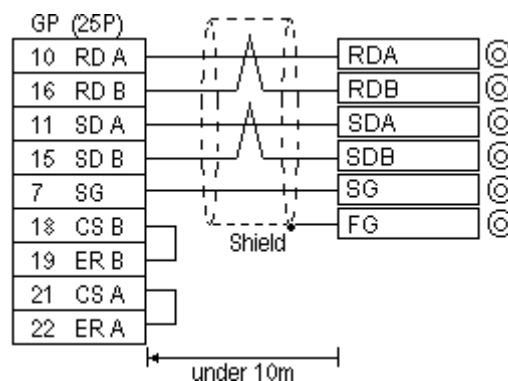
**Important**

• ***Pull out a small amount of the Transfer Cable's shield, make a wire out of it and connect it to the PLC's FG terminal.***

• ***The GP230-IS12-O Cable FG terminal is not connected to the GP's FG.***

• ***Attach a Termination Resistor to both ends of the cable.***

• ***For the RS-422 connection, refer to Yaskawa Electric's PLC manual for the cable length.***

• ***As a general rule, connect the PLC to one end of the circuit.***



**Note:**    When making your own cable, Hitachi's CO-SPEV-SB (A) 3P*0.5 cable is recommended.

The cable connection lines are as illustrated below.  The cables between the GP and the terminals should be less than 10m.

### 5.9.3 Supported Devices

The following describes the range of devices supported by the GP.

■ **Memocon-sc series** (GL120 and GL130)

▭ Setup System Area or Communication Information's Storing Address here.

| Device | Bit Address | Word Address | Particulars | |
|---|---|---|---|---|
| Coil (output/internal) | 000001 ~ 008192 | --- | *1 | |
| Input Relay | 100001 ~ 101024 | --- | *1*2 | |
| Link Coil 1 | D10001 ~ D11024 | --- | *1 | |
| Link Coil 2 | D20001 ~ D21024 | | *1 | |
| MC Relay 1 | X10001 ~ X10256 | --- | *1*2 | |
| MC Relay 2 | X20001 ~ X20256 | --- | *1*2 | |
| MC Coil 1 | Y10001 ~ Y10256 | --- | *1 | |
| MC Coil 2 | Y20001 ~ Y20256 | --- | *1 | |
| MC Code Relay 1 | M10001 ~ M10096 | --- | *1*2 | |
| MC Code Relay 2 | M20001 ~ M20096 | --- | *1*2 | |
| MC Control Relay 1 | P10001 ~ P10256 | --- | *1*2 | H/L |
| MC Control Relay 2 | P20001 ~ P20256 | --- | *1*2 | |
| MC Control Coil 1 | Q10001 ~ Q10256 | --- | *1 | |
| MC Control Coil 2 | Q20001 ~ Q20256 | --- | *1 | |
| Input Register | --- | 300001 ~ 300512 | Bit 15 *2 | |
| Output Register | --- | 300001 ~ 300512 | Bit 15 | |
| Holding Register | --- | 400001 ~ 409999 | Bit 15 | |
| Link Register 1 | --- | R10001 ~ R11024 | Bit 15 | |
| Link Register 2 | --- | R20001 ~ R21024 | Bit 15 | |
| Constant Register | --- | 700001 ~ 704096 | Bit 15 | |

*\* 1  1-word (16-bit) data day be specified.*

*\* 2  Data cannot be written here.*

**5.9.4**   **Environment Setup**

The following lists Digital's recommended PLC and GP communication settings.

■ **Memocon-sc series** (GL 120 and GL 130)

| GP Setup | | PC Link Unit Setup | |
|---|---|---|---|
| Baud Rate | 19200 bps | Baud Rate | 19200 bps |
| Data Length | 8 bits | --- | |
| Stop Bit | 1 bit | Stop Bit | 1 bit |
| Parity Bit | Even | Parity Bit ON/OFF EVEN/ODD | ON Even |
| Data Flow Control | ER Control | --- | |
| Communication Format | 4-wire type | Communication Format | RS-422 |
| Unit No. | 1 | Slave address number | 1 |
| --- | | Transmission bit | RTU mode (fixed) |