

# Communication between PLCs and PWS

# P

IMPORTANT NOTES: "The Register and Range of Relay Numbers" listed in this appendix is the range that allows for setting. In real operation, please be sure not to exceed the maximum range of the numbers that the PLC-CPU defined.

NOTE: Set the PLC's communications parameters according to the following table; set the Workstation's baud rate and data format to match the PLC's transmission speed and format; Set the Workstation's Default Controller Station Number to match the PLC's address:

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**PLC Drivers, p513.tsk, Allen-Bradley Micrologic1000**

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type /		Data Size	
			Aux. Address		R/W	
Output file	O0:n	n=0	0	0	Word	✓
Input file	I1:n	n=0-1	1	0	Word	✓
Status file	S2:nn	nn=0-32	2	0	Word	✓
Bit file	B3:nn	nn=0-31	3	0	Word	✓
Timer flag	T4:nn.0	nn=0-39	4	0	Word	✓
Timer Preset Value	T4:nn.1	nn=0-39	5	0	Word	✓
Timer Accumulator Value	T4:nn.2	nn=0-39	6	0	Word	✓
Counter flag	C5:nn.0	nn=0-31	7	0	Word	✓
Counter Preset Value	C5:nn.1	nn=0-31	8	0	Word	✓
Counter Accumulator Value	C5:nn.2	nn=0-31	9	0	Word	✓
Control file	R6:nn.0	nn=0-15	10	0	Word	✓
Control Size of Bit Array	R6:nn.1	nn=0-15	11	0	Word	✓
Control Reserved file	R6:nn.2	nn=0-15	12	0	Word	✓
Integer file	N7:nnn	nnn=0-104	13	0	Word	✓

**Note 1:** The Workstation can read up to 30 words in one read command.

**Note 2:** The Workstation does not support block read for registers in Timer, Counter, and Control files.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Output	O0:n/bb	n=0 ; bb=0-15	0xC0	0-15	Word	✓
Input	I1:n/bb	n=0-1; bb=0-15	0xC1	0-15	Word	✓
Status	S2:nn/bb	nn=0-32; bb=0-15	0xC2	0-15	Word	✓
Bit	B3:nn/bb	nn=0-31; bb=0-15	0xC3	0-15	Word	✓
Timer	T4:nn.0/bb	nn=0-39; bb=0-15	0xC4	0-15	Word	✓
Timer Preset Value	T4:nn.1/bb	nn=0-39; bb=0-15	0xC5	0-15	Word	✓
Timer Accumulator Value	T4:nn.2/bb	nn=0-39; bb=0-15	0xC6	0-15	Word	✓
Counter flag	C5:nn.0/bb	nn=0-31; bb=0-15	0xC7	0-15	Word	✓
Counter Preset Value	C5:nn.1/bb	nn=0-31; bb=0-15	0xC8	0-15	Word	✓
Counter Accumulator Value	C5:nn.2/bb	nn=0-31; bb=0-15	0xC9	0-15	Word	✓
Control	R6:nn.0/bb	nn=0-15; bb=0-15	0xCA	0-15	Word	✓
Control Size of Bit Array	R6:nn.1/bb	nn=0-15; bb=0-15	0xCB	0-15	Word	✓
Control Reserved	R6:nn.2/bb	nn=0-15; bb=0-15	0xCC	0-15	Word	✓
Integer	N7:nnn/bb	nnn=0-104; bb=0-15	0xCD	0-15	Word	✓

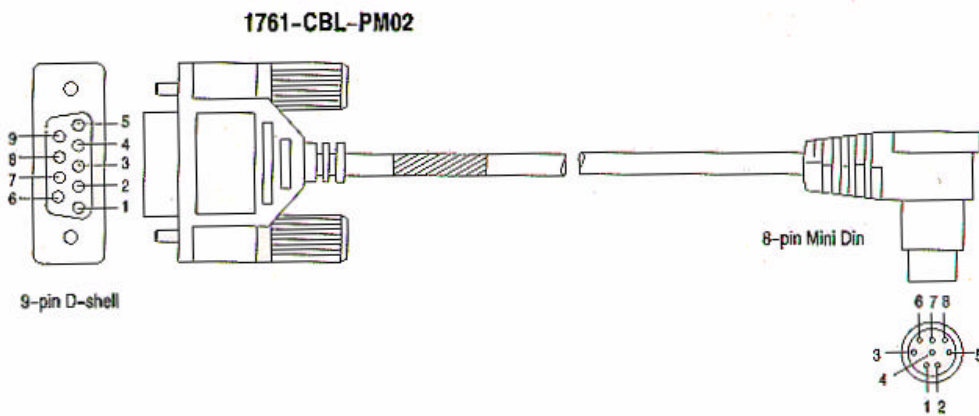
**Note 3:** The Workstation can read up to 480 bits in one read command.

**Note 4:** The Workstation doesnot support block read for bits in Timer, Counter, and Control files.

3. Example for the connections between PWS & RS232C of 1761-CBL-PM02:

HMI-COM port	PLC-port RS232C
25-pin female -----CABLE-----	9-pin male
RXD 3	2 SD
TXD 2	3 RD
GND 7	5 SG
RTX 4	
CTX 5	

HMI-COM port	1761-CBL-PM02
9-pin male -----CABLE-----	9-pin male
RXD 2	2 SD
TXD 3	3 RD
GND 5	5 SG
RTX 7	
CTX 8	



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS-Setting
a. Communication format	:RS232C	Set the Workstation's operating parameters to match the PLC.
b. Node Address	:N	
c. Transmission Speed	:19200 bps	
d. Transmission Format	:8-bits,none, 1-bit (data bits,parity,stop bits)	
e. Com Port	:FULL DUPLEX ; DF1	
f. CRC ERROR Check	:YES	
Note: You should open those files in the PLC that the Workstation will access.		

**[PLC Drivers, p553.tsk, Allen-Bradley PLC-5](#)**

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Output file	O:ooo	ooo=octal number 0-277	0	0	Word	✓
Input file	I:ooo	ooo=octal number 0-277	1	0	Word	✓
Status file	S:nnn	nnn=0-127	2	0	Word	✓
Bit file	Bfff:nnn B:nnn	fff=3-999; default file is 3 if fff omitted; nnn=0-999	3	0	Word	✓
Timer file	Tfff:nnn T:nnn Tfff:nnn.PRE T:nnn.PRE Tfff:nnn.ACC T:nnn.ACC	fff=3-999; default file is 4 if fff omitted; nnn=0-999	4	0	Word	✓
Counter file	Cfff:nnn C:nnn Cfff:nnn.PRE C:nnn.PRE Cfff:nnn.ACC C:nnn.ACC	fff=3-999; default file is 5 if fff omitted; nnn=0-999	5	0	Word	✓
Control file	Rfff:nnn R:nnn Rfff:nnn.LEN R:nnn.LEN Rfff:nnn.POS R:nnn.POS	fff=3-999; default file is 6 if fff omitted; nnn=0-999	6	0	Word	✓
Integer file	Nfff:nnn N:nnn	fff=3-999; default file is 7 if fff omitted; nnn=0-999	7	0	Word	✓

**Note 1:** The Workstation can read up to 60 words in one read command.

**Note 2:** The Workstation does not support block read for registers in Timer, Counter, and Control files.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size R/W	
Output file	O:xxx/yy	xxx=octal number 0-277; yy=octal number 0-7 ; 10-17	0xC0	0-15	Word	✓
Input file	I:xxx/yy	xxx=octal number 0-277; yy=octal number 0-7 ; 10-17	0xC1	0-15	Word	✓
Status file	S:nnn/bb	nnn=0-127; bb=0-15	0xC2	0-15	Word	✓
Bit file	Bfff:nnn/bb	fff=3-999; default file is 3 if fff omitted; nnn=0-999; bb=0-15	0xC3	0-15	Word	✓
Timer file	Tfff:nnn/bb Tfff:nnn.DN Tfff:nnn.PRE/bb Tfff:nnn.ACC/bb Tfff:nnn.EN Tfff:nnn.TT	fff=3-999; default file is 4 if fff omitted; nnn=0-999; bb=0-15;	0xC4	0-15	Word	✓
Counter file	Cfff:nnn/bb Cfff:nnn.PRE/bb Cfff:nnn.ACC/bb Cfff:nnn.CU Cfff:nnn.CD Cfff:nnn.DN Cfff:nnn.OV Cfff:nnn.UN	fff=3-999; default file is 5 if fff omitted; nnn=0-999; bb=0-15	0xC5	0-15	Word	✓
Control file	Rfff:nnn/bb Rfff:nnn.LEN/bb Rfff:nnn.POS/bb Rfff:nnn.EN Rfff:nnn.EU Rfff:nnn.DN Rfff:nnn.EM Rfff:nnn.ER Rfff:nnn.UL Rfff:nnn.IN Rfff:nnn.FD	fff=3-999; default file is 6 if fff omitted; nnn=0-999; bb=0-15	0xC6	0-15	Word	✓
Integer file	Nfff:nnn/bb	fff=3-999; default file is 7 if fff omitted; nnn=0-999; bb=0-15	0xC7	0-15	Word	✓

**Note 3:** The Workstation can read up to 960 bits in one read command.

**Note 4:** The Workstation doesnot support block read for bits in Timer, Counter, and Control files.



## 3. Example for the connections between PWS and RS232C of PLC-5:

HMI-COM port 25-pin female	-----CABLE-----	PLC-port RS232C 25-pin male
RXD 3	=====	2 SD
TXD 2	=====	3 RD
GND 7	=====	7 SG
RTX 4	=====	4 RS
CTX 5	=====	5 CS
		6 DSR
		8 CD
		20 DTR

HMI-COM port 9-pin male	-----CABLE-----	PLC-port RS232C 25-pin male
RXD 2	=====	2 SD
TXD 3	=====	3 RD
GND 5	=====	7 SG
RTX 7	=====	4 RS
CTX 8	=====	5 CS
		6 DSR
		8 CD
		20 DTR

## 4. P.L.C. &amp; PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS-Setting
a. Communication format	:RS232C	
b. Node Address	:N	Set the Workstation's operating parameters to match the PLC. PLC Node Address N
c. Transmission Speed	:9600/19200 bps	
d. Transmission Format (data bits,parity,stop bits)	:8-bits,none, 1-bit	
e. Com Port	:FULL DUPLEX	
f. BCC ERROR Check	:YES	
Note: You should open those files in the PLC that the Workstation will access.		

**[PLC Drivers, p503.tsk, Allen-Bradley SLC-503/504](#)**

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size R/W	
Output file	O:nn	nn= 0-30	0	0	Word	✓
Input file	I:nn	nn= 0-30	1	0	Word	✓
Status file	S:nn	nn= 0-31	2	0	Word	✓
Bit file	Bfff:nnn B:nnn	fff= 3 or 10-255; default file is 3 if fff omitted; nnn=0-255	3	0	Word	✓
Timer file	Tfff:nnn T:nnn Tfff:nnn.PRE T:nnn.PRE Tfff:nnn.ACC T:nnn.ACC	fff= 4 or 10-255; default file is 4 if fff omitted; nnn=0-255	4	0	Word	✓
Counter file	Cfff:nnn C:nnn Cfff:nnn.PRE C:nnn.PRE Cfff:nnn.ACC C:nnn.ACC	fff=5 or 10-255; default file is 5 if fff omitted; nnn=0-255	5	0	Word	✓
Control file	Rfff:nnn R:nnn Rfff:nnn.LEN R:nnn.LEN Rfff:nnn.POS R:nnn.POS	fff=6 or 10-255; default file is 6 if fff omitted; nnn=0-255	6	0	Word	✓
Integer file	Nfff:nnn N:nnn	fff=7 or 10-255; default file is 7 if fff omitted; nnn=0-255	7	0	Word	✓

**Note 1:** The Workstation can read up to 30 words in one read command.

**Note 2:** The Workstation does not support block read for registers in Timer, Counter, and Control files.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Output file	O:nn/bb	nn= 0-30; bb= 0-15	0xC0	0-15	Word	✓
Input file	I:nn/bb	nn= 0-30; bb= 0-15	0xC1	0-15	Word	✓
Status file	S:nn/bb	nn= 0-31; bb= 0-15	0xC2	0-15	Word	✓
Bit file	Bfff:nnn/bb	fff= 3 or 10-255; default file is 3 if fff omitted; nnn=0-255; bb=0-15	0xC3	0-15	Word	✓
Timer file	Tfff:nnn/bb Tfff:nnn.PRE/bb Tfff:nnn.ACC/bb Tfff:nnn.EN Tfff:nnn.TT Tfff:nnn.DN	fff= 4 or 10-255; default file is 4 if fff omitted; nnn=0-255; bb=0-15	0xC4	0-15	Word	✓
Counter file	Cfff:nnn/bb Cfff:nnn.PRE/bb Cfff:nnn.ACC/bb Cfff:nnn.CU Cfff:nnn.CD Cfff:nnn.DN Cfff:nnn.OV Cfff:nnn.UN	fff=5 or 10-255; default file is 5 if fff omitted; nnn=0-255; bb=0-15	0xC5	0-15	Word	✓
Control file	Rfff:nnn/bb Rfff:nnn.LEN/bb Rfff:nnn.POS/bb Rfff:nnn.EN Rfff:nnn.EU Rfff:nnn.DN Rfff:nnn.EM Rfff:nnn.ER Rfff:nnn.UL Rfff:nnn.IN Rfff:nnn.FD	fff=6 or 10-255; default file is 6 if fff omitted; nnn=0-255; bb=0-15	0xC6	0-15	Word	✓
Integer file	Nfff:nnn/bb	fff=7 or 10-255; default file is 7 if fff omitted; nnn=0-255; bb=0-15	0xC7	0-15	Word	✓

**Note 3:** The Workstation can read up to 480 bits in one read command.

**Note 4:** The Workstation does not support block read for bits in Timer, Counter, and Control files.

3. Example for the connections between PWS & RS232C of PLC SLC-503/504:

HMI-COM port		PLC-port RS232C	
25-pin female	-----CABLE-----	9 -pin male	
RXD 3	_____	3	SD
TXD 2	_____	2	RD
GND 7	_____	5	SG
RTX 4	┌	7	RS
CTX 5	└	8	CS

HMI-COM port		PLC-port RS232C	
9 -pin male	-----CABLE-----	9 -pin male	
RXD 2	_____	3	SD
TXD 3	_____	2	RD
GND 5	_____	5	SG
RTX 7	┌	7	RS
CTX 8	└	8	CS

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS-Setting
a. Communication format	:RS232C =SLC-503/504	Set the Workstation's operating parameters to match the PLC. PLC Node Address N
b. Node Address	:N	
c. Transmission Speed	:9600/19200 bps	
d. Transmission Format (data bits, parity, stop bits)	:8-bits,none, 1-bit	
e. SLC-503/504	:FULL DUPLEX ; DF1	
f. BCC ERROR Check	:YES	
Note: You should open those files in the PLC that the Workstation will access.		

PLC Drivers, p523.tsk, AB IQ Master Controller

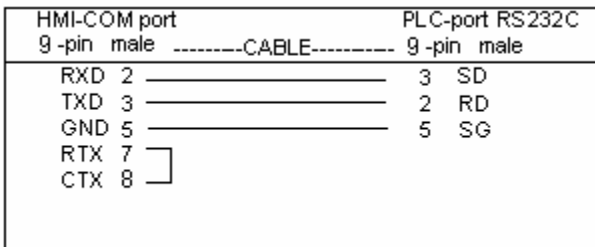
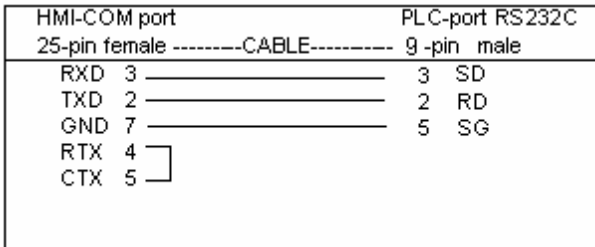
1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Register	Gnn	nn= 1-64	0	0	Dword	✓
Register	Vnnn	nn= 1-64	1	0	Dword	✓
Register	WGnn	nn= 1-64	2	0	Word	✓
Register	WVnn	nn= 1-64	3	0	Word	✓

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Input Relay	Inn	nn= 1-48	0xC0	0	Bit	R
Output Relay	Onn	nn= 1-24	0xC1	0	Bit	✓
Intrenal Relay	Bnn	nn= 1-8	0xC2	0	Bit	✓
Intrenal Relay	Fnn	nn= 1-64	0xC3	0	Bit	✓

3. Example of the connections between PWS & RS232 of P6 connector.



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS232C	
b.Node Address :00	
c.Transmission Speed :9600 bps	
d.Transmission Format :8-bit,NONE,1-bit	

**PLC Drivers, p383.tsk, ABB COMLI (SLAVE MODE)**

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size R/W	
Word IO	MWnnnnn	nnnnn=0 – 37760 (must be a multiple of 16)	0	0	Word	✓
Word Register	RWnnnnn	nnnn=0 - 3071	1	0	Word	✓

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size R/W	
Bit IO	Mnnnnn	nnnnn=0-37777	0xC0	0	Bit	✓

3. Example of the connections between PWS & RS232C of PLC Link port:

HMI-COM port 25-pin female	CABLE	PLC RS232 I/O Terminal
RXD 3	_____	6 TXD
TXD 2	_____	7 RXD
GND 7	_____	5 GND
RTS 4	□	
CTS 5	□	

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting
a.Communication Format	:RS232C	Set the Workstation's operating parameters to match the PLC.
b.Node Address	:01	
c.Transmission Speed	:9600 bps	
d.Transmission Format	:8-bit, odd,1-bit	

**[PLC Drivers, p003.tsk, Computer \(as master\) protocol](#)  
[p013.tsk, Computer \(as slave\) protocol](#)**

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Data Register	Wnnnn	nnnn=0-4095	0	0	Word	✓

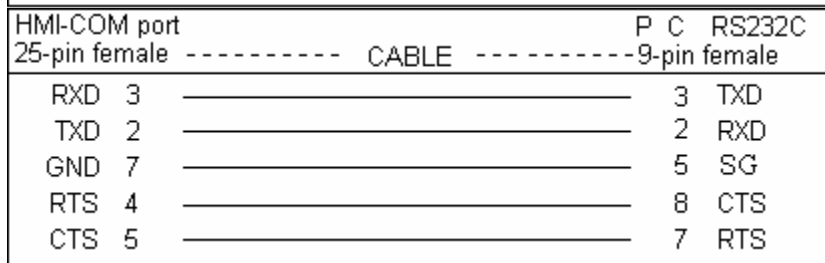
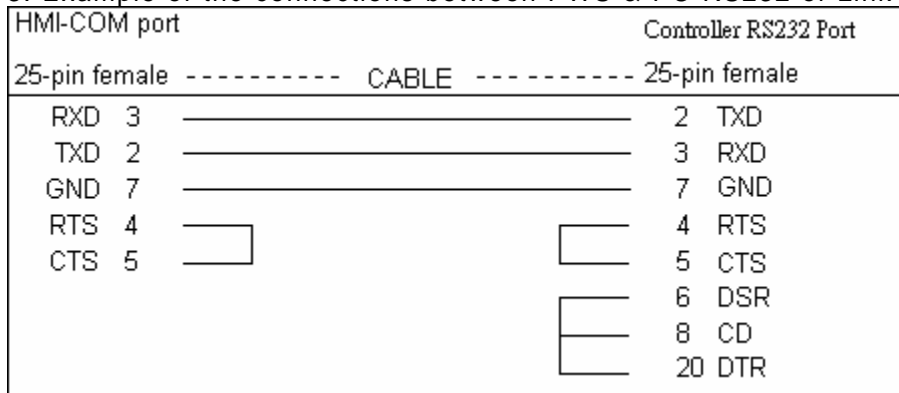
**Note 1:** The Workstation can read up to 128 words in one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Bit Relay	Bnnnn	nnnn=0-1023	0xC0	0	Bit	✓

**Note 2:** The Workstation can read up to 256 bits in one read command.

3. Example of the connections between PWS & PC RS232 of Link port .



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS232C	
b.Node Address : 00-255	
c.Transmission Speed :9600/19200 bps	
d.Transmission Format :8-bit,NONE,1-bit	

## PLC Drivers, pd13.tsk, DELTA DVP SERIES

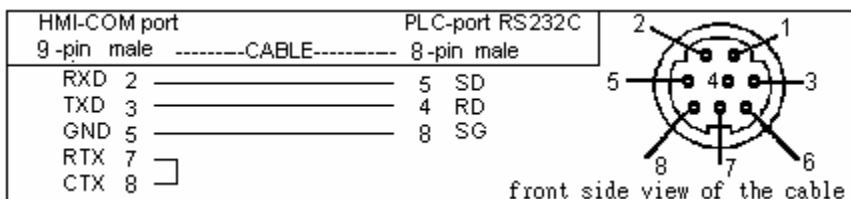
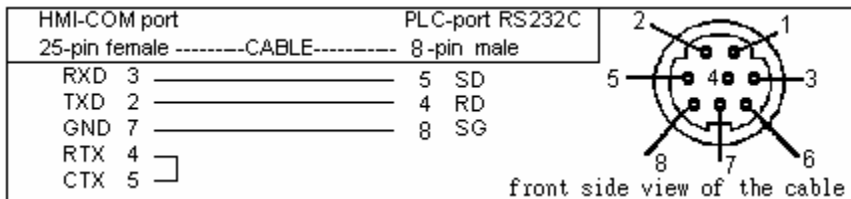
1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
S_Data	Snnnn	nnnn=0-1008 (must be a multiple of 16)	0	0	Word	✓
X_Data	Xnnn	nnn=0-360 (X0-X7, X10-X17, must be a multiple of 20)	1	0	Word	R
Y_Data	Ynnn	nnn=0-360 (Y0-Y7, Y10-Y17, must be a multiple of 20)	2	0	Word	✓
M_Data	Mnnnn	nnnn=0-1264 (must be a multiple of 16)	3	0	Word	✓
T_Register	Tnnn	nnn=0-255	4	0	Word	✓
C_Register	Cnnn	nnnn=0-255	5	0	Word	✓
D_Register	Dnnnn	nnnn=0-1279	6	0	Word	✓

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
S_Data	Snnnn	nnnn=0-1023	0xC0	0	Bit	✓
X_Data	Xnnn	nnn=0-377 (Oct. code)	0xC1	0	Bit	R
Y_Data	Ynnn	nnn=0-377 (Oct. code)	0xC2	0	Bit	✓
M_Data	Mnnnn	nnn=0-1279	0xC3	0	Bit	✓
T_Coil	Tnnn	nnn=0-255	0xC4	0	Bit	✓
C_Coil	Cnnn	nnn=0-255	0xC5	0	Bit	✓

3. Example of the connections between PWS & RS232C of DVP CPU port:





## 3.1 Example of the connections between PWS &amp; RS485 of DVP Link port:

HMI-COM port 25-pin female	----- CABLE -----	PLC- RS485 Screw Terminal
TXD+/RXD+ 14	_____	+
TXD-/RXD- 15	_____	-

## 4. P.L.C. &amp; PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting
a.Communication Format	:RS232C	COM2 ==> RS232
b.Node Address	:1	
c.Transmission Speed	:9600 bps	Set the Workstation's operating parameters to match the PLC.
d.Transmission Format	:7-bit, even,2-bit	
e.Comm. protocol	:Modbus ASCII mode	

[PLC Drivers, pz03.tsk, ERO TFS/THS/LFS Series](#)

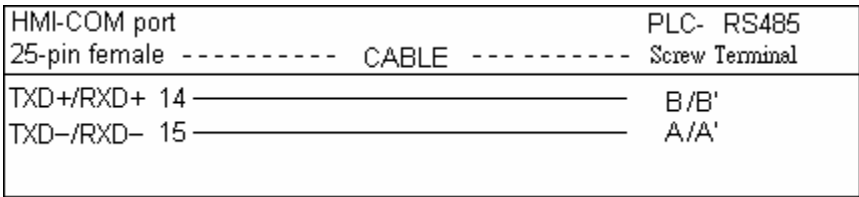
1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	R/W
Word Register	Mmm:Wnnn	mmm=0-255; nnn=0-529	0	0	Word	✓

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	R/W
Bit Relay	Mmm:Bnnn	mmm=0-255; nnn=0-342	0xC0	0	Bit	✓

3. Example of the connections between PWS & RS485 of Link port.



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS485	
b.Node Address : 00	
c.Transmission Speed :9600 bps	
d.Transmission Format :8-bit,even,1-bit	

## PLC Drivers, ph03.tsk, FACON FB SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
					R	W
Input Relay	WXnnnn	nnnn=0-9984; (Must be 0 or multiple of 8)	0	0	Word	✓
Output Relay	WYnnnn	nnnn=0-9984; (Must be 0 or multiple of 8)	1	0	Word	✓
Internal Relay	WMnnnn	nnnn=0-9984; (Must be 0 or multiple of 8)	2	0	Word	✓
Step Relay	WSnnnn	nnnn=0-9984; (Must be 0 or multiple of 8)	3	0	Word	✓
Timer Present Value	RTnnnn	nnnn=0-9999	4	0	Word	✓
Counter Present Value	RCnnnn	nnnn=0-9999	5	0	Word	✓
Data Register	Rnnnnn	nnnn=0-65534	6	0	Word	✓
Data Register	Dnnnnn	nnnn=0-65534	7	0	Word	✓

**Note 1:** The Workstation can read up to 64 words in one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
					R	W
Input Relay	Xnnnn	nnnn=0-9999	0xC0	0	Bit	✓
Output Relay	Ynnnn	nnnn=0-9999	0xC1	0	Bit	✓
Internal Relay	Mnnnn	nnnn=0-9999	0xC2	0	Bit	✓
Step Relay	Snnnn	nnnn=0-9999	0xC3	0	Bit	✓
Timer Flag	Tnnnn	nnnn=0-9999	0xC4	0	Bit	✓
Counter Flag	Cnnnn	nnnn=0-9999	0xC5	0	Bit	✓

**Note 2:** An On/off block must start at an address that is 0 or a multiple of 8.

**Note 3:** You cannot specify On/off blocks to read Timer Flags and Counter Flags.

3. Example of the connections between PWS & RS232C of FB-MC type:

HMI-COM port	PLC-port RS232C
25-pin female -----CABLE-----	15-pin male
RXD 3 _____	2 SD
TXD 2 _____	1 RD
GND 7 _____	6 SG
RTX 4 <input type="checkbox"/>	3 RS
CTX 5 <input type="checkbox"/>	4 CS

HMI-COM port	PLC-port RS232C
9-pin male -----CABLE-----	15-pin male
RXD 2 _____	2 SD
TXD 3 _____	1 RD
GND 5 _____	6 SG
RTX 7 <input type="checkbox"/>	3 RS
CTX 8 <input type="checkbox"/>	4 CS

3.1 Example of the connections between PWS & RS485 of FB-MC type:

HMI-COM port	PLC-port RS485
25-pin female -----CABLE-----	15-pin male
RXD/TXD+ 14 _____	5 DATA+
RXD/TXD- 15 _____	7 DATA-
SG 7 _____	10 FG

HMI-COM port	PLC-port RS485
9-pin male -----CABLE-----	15-pin male
RXD/TXD+ 1 _____	5 DATA+
RXD/TXD- 6 _____	7 DATA-
GND 5 _____	10 FG

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS232C/RS485	Set the Workstation's operating parameters to match the PLC.
b.Node Address :1	
c.Transmission Speed :9600/19200 bps	
d.Transmission Format :7-bit, even,1-bit	

## PLC Drivers, pf03.tsk, Festo FPC/FEC SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Input	IWnnn	nnn=0-255	0	0	Word	✓
Output	OWnnn	nnn=0-255	1	0	Word	✓
Flag	FWnnnn	nnnn=0-9999	2	0	Word	✓
Timer	TWnnn	nnn=0-255	3	0	Word	✓
Counter	CWnnn	nnn=0-255	4	0	Word	✓
Register	Rnnn	nnn=0-255	5	0	Word	✓
Timer_Preset	TPnnn	nnn=0-255	6	0	Word	✓
Counter_Preset	CPnnn	nnn=0-255	7	0	Word	✓

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Input	Iinn.bb	nnn=0-255; bb=0-15	0xC0	0-15	Bit	✓
Output	Qnnn.bb	nnn=0-255; bb=0-15	0xC1	0-15	Bit	✓
Flag	Fnnnn.bb	nnnn=0-9999; bb=0-15	0xC2	0-15	Bit	✓
Timer	Tnnn	nnn=0-255	0xC3	0	Bit	✓
Counter	Cnnn	nnn=0-255	0xC4	0	Bit	✓
Timer_on	TONnnn	nnn=0-255	0xC5	0	Bit	✓
Timer_off	TOFFnnn	nnn=0-255	0xC6	0	Bit	✓

3. Example of the connections between PWS & RS232C of 6-pin phone jack converter from PLC port..

HMI-COM port	phone jack converter
25-pin female	9-pin female
RXD 3	2 SD
TXD 2	3 RD
GND 7	5 SG
RTX 4	7 RS
CTX 5	8 CS

HMI-COM port	phone jack converter
9-pin male	9-pin female
RXD 2	2 SD
TXD 3	3 RD
GND 5	5 SG
RTX 7	7 RS
CTX 8	8 CS

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS232C	Set the Workstation's operating parameters to match the PLC.
b.Node Address :none	
c.Transmission Speed :9600 bps	
d.Transmission Format :8-bit, none,1-bit	

[PLC Drivers, pa03.tsk, FUJI F SERIES](#)

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size R/W	
Input/Output Relays	WBnnnn	nnnn=0-9999	0	0	Word	✓
Auxiliary Relays	WMnnnn	nnnn=0-9999	1	0	Word	✓
Data Memory	BDnnnn	nnnn=0-9999	2	0	DWord	✓

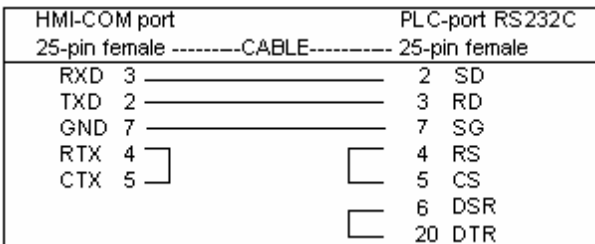
**Note 1:** The Workstation can read up to 52 words in one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size R/W	
Input/output Relays	Bnnnnb	nnnn=0-9999; b=0-f	0xC0	0-15	Bit	✓
Discrete Outputs	Mnnnnb	nnnn=0-9999; b=0-f	0xC1	0-15	Bit	✓

**Note 2:** When you specify the address of an On/off Block register, the bit number must be 0.

3. Example of the connections between PWS & RS232 of T-LINK FFK120A:



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS232C b.Node Address :None c.Transmission Speed :19200 bps/9600bps d.Transmission Format :7-bit,EVEN,1	Set the Workstation's operating parameters to match the PLC.

To set the operating parameters of the General Interface Module FFU120B:

- 1) Use the Character Formation Switch on the back side to select transmission speed and transmission format. The switch #8 should be set to on.
  
- 2) Set Mode Switch to 1 for RS-232C communications or 3 for the RS-422/RS-485 communications.

- 3) Use RS-485 Channel Set Dials to select the channel number.

PLC Drivers, Pa13.tsk, FUJI NB SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Data Register	Dnnn	nnn=hex number 0-3ff	0	0	Word	✓
Special Register	Dnnnn	nnnn=hex number 8000-80ff	1	0	Word	✓
Timer Current Value	TNnnn	nnn=hex number 0-1ff	2	0	Word	✓
Counter Current Value	CNnn	nn=hex number 0-ff	3	0	Word	✓
Input Relay	WXnn	nn=hex number 0-1f	4	0	Word	✓
Output Relay	WYnn	nn=hex number 0-1f	5	0	Word	✓
Internal Relay	WMnn	nn=hex number 0-3f	6	0	Word	✓
Latch Relay	WLnn	nn=hex number 0-3f	7	0	Word	✓
Special Relay	WMnnn	nnn=hex number 800-81f	8	0	Word	✓
Step Relay	WSnnn	nnn=hex number 0-3f	9	0	Word	✓

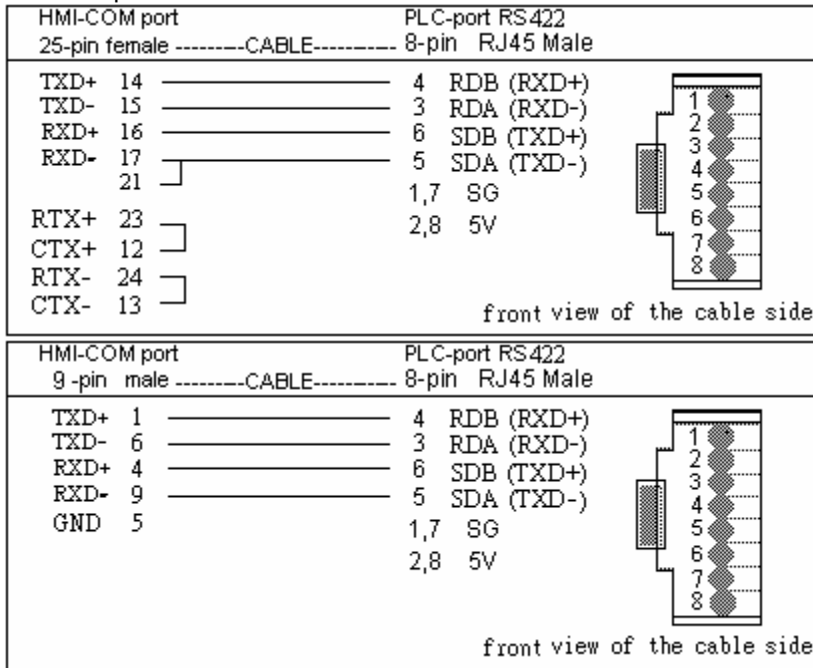
2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Timer output	Tnnn	nnn=hex number 0-1ff	0xC0	0	Bit	✓
Counter output	Cnn	nn=hex number 0-ff	0xC1	0	Bit	✓
Input Relay	Xnnn	nnn=hex number 0-1ff	0xC2	0	Bit	✓
Output Relay	Ynnn	nnn=hex number 0-1ff	0xC3	0	Bit	✓
Internal Relay	Mnnn	nnn=hex number 0-3ff	0xC4	0	Bit	✓
Latch Relay	Lnnn	nnn=hex number 0-3ff	0xC5	0	Bit	✓
Special Relay	Mnnnn	nnnn=hex number 8000-81ff	0xC6	0	Bit	✓
Step Relay	Snnn	nnn=hex number 0-3ff	0xC7	0	Bit	✓

**Note 1:** When you specify the address of an On/off Block register, the bit number must be zero.



3. Example of the connections between PWS & RS422 of NB/NS/NJ-CPU port:



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting
a.Communication Format	:RS422	COM2=RS232/422/485
b.Node Address	:None	
c.Transmission Speed	:19200 bps	Set the Workstation's operating parameters to match the PLC.
d.Transmission Format	:8-bit,ODD,1-bit	
e. P.L.C. password	:none or 0000-9999	0000 or ****

PLC Drivers, p403.tsk, GE-FANUC 90-SNP

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type /		Data Size	
			Aux. Address		R/W	
Discrete Inputs	%Innnnn	nnnn=1-12288; must be 1 or multiple of 16 plus 1	0	0	Word	✓
Discrete Outputs	%Qnnnnn	nnnn=1-12288; must be 1 or multiple of 16 plus 1	1	0	Word	✓
Discrete Temporaries	%Tnnn	nnn=1-256; must be 1 or multiple of 16 plus 1	2	0	Word	✓
Discrete Internals	%Mnnnnn	nnnn=1-12288; must be 1 or multiple of 16 plus 1	3	0	Word	✓
%SA Discretes	%SAnnn	nnn=1-128; must be 1 or multiple of 16 plus 1	4	0	Word	✓
%SB Discretes	%SBnnn	nnn=1-128; must be 1 or multiple of 16 plus 1	5	0	Word	✓
%SC Discretes	%SCnnn	nnn=1-128; must be 1 or multiple of 16 plus 1	6	0	Word	✓
%S Discretes	%Snnn	nnn=1-128; must be 1 or multiple of 16 plus 1	7	0	Word	✓
Genius Global Data	%Gnnnn	nnnn=1-7680; must be 1 or multiple of 16 plus 1	8	0	Word	✓
Registers	%Rnnnnn	nnnn=1-16384	9	0	Word	✓
Analog Inputs	%AInnnn	nnnn=1-8192	10	0	Word	✓
Analog Outputs	%AQnnnn	nnnn=1-8192	11	0	Word	✓

**Note 1:** The PWS can read up to 50 Words in one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Discrete Inputs	%Innnnn	nnnn=1-12288	0xC0	0	Bit	✓
Discrete Outputs	%Qnnnnn	nnnn=1-12288	0xC1	0	Bit	✓
Discrete Temporaries	%Tnnn	nnn=1-256	0xC2	0	Bit	✓
Discrete Internals	%Mnnnnn	nnnn=1-12288	0xC3	0	Bit	✓
%SA Discretes	%SAnnn	nnn=1-128	0xC4	0	Bit	✓
%SB Discretes	%SBnnn	nnn=1-128	0xC5	0	Bit	✓
%SC Discretes	%SCnnn	nnn=1-128	0xC6	0	Bit	✓
%S Discretes	%Snnn	nnn=1-128	0xC7	0	Bit	✓
Genius Global Data	%Gnnnn	nnnn=1-7680	0xC8	0	Bit	✓

Note 2: When you specify the address of an On/off Block register, use an address that is a multiple of 16 plus 1.

Note 3: The PWS can read up to 800 Bits in one read command.

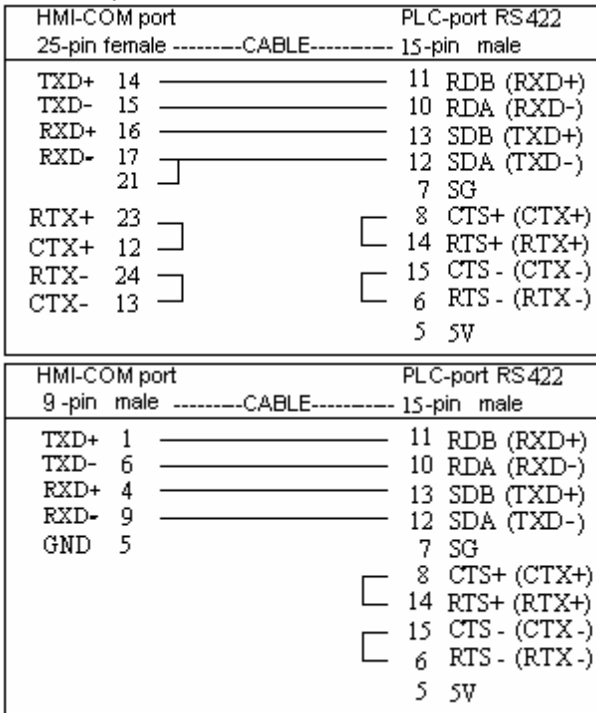
3. Example of the connections between PWS & RS232 of PLC miniconverter kit:

HMI-COM port		PLC-port RS232C	
25-pin female	-----CABLE-----	9-pin male	
RXD 3	=====	2	SD
TXD 2	=====	3	RD
GND 7	=====	5	SG
RTX 4	=====	7	RS
CTX 5	=====	8	CS

HMI-COM port		PLC-port RS232C	
9-pin male	-----CABLE-----	9-pin male	
RXD 2	=====	2	SD
TXD 3	=====	3	RD
GND 5	=====	5	SG
RTX 7	=====	7	RS
CTX 8	=====	8	CS

3.1 Example of the connections between PWS & RS422 of PLC 9030 CPU port:



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting
a.Communication Format	:RS422 CPU PORT :RS232C	
b.Node Address	:None	
c.Transmission Speed	:19200/9600 bps	
d.Transmission Format	:8-bit, none,1	
e.P.L.C. ID	:blank	
f. P.L.C. password	:none or *****	00000000 or *****

## PLC Drivers, p413.tsk, GE-FANUC 90-CCM

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Input Table	%Innnnn	nnnn=1-12288; must be 1 or multiple of 16 plus 1	0	0	Word	✓
Output Table	%Qnnnnn	nnnn=1-12288; Must be 1 or multiple of 16 plus 1	1	0	Word	✓
Register Table	%Rnnnnn	nnnn=1-16384	2	0	Word	✓

**Note 1:** The PWS can read up to 50 Words in one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Input Table	%Innnnn	nnnn=1-12288	0xC0	0	Bit	✓
Output Table	%Qnnnnn	nnnn=1-12288	0xC1	0	Bit	✓

**Note 2** When you specify the address of an On/off Block register, use an address that is a multiple of 16 plus 1.

**Note 3:** The Workstation can read up to 800 bits in one read command.

3. Example of the connections between PWS & RS232 of PLC PCM 331:

HMI-COM port 25-pin female	PLC-port RS232C 25-pin male
RXD 3	2 SD
TXD 2	3 RD
GND 7	7 SG
RTX 4	4 RS
CTX 5	5 CS

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS422 /RS485 :RS232C	
b.Node Address :None	
c.Transmission Speed :19200/9600 bps	
d.Transmission Format : 8bit,odd ,1	
e.P.L.C. ID :blanks	
f. P.L.C. password :none or *****	00000000 or *****

## PLC Drivers, pb13.tsk, HITACHI EC SERIES

1. The table below shows the formats of every register the PWS can access.

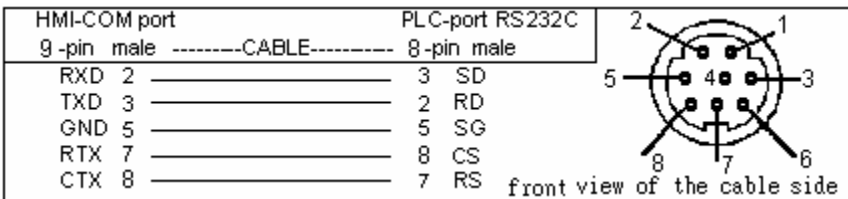
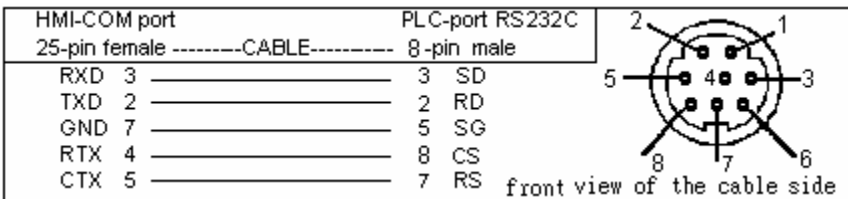
Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Internal Register	WMnnn	nnn=400, 402, 404,..., 654	0	0	Word	✓
Internal Register	WMnnn	nnn=700, 702, 704,...,954	1	0	Word	✓
Internal Register	WMnnn	nnn=960, 962, 964,... ,990	2	0	Word	✓
Timer/Counter Register	TCnnn	nnn=100-195	3	0	Word	✓
Timer/Counter Register	TCnnn	nnn=200-295	4	0	Word	✓

**Note 1:** The Workstation can read up to 60 words in one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Input Relay	Xnnn	nnn=0-15, 20-35, 40-55, 60-75, ...,180-195	0xC0	0	Bit	✓
Output Relay	Ynnn	nnn=200-215, 220-235, 240-255,... , 380-395	0xC1	0	Bit	✓
Auxiliary Relay	Mnnn	nnn=400-655, 700-955, 960-991	0xC2	0	Bit	✓
Timer/Counter Relay	TCnn	nn=0,1,2,3.....,80-95	0xC3	0	Bit	✓

3. Example of the connections between PWS & RS232 of PLC CPU port:



#### 4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS232C If use COM2 as communication port please choose exclusive protocol.	
b.Node Address :None	
c.Transmission Speed :9600 bps	
d.Transmission Format :7-bit ,EVEN, 1- bit	
e.CTS Handshanking :Enabled	

## PLC Drivers, pb03.tsk, HITACHI H SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size R/W	
External input	WXnnnm	nnn=hex number 0-4ff;m=0-9	0	0	Word	✓
External output	WYnnnm	nnn=hex number 0-4ff; m=0-9	1	0	Word	✓
Internal output	WRnnnn	nnnn=hex number 0-c3ff	2	0	Word	✓
Internal output	WRnnnn	nnnn=hex number f000-f1ff	3	0	Word	✓
Internal output	WMnnn	nnn=hex number 0-3ff	4	0	Word	✓
1st CPU link area	WLnnn	nnn=hex number 0-3ff	5	0	Word	✓
2nd CPU link area	WLnnnn	nnnn=hex 1000-13ff	6	0	Word	✓
Timer/Counter Current Value	TCnnn	nnn=0-511	7	0	Word	✓

**Note 1:** The Workstation can read up to 120 words in one read command.

**Note 2:** Block access for WX and WY areas are not allowed.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

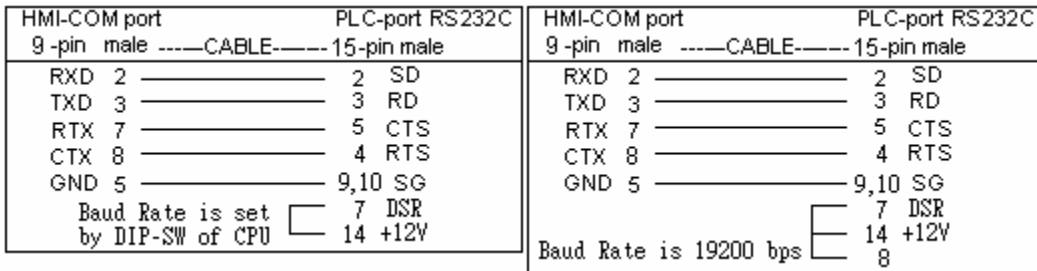
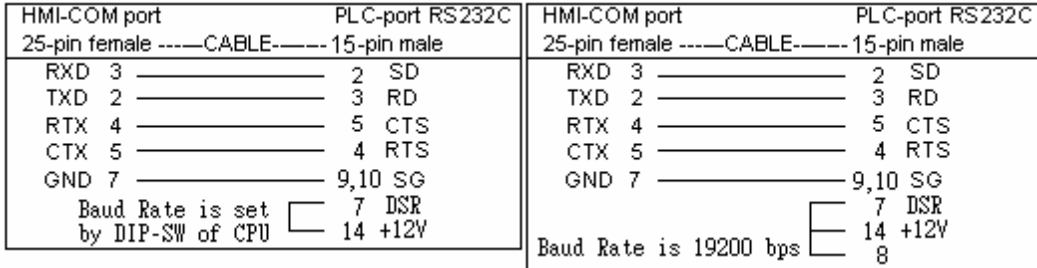
Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size R/W	
External input	Xnnmm	nnn=hex. 0-4ff; mm=00-95	0xC0	0	Bit	✓
External output	Ynnmm	nnn=hex. 0-4ff; mm=00-95	0xC1	0	Bit	✓
Internal output	Rnnn	nnn=hex number 0-7ff	0xC2	0	Bit	✓
Internal output	Mnnnn	nnnn=hex number 0-3fff	0xC3	0	Bit	✓
1st CPU link area	Lnnnn	nnnn=hex number 0-3fff	0xC4	0	Bit	✓
2nd CPU link area	Lnnnnn	nnnnn=hex number 10000-13fff	0xC5	0	Bit	✓
On-delay timer bit	TDnnn	nnn=0-255	0xC6	0	Bit	✓
Single-shot timer bit	SSnnn	nnn=0-255	0xC7	0	Bit	✓
Up counter bit	CUnnn	nnn=0-511	0xC8	0	Bit	✓
Up/down counter up coil	CTUnnn	nnn=0-511	0xC9	0	Bit	✓
Up/down counter down coil	CTDnnn	nnn=0-511	0xCA	0	Bit	✓
Up/down counter contact	CTnnn	nnn=0-511	0xCB	0	Bit	✓
Timer/counter value clear bit	CLnnn	nnn=0-511	0xCC	0	Bit	✓
Rising edge detection bit	DIFnnn	nnn=0-511	0xCD	0	Bit	✓
Falling edge detection bit	DFNnnn	nnn=0-511	0xCE	0	Bit	✓

**Note 3:** The Workstation can read up to 240 bits in one read command.



**Note 4:** The Workstation does not support an On/off Block register in external input and external output.

3. Example of the connections between PWS & RS232 of PLC H200-CPU port:



4. P.L.C. & PWS setting:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS232C	
b.Transmission Speed :19200/9600 bps	
c.Transmission Format :7-bit, EVEN, 1-bit	
d.CTS Handshanking :Enabled	

PLC Drivers, ph13.tsk, HUST CNC CONTROLLER

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size R/W	
Register	Wnnnnn	nnnnn=0-65534	0	0	Word	✓
Register	Dnnnnn	nnnnn=0-65534	1	0	DWord	✓

**Note 1:** The Workstation can read up to 120 words in one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size R/W	
Bit Variable	Bnnnnn.bb	nnn=0-65534; b=00-31	0xC0	0-31	Bit	✓
I - Bit Data	Innn	nnn=0-255	0xC1	0	Bit	R
O - Bit Data	Onnn	nnn=0-255	0xC2	0	Bit	R
C - Bit Data	Cnnn	nnn=0-255	0xC3	0	Bit	R
S - Bit Data	Snnn	nnn=0-255	0xC4	0	Bit	R
A - Bit Data	Annnn	nnn=0-1023	0xC5	0	Bit	R

3. Example of the connections between PWS & RS232 of Link port:

HMI-COM port 25-pin female	CABLE	PLC RS232C 9-pin male
RXD 3	_____	2 TXD
TXD 2	_____	3 RXD
GND 7	_____	5 SG
RTS 4	_____	7 CTS
CTS 5	_____	8 RTS

HMI-COM port 9-pin male	CABLE	PLC RS232C 9-pin male
RXD 2	_____	2 TXD
TXD 3	_____	3 RXD
GND 5	_____	5 SG
RTS 7	_____	7 CTS
CTS 8	_____	8 RTS

4. P.L.C. & PWS setting:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS232C	
b.Transmission Speed :9600/19200 bps	
c.Transmission Format :7-bit, EVEN, 2-bit	
d.CTS Handshanking :Enabled	

## PLC Drivers, pe53.tsk, IDEC MICRO-3 SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size R/W	
Input Relay	Xn	n=0-3	0	0	Byte	✓
Output Relay	Yn	n=0-3	1	0	Byte	✓
Internal Relay	Mnn	nn=0-31	2	0	Byte	✓
Shift Register	Rnn	nn=0-48; Must be 0 or multiple of 8	3	0	Bit	✓
Timer Preset	TPnn	nn=0-31 (read only)	4	0	Word	R
Timer Current	Tnn	nn=0-31	5	0	Word	✓
Counter Preset	CPnn	nn=0-31 (read only)	6	0	Word	R
Counter Current	Cnn	nn=0-31	7	0	Word	✓
Data Register	Dnn	nn=0-99	8	0	Word	✓
Calender/Clock	Wn	n=0-6	9	0	Word	✓

**Note 1:** The Workstation can read up to 50 words in one read command.

**Note 2:** Timer Preset and Counter Preset are read only. If the value of a TP or CP is in a data register, then the value read is the address of that data register.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size R/W	
Input Relay	Xnb	n=0-3; b=0-7	0xC0	0-7	Bit	✓
Output Relay	Ynb	n=0-3; b=0-7	0xC1	0-7	Bit	✓
Internal Relay	Mnbn	nn=0-31; b=0-7	0xC2	0-7	Bit	✓
Shift Register	Rnn	nn=0-63	0xC3	0	Bit	✓
Timer Status	Tnn	nn=0-31 (read only)	0xC4	0	Bit	R
Counter Status	Cnn	nn=0-31 (read only)	0xC5	0	Bit	R

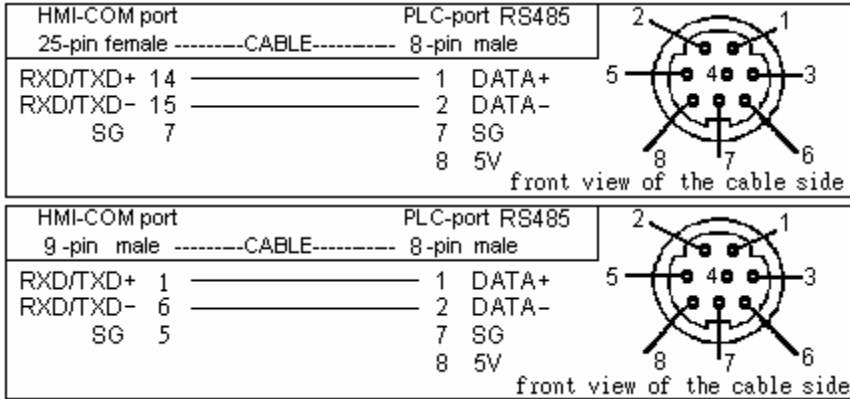
**Note 3:** The Workstation can read up to 800 bits in one read command.

**Note 4:** Timer Status and Counter Status are read only.

**Note 5:** When you specify the address of an On/off Block register in X, Y, or M area, use an address that its bit address ("b") is 0.

**Note 6:** When you specify the address of an On/off Block register in R, T, or C area, use an address that its bit address must be 0 or multiple of 8.

3. Example of the connections between PWS & RS485 of PLC Micro3-CPU port:



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS485 b.Node Address :0-31 ; 255 c.Transmission Speed :9600bps d.Transmission Format :7-bit;EVEN, 1-bit e.CTS Handshaking :Disabled	PWS back DIP-Switch SW10=ON If your application has only one PLC, then set the parameter to 255; otherwise, set it to the PLC's "PLC Address for Network Communication" that you set with the program loader

## PLC Drivers, pe63.tsk, IDEC FA-2J SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Input Relay	Inn	nn=0-15	0	0	Byte	✓
Output Relay	Qnn	nn=0-15	1	0	Byte	✓
Internal Relay	Mnn	nn=0-29	2	0	Byte	✓
Shift Register	Rnnn	nnn=0-127; (Must be 0 or multiple of 8)	3	0	Byte	✓
Timer Preset	TPnn	nn=0-79	4	0	Word	✓
Timer	Tnn	nn=0-79	5	0	Word	R
Counter Preset	CPnn	nn=0-46	6	0	Word	✓
Counter	Cnn	nn=0-46	7	0	Word	R
Data Register	Dnnn	nnn=0-399	8	0	Word	✓

**Note 1:** The Workstation can read up to 50 Words in one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

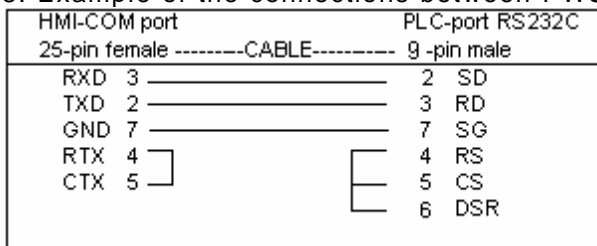
Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Input Relay	Innb	n=0-15; b=0-7	0xC0	0-7	Bit	✓
Output Relay	Qnnb	n=0-15; b=0-7	0xC1	0-7	Bit	✓
Internal Relay	Mnnb	nn=0-29; b=0-7	0xC2	0-7	Bit	✓
Shift Register	Rnnn	nn=0-127	0xC3	0	Bit	✓

**Note 2:** The bit address ("b") of an on/off block register in I, Q, or M area must be 0.

**Note 3:** The address of an on/off block register in R area must be divisible by 8.

**Note 4:** The Workstation can read up to 8 bits with one read command.

3. Example of the connections between PWS & RS232 of Adapter PF2-CLA:



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS232	
b.Node Address :0	
c.Transmission Speed :9600bps	
d.Transmission Format :8-bit,EVEN,1-bit	

PLC Drivers, pk63.tsk, JETTER DELTA SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size R/W	
User Register	Rnnnn	nnnn=0-64999	0	0	DWord	✓
User Register	WRnnnn	nnnn=0-64999	1	0	Word	✓

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size R/W	
Input Relay	Inn	nnn=101-864	0xC0	0	Bit	✓
Output Relay	Onn	nnn=101-864	0xC1	0	Bit	✓
Flag Relay	Fnnn	nnn=0-2047	0xC2	0	Bit	✓

3. Example of the connections between PWS & RS232C of PLC Link port:

HMI-COM port 25-pin female	CABLE	PLC-port RS232C 15-pin male
RXD 3	_____	2 TXD
TXD 2	_____	3 RXD
GND 7	_____	7 GND

3.1 Example of the connections between PWS & RS232 of Link port:

HMI-COM port 25-pin female	CABLE	PLC-port RS232C 9-pin male
RXD 3	_____	2 TXD
TXD 2	_____	3 RXD
GND 7	_____	5 GND

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting
a.Communication Format	:RS232C	COM = RS232
b.Node Address	:none	
c.Transmission Speed	:9600 bps	Set the Workstation's operating parameters to match the PLC.
d.Transmission Format	:8-bit, even,1-bit	

## PLC Drivers, pk53.tsk, JETTER NANO\_B SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
User Register	Rnnnn	nnnn=0-32767	0	0	DWord	✓
User Register	WRnnnn	nnnn=0-32767	1	0	Word	✓

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Input Relay	lnn	nnn=11-58	0xC0	0	Bit	✓
Output Relay	Onn	nnn=11-58	0xC1	0	Bit	✓
Flag Relay	Fnnn	nnn=0-255	0xC2	0	Bit	✓

3. Example of the connections between PWS & RS232C of PLC Link port:

HMI-COM port		PLC-port RS232C	
25-pin female	----- CABLE -----	15-pin male	
RXD 3	_____	2 TXD	
TXD 2	_____	3 RXD	
GND 7	_____	7 GND	

3.1 Example of the connections between PWS & RS232 of Link port:

HMI-COM port		PLC-port RS232C	
25-pin female	----- CABLE -----	9-pin male	
RXD 3	_____	2 TXD	
TXD 2	_____	3 RXD	
GND 7	_____	5 GND	

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting	
a.Communication Format	:RS232C	COM = RS232	
b.Node Address	:none		
c.Transmission Speed	:9600 bps	Set the Workstation's operating parameters to match the PLC.	
d.Transmission Format	:8-bit, even,1-bit		

PLC Drivers, pk03.tsk, KLOCKNER MOELLER PS  
SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Word Marker	MWnnnnn	nnnnn=0-32766	0	0	Word	✓

**Note 1:** The Workstation can read up to 32 words in one read command.

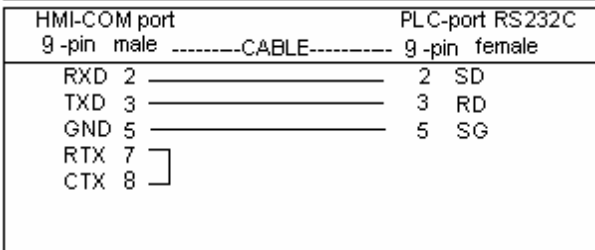
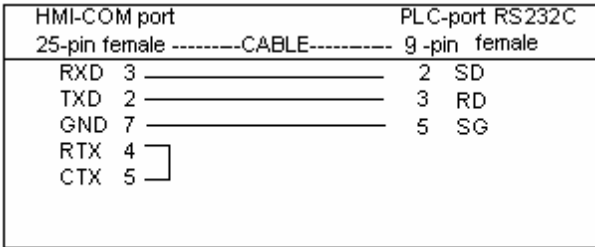
2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Bit Marker	Mnnnnn.b	nnnnn=0-32766 ; b=0-7	0xC0	0-7	Bit	✓

**Note 2:** When you specify the address of an On/off Block register, the bit address ("b") should be 0.

**Note 3:** The Workstation can read up to 512 bits in one read command.

3. Example of the connections between PWS & PLC-CPU ZB4-303-KB1:



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS232	
b.Node Address :0=PS4-201 :1=PS316	PLC node 0 (Refer to what PLC was set) PLC node 1
c.Transmission Speed :9600bps	
d.Transmission Format :8-bit; None;1bit	



## PLC Drivers, pk33.tsk, Keyence KV SERIES

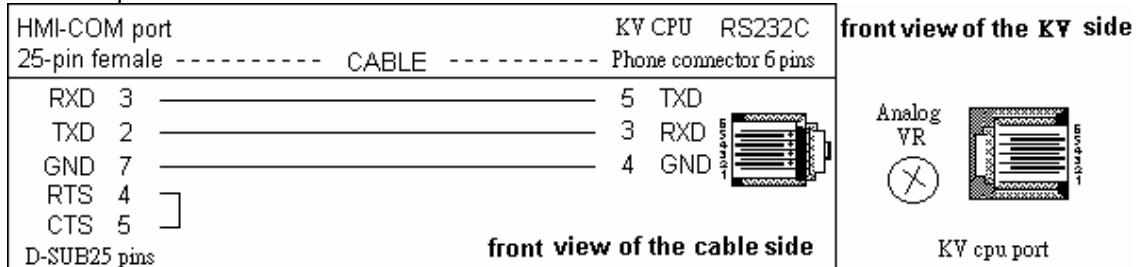
1. The table below shows the formats of every register the PWS can access.

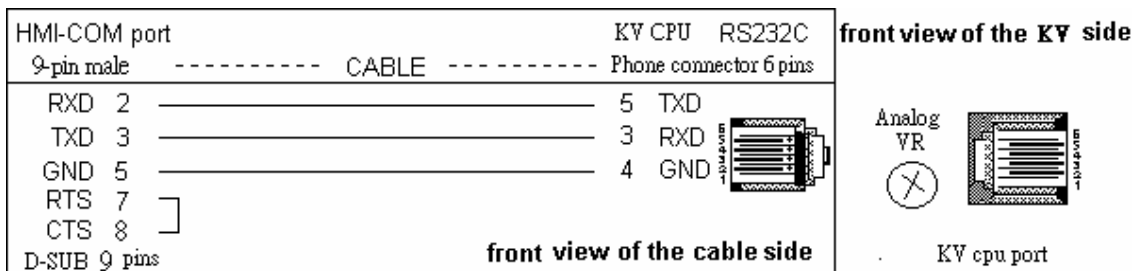
Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Timer	Tnnn	nnn=decimal number 0-119	0	0	Word	✓
Counter	Cnnn	nnn=decimal number 0-119	1	0	Word	✓
High speed counter	CTHn	n=0-1	2	0	Word	✓
High speed counter comparator	CTCn	n=0-3	3	0	Word	✓
Data memory	DMnnnn	nnnn=decimal number 0-1999	4	0	Word	✓
Temporary memory	TMnn	nn=0-31	5	0	Word	✓
Timer preset value	PTnnn	nnn=decimal number 0-119	6	0	Word	✓
Counter preset value	PCnnn	nnn=decimal number 0-119	7	0	Word	✓
CTC preset value	PCTCn	n=0-3	8	0	Word	✓

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Input Relay	nnnn	nnnn=0000-0415	0xC0	0	Bit	✓
Internal Relay	nnnn	nnnn=1000-6915	0xC0	0	Bit	✓
Output Relay	nnnn	nnnn=0500-0915	0xC1	0	Bit	✓
Timer Flag	Tnnn	nnn=0-199	0xC2	0	Bit	✓
Counter Flag	Cnnn	nnn=0-199	0xC3	0	Bit	✓
High speed Counter Flag	CTCn	n=0-3	0xC4	0	Bit	✓

3. Example of the connections between PWS & RS232 of connector kit IO-23086





4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication :RS232C	
b.Node Address :none	
c.Transmission Speed :9600 bps	
d.Transmission Format :8-bit,ENEN,1	
e.Protocol Data Format :ASCII code	
f. Duplex :Full	

## PLC Drivers, pc03.tsk, KOYO SA SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
TMR/CTR Accumulator	nnn	nnn=octal number 600-677	0	0	Word	✓
Register Values	mmm	mmm=octal number 400-576	1	0	Even Bytes	✓

**Note1:** Although the registers are 8 bits wide, the Workstation handles each pair of registers as if it were a single 16-bit register, where the even-numbered register contains the low byte and the odd-numbered register contains the high byte. For example, if you specify register 406, then 406 is the low byte and 407 is the high byte. ADP3 doesn't accept odd-numbered register addresses.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

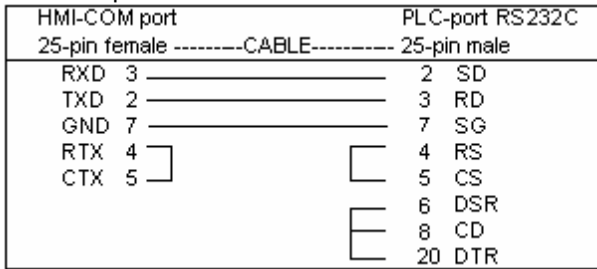
Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Input/Output Bits	Bnnn	nnn=octal number 0-157	0xC0	0	Bit	✓
Input/Output Bits	Bnnn	nnn=octal number 700-767	0xC1	0	Bit	✓
Internal Relay Bits	Bnnn	nnn=octal number 160-377	0xC2	0	Bit	✓
Shift Register Bits	Bnnn	nnn=octal number 400-577	0xC3	0	Bit	✓
TMR/CTR Bits	Bnnn	nnn=octal number 600-677	0xC4	0	Bit	✓

**Note2:** When you specify the address of an On/off Block, use an address that the last digit must be 0.

**Note3:** When the Workstation changes a relay, it reads a byte from the PLC that contains 8 relays, changes the desired bit, and writes the byte to the PLC. These steps require more than one PLC scan to complete, so your PLC ladder program must not control other bits within the same byte. If it does, there is a risk that the Workstation will reverse a change that the PLC makes.

For example, if the Workstation changes B3, it reads B0 through B7 as a single byte, changes B3 within that byte, and writes that entire byte back to the PLC. If your PLC ladder changes some other relay within that byte in the meantime, then the Workstation's subsequent write will cancel that change.

3. Example of the connections between PWS & RS232C of PLC SA21 E03-DM:



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting
a.Communication Format	:RS422 or RS232C	
b.Node Address	:None	
c.Transmission Speed	:9600/19200 bps	
d.Transmission Format	:8-bit, odd, 1 stop bit	
e.Operation Mode	:RUN Mode	
f.Comm. Mode	:ASCII mode. SW2-8=ON	

## PLC Drivers, pl03.tsk, LG K10/60H/200H SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size R/W	
Auxiliary Relay	Mnn	nn=0-63	0	0	Word	✓
Input/Output Relay	Pnn	nn=0-15	1	0	Word	✓
Keep Relay	Knn	nn=0-31	2	0	Word	✓
Link Relay	Lnn	nn=0-31	3	0	Word	✓
Special Relay	Fnn	nn=0-15	4	0	Word	✓
Timer Current Value	Tnnn	nnn=0-255	5	0	Word	✓
Counter Current Value	Cnnn	nnn=0-255	6	0	Word	✓
Timer Set Value	TSnnn	nnn=0-255	7	0	Word	✓
Counter Set Value	CSnnn	nnn=0-255	8	0	Word	✓
Data Register	Dnnnn	nnnn=0-1023	9	0	Word	✓

**Note 1:** The Workstation can read up to 32 words in one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size R/W	
Auxiliary Relay	Mnnb	nn=0-63; b=hex number 0-f	0xC0	0-15	Bit	✓
Input/Output Relay	Pnnb	nn=0-15; b=hex number 0-f	0xC1	0-15	Bit	✓
Keep Relay	Knnb	nn=0-31; b=hex number 0-f	0xC2	0-15	Bit	✓
Link Relay	Lnnb	nn=0-31; b=hex number 0-f	0xC3	0-15	Bit	✓
Special Relay	Fnnb	nn=0-15; b=hex number 0-f	0xC4	0-15	Bit	✓
Timer Relay	Tnnn	nnn=0-255	0xC5	0	Bit	✓
Counter Relay	Cnnn	nnn=0-255	0xC6	0	Bit	✓

**Note 2:** When you specify the address of a timer or counter relay On/off Block, use an address that is 0 or a multiple of 16.

**Note 3:** When you specify the address of an On/off Block register, use an address that the last digit 'b' is 0.

**Note 4:** The Workstation can read up to 256 bits in one read command.

3. Example of the connections between PWS & RS232 of PLC-K200H CPU:

HMI-COM port	PLC-port RS232C
25-pin female -----CABLE-----	9-pin male
RXD 3 _____	3 SD
TXD 2 _____	2 RD
GND 7 _____	5 SG
RTX 4 ]	
CTX 5 ]	

HMI-COM port	PLC-port RS232C
9-pin male -----CABLE-----	9-pin male
RXD 2 _____	3 SD
TXD 3 _____	2 RD
GND 5 _____	5 SG
RTX 7 ]	
CTX 8 ]	

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS232C	
b.Node Address :00	
c.Transmission Speed :9600 bps	
d.Transmission Format :8-bit,NONE,1-bit	

## PLC Drivers, pl63.tsk, LG K10S/30S/60S/100S SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
I/O Relay	PWnn	nn= 0-5	0	0	Word	✓
AUX Relay	MWnnn	nnn = 0-31	1	0	Word	✓
Keep Relay	KWnn	nn = 0-15	2	0	Word	✓
Link Relay	LWnn	nn = 0-15	3	0	Word	✓
Special Relay	FWnn	nn = 0-15	4	0	Word	R
Timer	TWnnn	nnn = 0-127	5	0	Word	✓
Counter	CWnnn	nnn = 0-127	6	0	Word	✓
Data Register	DWnnnn	nnnn =0-255	7	0	Word	✓

**Note 1:** The Workstation can read up to 32 words in one read command.

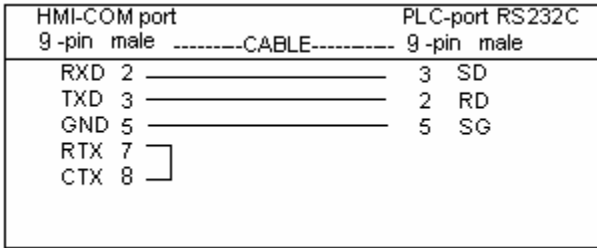
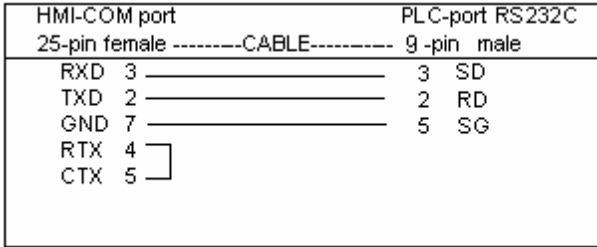
2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay		Device Type / Aux. Address		Data Size	
							R/W
I/O Relay	Pnnb	nn= 0-5	b=0-f	0xC0	0	Bit	✓
AUX Relay	Mnnb	nn= 0-31	b=0-f	0xC1	0	Bit	✓
Keep Relay	Knnb	nn= 0-15	b=0-f	0xC2	0	Bit	✓
Link Relay	Lnnb	nn= 0-15	b=0-f	0xC3	0	Bit	✓
Special Relay	Fnnb	nn= 0-15	b=0-f	0xC4	0	Bit	R
Timer	Tnnn	nnn = 0-127		0xC5	0	Bit	✓
Counter	Cnnn	nnn = 0-127		0xC6	0	Bit	✓

**Note 2:** When you specify the address of an On/off Block register, use an address that the last digit ' b ' is 0.

**Note 3:** The Workstation can read up to 256 bits in one read command.

3. Example of the connections between PWS & RS232 of PLC-K60S CPU:



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS232C	
b.Node Address : 00	
c.Transmission Speed :9600 bps	
d.Transmission Format :8-bit,NONE,1-bit	



## PLC Drivers, pl73.tsk, LG K200S SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size R/W	
I/O Relay	PWnn	nn= 0-31	0	0	Word	✓
AUX Relay	MWnnn	nnn = 0-191	1	0	Word	✓
Keep Relay	KWnn	nn = 0-31	2	0	Word	✓
Link Relay	LWnn	nn = 0-63	3	0	Word	✓
Special Relay	FWnn	nn = 0-63	4	0	Word	✓
Timer	TWnnn	nnn= 0-255	5	0	Word	✓
Counter	CWnnn	nnn =0-255	6	0	Word	✓
Data Register	DWnnnn	nnnn=0-9999	7	0	Word	✓

**Note 1:** The Workstation can read up to 32 words in one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay		Device Type / Aux. Address		Data Size R/W	
I/O Relay	Pnnb	nn= 0-15	b=0-f	0xC0	0-15	Bit	✓
AUX Relay	Mnnnb	nnn = 0-191	b=0-f	0xC1	0-15	Bit	✓
Keep Relay	Knnb	nn = 0-31	b=0-f	0xC2	0-15	Bit	✓
Link Relay	Lnnb	nn = 0-63	b=0-f	0xC3	0-15	Bit	✓
Special Relay	Fnnb	nn = 0-63	b=0-f	0xC4	0-15	Bit	✓
Timer Relay	Tnnn	nnn=0-255		0xC5	0	Bit	✓
Counter Relay	Cnnn	nnn=0-255		0xC6	0	Bit	✓

**Note 2:** When you specify the address of a timer or counter relay On/off Block, use an address that is 0 or a multiple of 16.

**Note 3:** When you specify the address of an On/off Block register, use an address that the last digit 'b' is 0.

**Note 4:** The Workstation can read up to 256 bits in one read command.

3. Example of the connections between PWS & RS232 of PLC-K200S CPU:

HMI-COM port	PLC-port RS232C
25-pin female -----CABLE-----	9-pin male
RXD 3 _____	3 SD
TXD 2 _____	2 RD
GND 7 _____	5 SG
RTX 4 ]	
CTX 5 ]	

HMI-COM port	PLC-port RS232C
9-pin male -----CABLE-----	9-pin male
RXD 2 _____	3 SD
TXD 3 _____	2 RD
GND 5 _____	5 SG
RTX 7 ]	
CTX 8 ]	

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS232C	
b.Node Address :00	
c.Transmission Speed :38400 bps	
d.Transmission Format :8-bit,NONE,1-bit	

## PLC Drivers, pl53.tsk, LG K300S SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
I/O Relay	PWnn	nn= 0-31	0	0	Word	✓
AUX Relay	MWnnn	nnn = 0-191	1	0	Word	✓
Keep Relay	KWnn	nn = 0-31	2	0	Word	✓
Link Relay	LWnn	nn = 0-63	3	0	Word	✓
Special Relay	FWnn	nn = 0-63	4	0	Word	✓
Timer	TWnnn	nnn = 0-255	5	0	Word	✓
Counter	CWnnn	nnn = 0-255	6	0	Word	✓
Step controller	SWnnnn	nnnn = 0-9999	7	0	Word	✓
Data Register	DWnnnn	nnnn = 0-9999	8	0	Word	✓

**Note 1:** The Workstation can read up to 32 words in one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay		Device Type / Aux. Address		Data Size	
							R/W
I/O Relay	Pn <b>n</b> b	nn= 0-31	b=0-f	0xC0	0-15	Bit	✓
AUX Relay	M <b>n</b> nnb	nnn = 0-191	b=0-f	0xC1	0-15	Bit	✓
Keep Relay	K <b>n</b> nb	nn = 0-31	b=0-f	0xC2	0-15	Bit	✓
Link Relay	L <b>n</b> nb	nn = 0-63	b=0-f	0xC3	0-15	Bit	✓
Special Relay	F <b>n</b> nb	nn = 0-63	b=0-f	0xC4	0-15	Bit	✓

**Note 2:** When you specify the address of an On/off Block register, use an address that the last digit 'b' is 0.

**Note 3:** The Workstation can read up to 256 bits in one read command.

3. Example of the connections between PWS & RS232 of PLC-K300S CPU:

HMI-COM port		RS232 PORT
25-pin female	----- CABLE -----	9-pin male
RXD 3	=====	7 TXD
TXD 2	=====	4 RXD
GND 7	=====	5 GND

3.1 Example of the connections between PC & RS232 of PLC-K300S CPU:

HMI-COM port		PLC-port RS232C
25-pin female	-----CABLE-----	9-pin male
RXD 3	=====	3 SD
TXD 2	=====	2 RD
GND 7	=====	5 SG
RTX 4	]	
CTX 5	]	

HMI-COM port		PLC-port RS232C
9-pin male	-----CABLE-----	9-pin male
RXD 2	=====	3 SD
TXD 3	=====	2 RD
GND 5	=====	5 SG
RTX 7	]	
CTX 8	]	

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS232C	
b.Node Address : 00	
c.Transmission Speed :9600 bps	
d.Transmission Format :8-bit,NONE,1-bit	

## PLC Drivers, pl23.tsk, LG K500H/1000H SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Auxiliary Relay	Mnnn	nnn=0-191	0	0	Word	✓
Input/Output Relay	Pnn	nn=0-63	1	0	Word	✓
Keep Relay	Knn	nn=0-31	2	0	Word	✓
Link Relay	Lnn	nn=0-63	3	0	Word	✓
Special Relay	Fnn	nn=0-31	4	0	Word	✓
Timer Current Value	Tnnn	nnn=0-255	5	0	Word	✓
Counter Current Value	Cnnn	nnn=0-255	6	0	Word	✓
Data Register	Dnnnn	nnnn=0-9999	7	0	Word	✓

**Note 1:** The Workstation can read up to 32 words in one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Auxiliary Relay	Mnnnb	nnn=0-191; b=hex number 0-f	0xC0	0-15	Bit	✓
Input/Output Relay	Pnnnb	nn=0-63; b=hex number 0-f	0xC1	0-15	Bit	✓
Keep Relay	Knnnb	nn=0-31; b=hex number 0-f	0xC2	0-15	Bit	✓
Link Relay	Lnnnb	nn=0-63; b=hex number 0-f	0xC3	0-15	Bit	✓
Special Relay	Fnnnb	nn=0-31; b=hex number 0-f	0xC4	0-15	Bit	✓

**Note 2:** When you specify the address of an On/off Block register, the bit address ("b") should be 0.

**Note 3:** The Workstation can read up to 256 bits in one read command.

3. Example of the connections between PWS & RS232 of PLC-K1000H CPU:

HMI-COM port		PLC-port RS232C	
25-pin female		25-pin male	
RXD	3	2	SD
TXD	2	3	RD
GND	7	7	SG
RTX	4		
CTX	5		

3.1 Example of the connections between PWS & RS485 of PLC-K1000H CPU:

HMI-COM port		PLC-port RS485	
25-pin female		-----CABLE----- 25-pin male	
RXD/TXD+	14	10	DATA + (SD+)
RXD/TXD-	15	11	DATA - (SD-)
SG	7	7	SG

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting
a.Communication Format	:RS422 or RS232C	COM2=RS232/422/485
sw1=Off	:RS422/485	
sw1=on	:RS232	
b.Node Address	:00(CPU PORT)	PLC node address is 00
	:00--15(RS422)	Refer to what PLC was set
c.Transmission Speed	:9600/19200 bps	
d.Transmission Format	:8-bit,NONE,1-bit	

## PLC Drivers, pl43.tsk, LIYAN CX SERIES

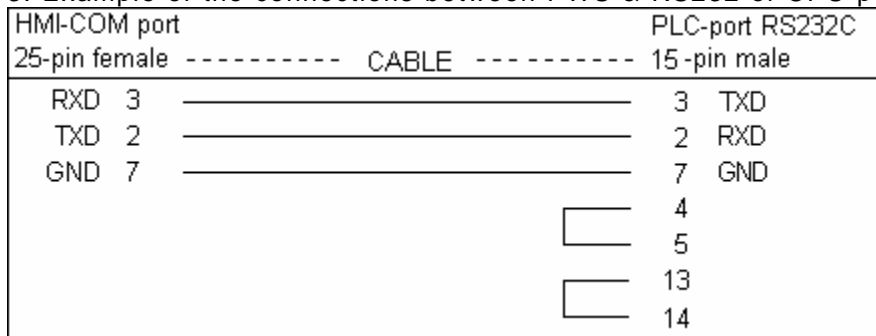
1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size R/W	
Input Relay	Xnnn	nnn=0-076	0	0	Word	✓
Output Relay	Ynnn	nnn=0-076	1	0	Word	✓
Auxiliary Relay	Mnnnn	nnnn=0-8254	2	0	Word	✓
ST1 Status	Snnn	nnn=0-510	3	0	Word	✓
Data Register	Dnnnn	nnn=0-511	4	0	Word	✓
Special Data	Dnnnn	nnnn=8000-8255	5	0	Word	✓
Timer Preset Register	PTnnn	nnn=0-063	6	0	Word	✓
Counter Preset Register	PCnnn	nnn=0-063	7	0	Word	✓
Timer Current Register	CTnnn	nnn=0-063	8	0	Word	✓
Counter Current Register	CCnnn	nnn=0-063	9	0	Word	✓
Timer Preset Register	PTnnn	nnn=224-255	10	0	Word	✓
Counter Preset Register	PCnnn	nnn=224-255	11	0	Word	✓
Timer Current Register	CTnnn	nnn=224-255	12	0	Word	✓
Counter Current Register	CCnnn	nnn=224-255	13	0	Word	✓

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size R/W	
Input Relay	Xnnnb	nnn=0-077; b=0-7	0xC0	0-7	Bit	✓
Output Relay	Ynnnb	nnn=0-077; b=0-7	0xC1	0-7	Bit	✓
Auxiliary Relay	Mnnnnb	nnnn=0-8255; b=0-7	0xC2	0-7	Bit	✓
ST1 Status	Snnnb	nnn=0-511; b=0-7	0xC3	0-7	Bit	✓
Data	Dnnnb	nnn=0-511; b=0-7	0xC4	0-7	Bit	✓
Special Data	Dnnnnb	nnnn=8000-8255; b=0-7	0xC5	0-7	Bit	✓
Timer Relay Status	Tnnnb	nnn=0-063; b=0-7	0xC6	0-7	Bit	✓
Counter Relay Status	Cnnnb	nnn=0-063; b=0-7	0xC7	0-7	Bit	✓

3. Example of the connections between PWS & RS232 of CPU port.



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS232	
b.Node Address :0	
c.Transmission Speed :9600bps	
d.Transmission Format :8-bit,EVEN,1-bit	



PLC Drivers, pl33.tsk, NHP Microlink ML-14  
SERIES

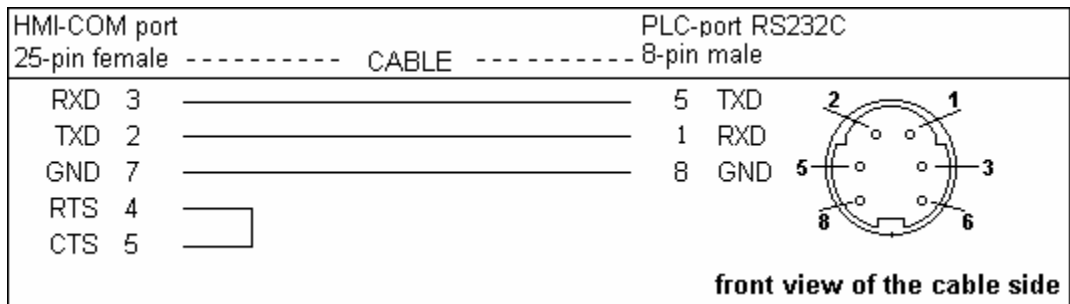
1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Input/Output	Pnnn	nnn= 0005	0	0	Word	✓
Auxiliary Relay	Mnnn	nnn= 0031	1	0	Word	✓
Keep Relay	Knnn	nnn= 0015	2	0	Word	✓
Link Relay	Lnnn	nnn= 0015	3	0	Word	✓
Special Relay	Fnnn	nnn= 0015	4	0	Word	✓
Timer	Tnnn	nnn= 0127	5	0	Word	✓
Counter	Cnnn	nnn= 0127	6	0	Word	✓
Step	Snnn	nnn= 0031	7	0	Word	✓
Data Register	Dnnn	nnn= 0255	8	0	Word	✓

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Input/Output	Pnnnb	nnn= 0-005 ; b=0-f	0xC0	0-15	Bit	✓
Auxiliary Relay	Mnnnb	nnn= 0-031 ; b=0-f	0xC1	0-15	Bit	✓
Keep Relay	Knnn	nnn= 0015 ; b=0-f	0xC2	0-15	Bit	✓
Link Relay	Lnnn	nnn= 0-015 ; b=0-f	0xC3	0-15	Bit	✓
Special Relay	Fnnn	nnn= 0-015 ; b=0-f	0xC4	0-15	Bit	✓

3. Example of the connections between PWS & RS232C of CPU port:



3.1 Example of the connections between PWS & RS485 of Link port:

HMI-COM port 25-pin female	----- CABLE -----	PLC- RS485 Screw Terminal
TXD+/RXD+ 14	—————	+
TXD-/RXD- 15	—————	-

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting
a.Communication Format	:RS232C/RS485	Set the Workstation's operating parameters to match the PLC.
b.Node Address	:0-1F	
c.Transmission Speed	:9600/19200 bps	
d.Transmission Format	:8-bit, none,1-bit	

## PLC Drivers, p123.tsk, Mirle DX Controller

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Data Memory	DMnn	nn=0-23	0	0	Word	R
Data Memory	DMnn	nn=0-47	0	0	DWord	R
Data Memory	DMnnn	nnn=24-287	0	0	Word	✓
Data Memory	DMnnn	nnn=48-575	0	0	DWord	✓
Data Memory	DMnnn	nnn=0-2376 (for nDX)	0	0	Word	✓

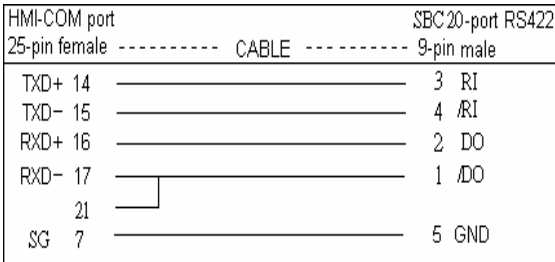
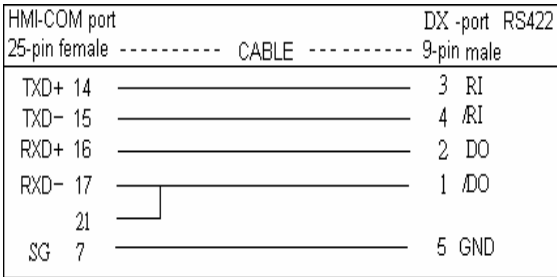
**Note 1:** The Workstation can read up to 28 words in one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

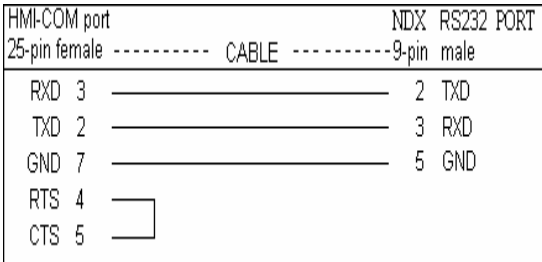
Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Input area	IRnbb	n=0-1; bb=00-15	0xC0	0-15	Bit	R
Output area	IRnbb	n=4-5 ; bb=00-15	0xC0	0-15	Bit	✓
Internal area	IRnnbb	nn=8-11 ; bb=00-15	0xC0	0-15	Bit	✓
Internal area	IRnnbb	nn=12-13 ; bb=00-15	0xC0	0-15	Bit	R
Internal area	IRnnbb	nn=0-111 ; bb=00-15 (for nDX)	0xC0	0-15	Bit	✓

**Note 2:** When you specify the address of an On/off Block register, use an address that the last digit 'bb' is 00.

3. Example of the connections between PWS & RS422 of Controller Link port.



3.1 Example of the connections between PWS & RS232 of Controller nDX.



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS232C/422	
b.Node Address :00	
c.Transmission Speed :9600 bps	
d.Transmission Format :8-bit,odd,1-bit for DX	
:8-bit,odd,1-bit for SBC20	
:8-bit,NONE,1-bit for NDX	

## PLC Drivers, p703.tsk, MITSUBISHI FX2/FX2N SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size R/W	
Auxiliary Relay	Mnnnn	nnnn=0-3071; must be 0 or a multiple of 8	0	0	Word	✓
Special Auxiliary Relay	Mnnnn	nnnn=8000-8255; must be 0 or a multiple of 8	1	0	Word	✓
Status Relay	Snnn	nnn=0-999; must be 0 or a multiple of 8	2	0	Word	✓
Input Relay	Xnnn	nnn=octal number 0-377; The last digit is 0	3	0	Word	✓
Output Relay	Ynnn	nnn=octal number 0-377; The last digit is 0	4	0	Word	✓
Timer PV	Tnnn	nnn=0-255	5	0	Word	✓
16-bit Counter PV	Cnnn	nnn=0-199	6	0	Word	✓
32-bit Counter PV	Cnnn	nnn=200-255	7	0	DWord	✓
Data Register	Dnnn	nnn=0-1023 (7999) D1000=FILE REGISTER	8	0	Word	✓
Special Data Register	Dnnnn	nnnn=8000-8255	9	0	Word	✓

**Note 1:** The Workstation can read up to 32 words in one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size R/W	
Auxiliary Relay	Mnnnn	0-3071	0xc0	0	Bit	✓
Special Auxiliary Relay	Mnnnn	8000-8255	0xc1	0	Bit	✓
Status Relay	Snnn	0-999	0xc2	0	Bit	✓
Input Relay	Xnnn	Octal number 0-377	0xc3	0	Bit	✓
Output Relay	Ynnn	Octal number 0-377	0xc4	0	Bit	✓
Timer Flag	Tnnn	0-255	0xc5	0	Bit	✓
Counter Flag	Cnnn	0-255	0xc6	0	Bit	✓

**Note 2:** When you specify the address of a timer or counter relay On/off Block, use an address that is 0 or a multiple of 16.

**Note 3:** When you specify the address of an On/off X and Y Block register, use an address that the last digit must be 0.

**Note 4:** The Workstation can read up to 512 bits in one read command.

3. Example of the connections between PWS & RS422 of PLC-FX2 CPU:

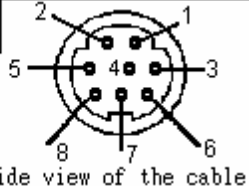
HMI-COM port	PLC-port RS422
25-pin female -----CABLE-----	25-pin male
TXD+ 14	2 RDB (RXD+)
TXD- 15	15 RDA (RXD-)
RXD+ 16	3 SDB (TXD+)
RXD- 17	16 SDA (TXD-)
21	7 SG
RTX+ 23	4 CTX+
CTX+ 12	5 RTX+
RTX- 24	17 CTX-
CTX- 13	18 RTX-
	20
	21

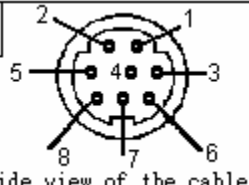
HMI-COM port	PLC-port RS422
9-pin male -----CABLE-----	25-pin male
TXD+ 1	2 RDB (RXD+)
TXD- 6	15 RDA (RXD-)
RXD+ 4	3 SDB (TXD+)
RXD- 9	16 SDA (TXD-)
GND 5	7 SG
	4 DSR+
	8 SG
	17 DSR-
	18 DTR-
	20
	21

3.1 Example of the connections between PWS & RS422 of FX2N/FX0N CPU:

HMI-COM port	PLC-port RS422
25-pin female -----CABLE-----	8-pin male
TXD+ 14	2 RXD+
TXD- 15	1 RXD-
RXD+ 16	7 TXD+
RXD- 17	4 TXD-
21	3 SG

HMI-COM port	PLC-port RS422
9-pin male -----CABLE-----	8-pin male
TXD+ 1	2 RXD+
TXD- 6	1 RXD-
RXD+ 4	7 TXD+
RXD- 9	4 TXD-
GND 5	3 SG



3.2 Example of the connections between PWS & RS485BD of FX2N/FX0N :

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS422	
b.Node Address : 00	
c.Transmission Speed :9600 bps	
d.Transmission Format :7-bit,even,1-bit	



PLC Drivers, p8x3.tsk, MITSUBISHI A SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size R/W	
Input Relay	Xnnn	nnn=hex number 0-7ff; The last digit is 0	0	0	Word	✓
Output Relay	Ynnn	nnn=hex number 0-7ff; The last digit is 0	1	0	Word	✓
Link Relay	Bnnn	nnn=hex number 0-fff; The last digit is 0	2	0	Word	✓
Internal Relay	Mnnnn	nnnn=0-8191; Must be 0 or multiple of 16	3	0	Word	✓
Special Relay	Mnnnn	nnnn=9000-9255; (The last 3 digits must be multiple of 16)	4	0	Word	✓
Latch Relay	Lnnnn	nnnn=0-2047; Must be 0 or multiple of 16	5	0	Word	✓
Annunciator	Fnnnn	nnnn=0-2047; Must be 0 or multiple of 16	6	0	Word	✓
Timer PV	TNnnn	nnn=0-999	7	0	Word	✓
Input Relay	PXnnn	nnn=hex number 0-7ff; The last digit is 0	8	0	Word	✓
Counter PV	CNnnn	nnn=0-999	9	0	Word	✓
Data Register	Dnnnn	nnnn=0-6143	11	0	Word	✓
Special Register	Dnnnn	nnnn=9000-9255	12	0	Word	✓
File Register	Rnnnn	nnnn=0-8191	13	0	Word	✓
Link Register	Wnnn	nnn=hex number 0-fff	14	0	Word	✓

**Note 1:** The Workstation can read up to 64 words in one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size R/W	
Input Relay	Xnnn	nnn=hex number 0-7ff	0xc0	0	Bit	✓
Output Relay	Ynnn	nnn=hex number 0-7ff	0xc1	0	Bit	✓
Link Relay	Bnnn	nnn=hex number 0-fff	0xc2	0	Bit	✓
Internal Relay	Mnnnn	nnnn=0-8191	0xc3	0	Bit	✓
Special Relay	Mnnnn	nnnn=9000-9255	0xc4	0	Bit	✓
Latch Relay	Lnnnn	nnnn=0-2047	0xc5	0	Bit	✓
Annunciator	Fnnnn	nnnn=0-2047	0xc6	0	Bit	✓
Timer Contact	TSnnn	nnn=0-999	0xc7	0	Bit	✓
Timer Coil	TCnnn	nnn=0-999	0xc8	0	Bit	✓
Counter Contact	CSnnn	nnn=0-999	0xc9	0	Bit	✓
Counter Coil	CCnnn	nnn=0-999	0xca	0	Bit	✓



Input Relay	PXnnn	nnn=hex number 0-7ff	0xcb	0	Bit	✓
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**Note 2:** The Workstation can read up to 512 bits in one read command.

### 3. Example of the connections between PWS & RS232 of PLC AJ71UC24-R2/S8:

HMI-COM port 25-pin female	PLC-port RS232C 9-pin male	HMI-COM port 25-pin female	PLC-port RS232C 9-pin male
RXD 3	3 SD	RXD 3	2 SD
TXD 2	2 RD	TXD 2	3 RD
GND 7	5 SG	GND 7	7 SG
RTX 4	8 CTS	RTX 4	5 CTS
CTX 5	7 RTS	CTX 5	4 RTS
	6 DSR		6 DSR
	4 DTR		8 CD
	1 DCD		20 DTR

HMI-COM port 9-pin male	PLC-port RS232C 9-pin male	HMI-COM port 9-pin male	PLC-port RS232C 25-pin male
RXD 2	3 SD	RXD 2	2 SD
TXD 3	2 RD	TXD 3	3 RD
GND 5	5 SG	GND 5	7 SG
RTX 7	8 CTS	RTX 7	5 CTS
CTX 8	7 RTS	CTX 8	4 RTS
	6 DSR		6 DSR
	4 DTR		8 CD
	1 DCD		20 DTR

### 3.1 Example of the connections between PWS & RS422 of AnA and A1S CPU:

HMI-COM port 25-pin female	PLC-port RS422 25-pin male
TXD+ 14	2 RDB (RXD+)
TXD- 15	15 RDA (RXD-)
RXD+ 16	3 SDB (TXD+)
RXD- 17	16 SDA (TXD-)
21	7 SG
RTX+ 23	4 CTX+
CTX+ 12	5 RTX+
RTX- 24	17 CTX-
CTX- 13	18 RTX-
	20
	21

### 3.2 Example of the connections between PWS & RS422 of PLC AJ71UC24:

HMI-COM port 25-pin female	PLC-port RS422 8-pin Screw terminals
TXD+ 14	RDA (RXD+)
TXD - 15	RDB (RXD -)
RXD+ 16	SDA (TXD+)
RXD - 17	SDB (TXD -)
21	SG
RTX+ 23	
CTX+ 12	
RTX- 24	
CTX- 13	

HMI-COM port		PLC-port RS422	
9-pin male	-----CABLE-----	8-pin	Screw terminals
TXD+	1	_____	RDA (RXD+)
TXD-	6	_____	RDB (RXD-)
RXD+	4	_____	SDA (TXD+)
RXD-	9	_____	SDB (TXD-)
GND	5		SG

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting
a.Communication Format	:RS422 or RS232C	1.PWS back DIP-Switch SW10=OFF  Refer to what PLC was set <b>**PWS node address is 255</b> <b>**PWS node address is 255</b>
AJ71UC24 sw1=ON	:RS422	
sw1=Off	:RS232	
b.NODE ADDRESS.	:00(CPU PORT)	
	:00(AISJ71C24-S3)	
	:00-31(AJ71UC24)	
c.Transmission Speed	:9600/19200 bps	
d.Transmission Format	:CPU PORT=9600bps	
e.Comm. Protocol	:8-bit,ODD,1-bit	
f.Comm. Protocol	:Format 1;5;A	
f.Check Sum	:YES	
g.Write during Run	:Allowed	

Set the Workstation's baud rate and data format to match the PLC's transmission speed and format.

**Set the address of the Workstation as 255 and the address of the PLC as 0 when an A1SJ71C24 or AJ71C24 is used for the communications.**

To connect the Workstation to the PLC CPU port, set the Workstation communication parameters according to the following; set the DIP switch No.10 to off when COM2 is used.  
 Baud Rate = 9600; Data Format = (8 data bits, odd parity, 1 stop bit)

[PLC Drivers, p303.tsk, MODICON PC984 SERIES](#)

[PLC Drivers, p313.tsk, MODICON TSX QUANTUM](#)

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Input Registers	nnnnn	nnnnn=30001-40000	0	0	Word	✓
Output Registers	nnnnn	nnnnn=40001-50000	1	0	Word	✓
Input Registers (TSX Quantum)	nnnnnn	nnnnn=300001-365535	0	0	Word	✓
Output Registers (TSX Quantum)	nnnnnn	nnnnn=400001-565535	1	0	Word	✓

**Note 1:** The Workstation can read up to 125 words in one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Discrete Outputs	nnnnn	nnnnn=1-10000	0xC0	0	Bit	✓
Discrete Inputs	nnnnn	nnnnn=10001-20000	0xC1	0	Bit	✓
Discrete Outputs (TSX Quantum)	nnnnn	nnnnn=000001-065535	0xC0	0	Bit	✓
Discrete Inputs (TSX Quantum)	nnnnn	nnnnn=100001-165535	0xC1	0	Bit	✓

**Note 2:** The Workstation can read up to 2000 bits in one read command.

3. Example of the connections between PWS & RS232 of PLC CPU port:

HMI-COM port		PLC-port RS232C	
25-pin female -----CABLE-----		9-pin male	
RXD	3	3	SD
TXD	2	2	RD
GND	7	5	SG
RTX	4	7	RS
CTX	5	8	CS
		6	DSR
		4	DTR

HMI-COM port		PLC-port RS232C	
9-pin male	-----CABLE-----	9-pin male	
RXD 2	—————	3	SD
TXD 3	—————	2	RD
GND 5	—————	5	SG
RTX 7	┌	7	RS
CTX 8	└	8	CS
		6	DSR
		4	DTR

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting
a.Communication Format	:RS232C	PLC node address is 01 (Refer to what PLC was set)
b.Node Address	:1	
	:01—247 (mem setup)	
c.Transmission Speed	:19200/9600 bps	
d.Transmission Format	:8, EVEN, 1	
	:(7,O,1);(7,E,1);(7,E,2)	
RTU MODE	:(8,E,1);(8,O,1);(8,N,1)	

[PLC Drivers, p323.tsk, Modbus slave](#)

[PLC Drivers, p333.tsk, Modbus master](#)

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Registers	Wnnnnn	nnnn=0-65535	0	0	Word	✓

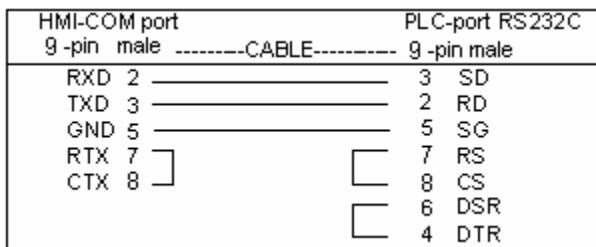
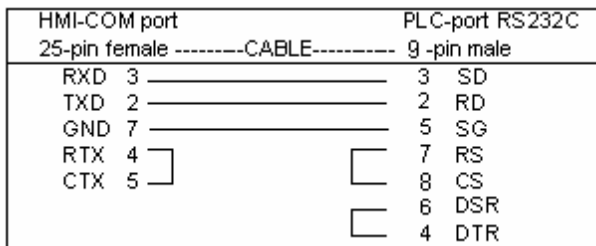
**Note 1:** The Workstation can read up to 125 words in one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Relay bits	Bnnnnn	nnnn=0-65535	0xC0	0	Bit	✓

**Note 2:** The Workstation can read up to 2000 bits in one read command.

3. Example of the connections between PWS & RS232 of PLC Link port:



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting
a.Communication Format	:RS232C	PWS node address is 00 (Refer to what PLC was set)
b.Node Address	:00	
	:01—254	
c.Transmission Speed	:19200/9600 bps	
d.Transmission Format	:8, EVEN, 1	
AScii Mode	:(7,O,1);(7,E,1);(7,E,2)	

RTU Mode	:(8,E,1);(8,O,1);(8,N,1)
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## PLC Drivers, p603.tsk, MATSUSHITA FP SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Internal Relay	WRnn	nn=0-97(875)	1	0	Word	✓
Special Internal Relay	WRnnn	nnn=900-910	2	0	Word	✓
Link Relay	WLnnn	nnn=0-127(639)	3	0	Word	✓
External Input Relay	WXnnn	nnn=0-127(255)	4	0	Word	✓
External Output Relay	WYnnn	nnn=0-127(255)	5	0	Word	✓
Timer/Counter P.V.	EVnnn	nnn=0-255(2047)	6	0	Word	✓
Timer/Counter S.V.	SVnnn	nnn=0-255 (2047)	7	0	Word	✓
Data Register	DTnnnn	nnnn=0-2047 (10239)	8	0	Word	✓
Special Data Register	DTnnnn	nnnn=9000-9255	9	0	Word	✓
Link Data Register	LDnnn	nnn=0-127(8447)	10	0	Word	✓
File Register	FLnnnnn	nnnn=0-8191 (32764)**	11	0	Word	✓

**Note 1:** The maximal number of words that the Workstation can read in one command is 27 for every type of registers except Timer/Counter registers.

**Note 2:** The maximum for Timer/Counter registers is 24.

**Note 3:** The Register setting range of FP10SH is nnnn=0- 32764.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Internal Relay	Rnnnb	nn=0-97(875);b= 0-f	0xC0	0-15	Bit	✓
Special Internal Relay	Rnnnb	nnn=900-910;b= 0-f	0xC1	0-15	Bit	✓
Link Relay	Lnnnb	nnn=0-127(639);b=0-f	0xC2	0-15	Bit	✓
External Input Relay	Xnnnb	nnn=0-127(255);b=0-f	0xC3	0-15	Bit	✓
External Output Relay	Ynnnb	nnn=0-127(255);b=0-f	0xC4	0-15	Bit	✓
Timer Flag Contact	Tnnn	nnn=0-255(2047)	0xC5	0	Bit	✓
Counter Flag Contact	Cnnn	nnn=0-255(2047) **	0xC6	0	Bit	✓

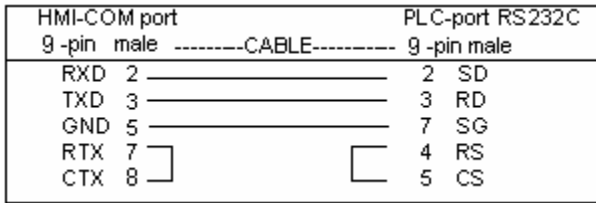
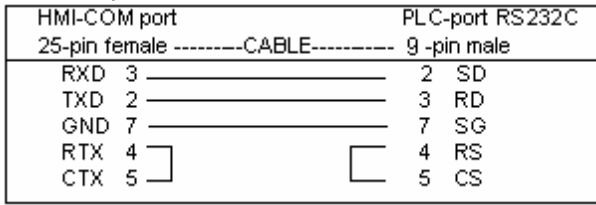
**Note 4:** When you specify the address of an On/off Block in R, L, X or Y area, use an address that its bit address("b") is 0("0").

**Note 5:** When you specify the address of an On/off Block in T or C area, use an address that is a multiple of 16.

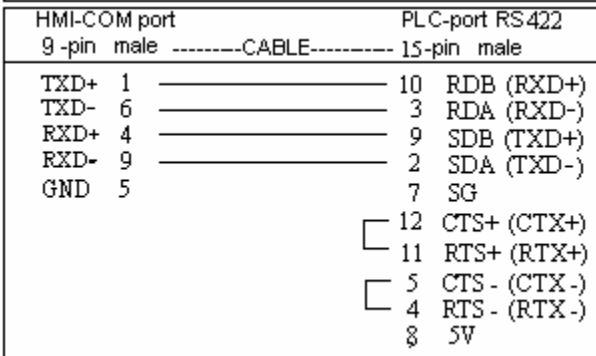
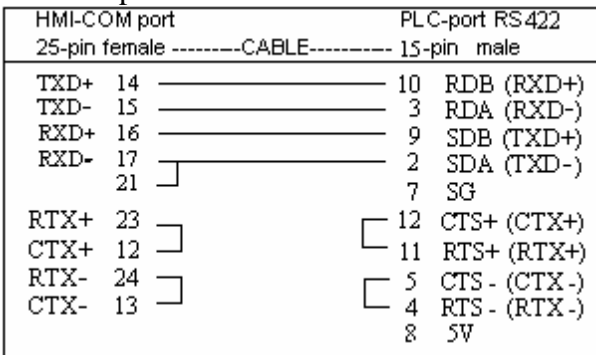
**Note 6:** The Workstation can read up to 432 bits in one read command.

**Note 7:** The Contact setting range of FP10SH is nnnn=0-2047.

3. Example of the connections between PWS & RS232 of FP3 CCU or FP1 LINK:



3.1 Example of the connections between PWS & RS422 of PLC FP3 CPU port:



3.2 Example of the connections between PWS & RS232C of PLC FP0 link port:

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS422/RS232C	CPU PORT's node address of is 238
b.Node Address :01-32;FP1=computer link :FP CPU PORT =238	
c.Transmission Speed :19200/9600 bps :FP10SH -CPU 115.2K bps	
d.Transmission Format :8-bit,odd,1	



## PLC Drivers, p103.tsk, OMRON C SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
IR area	IRnnn	nnn=0-255	0	0	Word	✓
HR area	HRnn	nn=0-99	1	0	Word	✓
AR area	ARnn	nn=0-27	2	0	Word	✓
LR area	LRnn	nn=0-63	3	0	Word	✓
TC area	TCnnn	nnn=0-511	4	0	Word	✓
DM area	DMnnnn	nnnn=0-6655	5	0	Word	✓

**Note 1:** The Workstation can read up to 28 words with one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
IR area	IRnnnbb	nnn=0-255; bb=00-15	0xC0	0-15	Bit	✓
HR area	HRnnbb	nn=0-99 ; bb=00-15	0xC1	0-15	Bit	✓
AR area	ARnnbb	nn=0-27 ; bb=00-15	0xC2	0-15	Bit	✓
LR area	LRnnbb	nn=0-63 ; bb=00-15	0xC3	0-15	Bit	✓
TC area	TCnnn	nnn=0-511	0xC4	0	Bit	✓

**Note 2:** When you specify the address of an On/off Block is in IR, HR, AR or LR area, use an address that its bit address ("bb") is 0("00").

**Note 3:** When you specify the address of an On/off Block in TC area, use an address that is a multiple of 16.

**Note 4:** The maximal number of bits the Workstation can read with one command is 112.

3. Example of the connections between PWS & RS232 of PLC link port:

HMI-COM port 25-pin female	PLC-port RS232C 9-pin male	HMI-COM port 25-pin female	PLC-port RS232C 25-pin male
RXD 3	2 SD	RXD 3	2 SD
TXD 2	3 RD	TXD 2	3 RD
GND 7	7 SG	GND 7	7 SG
	9 cv,cqm1	RTX 4	5 CTS
RTX 4	5 CTS	CTX 5	4 RTS
CTX 5	4 RTS		
-----CABLE-----			
HMI-COM port 9-pin male	PLC-port RS232C 9-pin male	HMI-COM port 9-pin male	PLC-port RS232C 25-pin male
RXD 2	2 SD	RXD 2	2 SD
TXD 3	3 RD	TXD 3	3 RD
GND 5	7 SG	GND 5	7 SG
	9 cv,cqm1	RTX 7	5 CTS
RTX 7	5 CTS	CTX 8	4 RTS
CTX 8	4 RTS		
-----CABLE-----			

3.1 Example of the connections between PWS & RS422 of PLC LK202 :

HMI-COM port		PLC-port RS422	
25-pin female -----CABLE-----		9-pin male	
TXD+	14	1	RDB (RXD+)
TXD-	15	6	RDA (RXD-)
RXD+	16	5	SDB (TXD+)
RXD-	17	9	SDA (TXD-)
	21		
SG	7	3	SG

HMI-COM port		PLC-port RS422	
9-pin male -----CABLE-----		9-pin male	
TXD+	1	1	RDB (RXD+)
TXD-	6	6	RDA (RXD-)
RXD+	4	5	SDB (TXD+)
RXD-	9	9	SDA (TXD-)
GND	5	3	SG

3.2 Example of the connections between PWS & RS232 of PLC CPM1-CIF01 :

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting
a.Communication Format	:RS232C :RS422 :RS485	COM2=RS232/422/485  PWS back DIP-Switch SW10=ON
b.Node Address	:00(00-31 to setting)	Refer to what PLC was set
1.Mini-H type	:DM0923=0000	
2.CQM1-CPU21	:DM6648=0000	
3.C200H-LK201	:Main brand sw1=0 , sw2=0	
c.Transmission Speed	:19200/9600 bps	Set the Workstation's baud rate, data format, default controller station number to match the PLC's transmission speed, transmission format, and unit number.
1.CQM1-CPU21	:DIP-sw5=OFF (Attention)	
2.C200H-LK201	:sw3=5 sw4=2 (9600bps)	
d.Transmission Format	:1.initial value 7-bit,ENEN,2 :2.adjustable	
e.Operation Mode	:Monitor Mode	
f. CTS handshaking	:Either position	
g.Communication Protocol	:Multiple-Link	
h.5V-POWER SUPPLY	:OFF	

## PLC Drivers, p113.tsk, OMRON CV SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
CIO area	CIOnnnn	nnnn=0-2555	0	0	Word	✓
AR area	ARnnn	nnn=0-511	1	0	Word	✓
TC area	TCnnnn	nnnn=0-1023 /2048-3071	2	0	Word	✓
DM area	DMnnnn	nnnn=0-9999	3	0	Word	✓

**Note 1:** The Workstation can read up to 28 words with one read command.

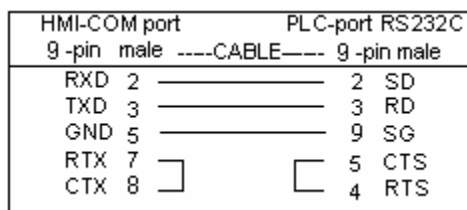
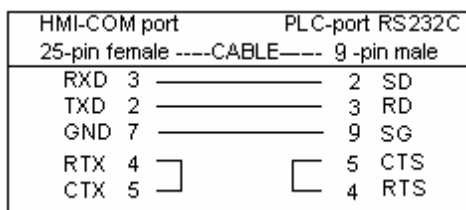
2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
CIO area	CIOnnnnbb	nnnn=0-2555; bb=00-15	0xC0	0-15	Bit	✓
TC area	TCnnnn	nnnn=0-1023 /2048-3071	0xC1	0	Bit	✓

**Note 2:** The bit address ("bb") of an on/off block in CIO area must be 00. The address of an on/off block in TC area must be divisible by 16.

**Note 3:** The maximal number of bits the Workstation can read with one command is 112.

3. Example of the connections between PWS & RS232 of PLC CV-CPU port:



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting
a.Communication Format	:RS232C :RS422 :RS485	COM2=RS232/422/485  PWS back DIP-Switch SW10=ON
b.Node Address	:00(00-31to set)	Refer to what PLC was set
c.Transmission Speed	:19200/9600 bps	Set the Workstation's baud rate, data

d.Transmission Format	:initial value 7-bit,ENEN,2	
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## PLC Drivers, ps03.tsk, SAIA PCD1 SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size R/W	
Timer	Tnnnn	nnnn=0-1599	0	0	DWord	✓
Counter	Cnnnn	nnnn=0-1599	1	0	DWord	✓
Register	Rnnnn	nnnn=0-4095	2	0	DWord	✓

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size R/W	
Input	Innn	nnn= 0-255	0xC0	0	Bit	✓
Output	Onnn	nnn= 0-255	0xC1	0	Bit	✓
Flag	Fnnnn	nnnn= 0-8191	0xC2	0	Bit	✓

3. Example of the connections between PWS & RS232 of PLC port:

HMI-COM port 25-pin female	-----CABLE-----	PLC-port RS232C 9-pin male
RXD 3	_____	3 SD
TXD 2	_____	2 RD
GND 7	_____	5 SG
RTX 4	_____	8 CTS
CTX 5	_____	7 RTS

HMI-COM port 9-pin male	-----CABLE-----	PLC-port RS232C 9-pin male
RXD 2	_____	3 SD
TXD 3	_____	2 RD
GND 5	_____	5 SG
RTX 7	_____	8 CTS
CTX 8	_____	7 RTS

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting
a.Communication Format	:RS232	COM=RS232
b.Node Address	:none	
c.Transmission Speed	:9600bps	Refer to what PLC was set
d.Transmission Format	:8-bit,none,1	

PLC Drivers, py53.tsk, SHARP JW10/20 SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Register	09000	000=octal number 0-776	0	0	Byte	✓
Register	19000	000=octal number 0-776	1	0	Byte	✓
Register	29000	000=octal number 0-776	2	0	Byte	✓
Register	39000	000=octal number 0-776	3	0	Byte	✓
Timer Value	T000	000=octal number 0-377	4	0	Word	✓
Counter Value	C000	000=octal number 0-377	5	0	Word	✓
Relay	0000	0000=octal number 0-1576	6	0	Byte	✓

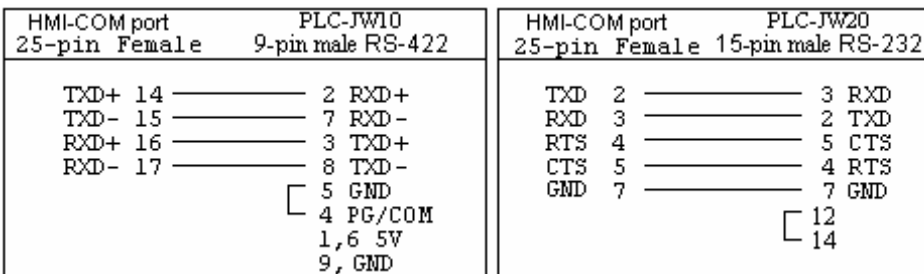
**Note 1:** The PWS can read up to 60 Words in one read command.

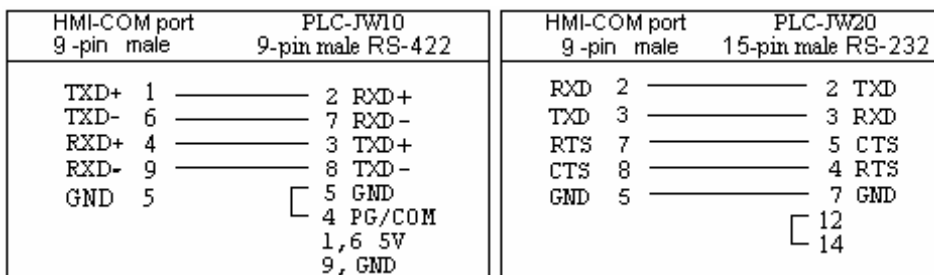
2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Relay	00000	00000=octal number 0-15776	0xC0	0	Bit	✓
Timer Contact	T000	000=octal number 0-377	0xC1	0	Bit	✓
Counter Contact	C000	000=octal number 0-377	0xC2	0	Bit	✓

**Note 2:** The Workstation can only read one bit with one read command, so it is meaningless to use on/off blocks.

3. Example of the connections between PWS & RS232/422 of PLC JW-CPU port:





3. Example of the connections between PWS & RS485 of PLC JW-10 Link-port:

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting
a.Communication Format	:RS232/RS422/RS485	COM2=RS232/422/485
b.Node Address	:01; SYS#237=Hex01	node address is 01
c.Transmission Speed	:19200bps=JW10 :9600bps=JW20 SYS#236= Hex 31 : (9600,7,even,2)	Refer to what PLC was set
d.Transmission Format	:Setting of SYS#236	
e.CTS handshaking	:enable	

**PLC Drivers, pn13.tsk, SIDE MiDA20/20D SERIES**

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size R/W	
Register	Wnnnn	nnnn= 0-1599	0	0	Word	✓

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size R/W	
I/O Relay	Bnnn	nnn=0-999	0xC0	0	Bit	✓

3. Example of The connections between PWS & RS232 of PLC:

HMI-COM port 25-pin female	CABLE	PLC RS232C 9-pin male
RXD 3	_____	3 TXD
TXD 2	_____	2 RXD
GND 7	_____	5 FG
RTS 4	_____	8 CTS
CTS 5	_____	7 RTS

HMI-COM port 25-pin female	CABLE	PLC- RS485 Screw Terminal
TXD+/RXD+ 14	_____	17 +
TXD-/RXD- 15	_____	18 -
SG 7		

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting
a.Communication Format	:RS232 :RS485	RS232C:selects SIDE MiDA 20/20D RS485 :selects MODBUS SLAVE
b.Node Address	:RS232=153 :RS485=1	
c.Transmission Speed	:9600 bps	
d.Transmission Format	:RS232=7-bit,none,1 :RS285=8-bit,even,1	



## PLC Drivers, p203.tsk, SIEMENS S5 SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Input Image	IBnnn	nnn=0-127	0	0	Byte	✓
Output Image	QBnnn	nnn=0-127	1	0	Byte	✓
Extended I/O	OBnnn	nnn=0-255	2	0	Byte	✓
Flag Bits	FBnnn	nnn=0-255	3	0	Byte	✓
Peripheral I/O	PBnnn	nnn=0-255	4	0	Byte	✓
System Data Area	RSnnn	nnn=0-255	5	0	Word	✓
System Data Area	RInnn	nnn=0-255	6	0	Word	✓
System Data Area	RJnnn	nnn=0-255	7	0	Word	✓
System Data Area	RTnnn	nnn=0-255	8	0	Word	✓
Timer Current	Tnnn	nnn=0-255	9	0	Word	✓
Counter Current	Cnnn	nnn=0-255	10	0	Word	✓
Data Block	DBmmm/nnn DBnnn	mmm=0-255; mmm is Block number nnn=0-255; nnn is the numbers which defines block If the mmm not set the numbers, the numbers of mmm is 3= DB3/nnn	11	0	Byte	✓
Data Block	DWmmm/nnn DWnnn	mmm=0-127; mmm is Block number nnn=0-255; nnn is the numbers which defines block If the mmm not set the numbers, the numbers of mmm is 3= DW3/nnn	12	0	Word	✓

**Note 1:** The PWS can read up to 30 Words in one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Input Image	IBnnn.b	nnn=0-127; b=0-7	0xC0	0	Bit	✓
Output Image	QBnnn.b	nnn=0-127; b=0-7	0xC1	0	Bit	✓
Extended I/O	OBnnn.b	nnn=0-255; b=0-7	0xC2	0	Bit	✓
Flag Bits	FBnnn.b	nnn=0-255; b=0-7	0xC3	0	Bit	✓
Peripheral I/O	PBnnn.b	nnn=0-255; b=0-7	0xC4	0	Bit	✓

**Note 2:** When you specify the address of an On/off Block register, use an address that its bit address ("b") is 0.

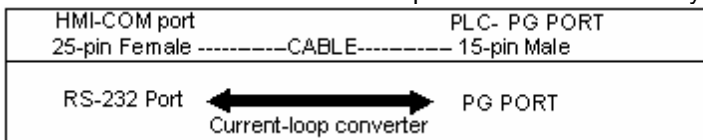
**Note 3:** The Workstation can read up to 256 bits with one read command.

When the Workstation changes an on/off location, it reads a byte from the PLC that contains 8 on/off locations, changes the desired bit, and writes the byte to the PLC. These steps require more than one PLC scan to complete, so your PLC ladder program must not control other bits within the same byte. If it does, there is a risk that the Workstation will reverse a change that the PLC makes.

For example, if the Workstation changes FB100.3, it reads FB100.0 through FB100.7 as a single byte, changes FB100.3 within that byte, and writes that entire byte back to the PLC. If your PLC ladder changes some other relay within that byte in the meantime, then the Workstation's subsequent write will cancel that change.

3. Example of the connections between PWS & S5 RS232/Current-loop converter:

You must use a RS-232/Current-loop converter cable directly.



You have to use an RS-232/Current-loop converter between the Workstation RS-232 port and the PLC PG port. Only the PWS-2120, and PWS-3000 support 20-mA current-loop signals. The PWS-12xx, PWS-17xx, PWS-3100, PWS-700T/X, PWS-21xx, and PWS-37XX do not support current-loop signals.

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting
a.Communication Format	:20mA CURRENT LOOP :RS-232/Current-loop converter	
b.Node Address	:None	
c.Transmission Speed	:9600 bps	Refer to what PLC was set
d.Transmission Format	:8-bit, EVEN ,1-bit	
e.PLC Mode Code	:In PLC Program Data Block n=3~255 Need OPEN	PLC. MODE CODE Setting 0: 90U      1: 95U 2:100U     3:102U 4:103U     5:115U 6:135U/921 7:135U/922 8:135U/928
f. Command Delay	This parameter is borrowed for determining the maximal number of words the Workstation can read with one read command. The more words the Workstation can read with one command the better performance you will get for the block read operations. Note that not all applications can have 64-word or 32-word, because the Workstation's response time of communication may not fast enough with your application. You have to test it carefully. 0, 3-255: 16 words 1: 32 words 2: 64 words	

## PLC Drivers, p253.tsk, SIEMENS S7-200 SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Input Image	IWn	n=0-6	0	0	Word	✓
Input Image	IDn	n=0-4	1	0	DWord	✓
Output Image	QWn	n=0-6	2	0	Word	✓
Output Image	QDn	n=0-4	3	0	DWord	✓
Internal Bits	MWnn	nn=0-30	4	0	Word	✓
Internal Bits	MDnn	nn=0-28	5	0	DWord	✓
Timer	Tnnn	nnn=0-255	6	0	Word	✓
Counter	Cnnn	nnn=0-255	7	0	Word	✓
Special S	SWnn	nn=0-30	8	0	Word	✓
Special S	SDnn	nn=0-28	9	0	DWord	✓
Special Bits	SMWnnn	nnn=0-27	10	0	Word	R
Special Bits	SMWnnn	nnn=28-192	11	0	Word	✓
Special Bits	SMDnnn	nnn=0-190	12	0	DWord	✓
Analog input word	AIWnn	nn=0-30	13	0	Word	R
Analog output word	AQWnn	nn=0-30	14	0	Word	R
Data Area	VWnnnn	nnnn=0-5118	15	0	Word	✓
Data Area	VDnnnn	nnnn=0-5116	16	0	DWord	✓

**Note 1:** The Workstation can read up to 32 words with one read command.

**Note 2:** In application, please be sure not to exceed the max. relay setting range of PLC-CPU defined. AQW, SW, SD can't be used in CPU212, 214, otherwise it will cause communication error.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Input Image	In.b	n=0-7; b=0-7	0xC0	0-7	Bit	✓
Output Image	Qn.b	n=0-7; b=0-7	0xC1	0-7	Bit	✓
Internal Bit	Mnn.b	nn=0-31; b=0-7	0xC2	0-7	Bit	✓
Timer Bit	Tnnn	nnn=0-255	0xC3	0-7	Bit	R
Counter Bit	Cnnn	nnn=0-255	0xC4	0-7	Bit	R
Special Bit	SMnnn.b	nnn=0-193; b=0-7	0xC5	0-7	Bit	✓
Data Area Bit	Vnnnn.b	nnnn=0-5119; b=0-7	0xC6	0-7	Bit	✓
Special M	Snn.b	nn=0-31; b=0-7	0xC7	0-7	Bit	✓

**Note 3:** When you specify the address of an On/off Block, use an address that its bit address ("b") is 0.

**Note 4:** The Workstation can read up to 512 bits with one read command.

3. Example of the connections between PWS & RS485 of PLC PPI-port:

HMI-COM port		PLC-port RS485	
25-pin female		9-pin male	
-----CABLE-----			
RXD/TXD+	14	3	DATA+
RXD/TXD-	15	8	DATA-
SG	7	5	SG
		7	24V

HMI-COM port		PLC-port RS485	
9-pin male		9-pin male	
-----CABLE-----			
RXD/TXD+	1	3	DATA+
RXD/TXD-	6	8	DATA-
GND	5	5	SG
		7	24V

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting
a.Communication Format	:RS485	PWS back DIP-Switch SW10 set to ON
b.Node Address	:02 (01-32)	Match the PLC address ( the default is 02)
c.Transmission Speed	:9600 /19200/38400bps	Most applications can work without this delay, i.e. Command Delay is 0. However, if the communications between the Workstation and your PLC fails occasionally, setting this parameter to a non-zero value may solve the problem.
d.Transmission Format	:8-bit, EVEN, 1-bit	
e Command Delay	:	

\*\* The communication refresh data in PPI mono-link faster than multi-link.

## PLC Drivers, p263.tsk, SIEMENS S7-300 CP340 3964R

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size R/W	
DBmmm.DBWnnnn	mmm=1-255 nnnn=0-8190	nnnn=0-8190; DBWnnnn is a word address, the Byte nnnn & nnnn+1 make DBWnnnn	0	0	Word	✓
DBmmm.DBDnnnn	mmm=1-255 nnnn=0-8188	nnnn=0-8188; DBDnnnn is a double word address, the DBWnnnn & DBWnnnn+1 make DBDnnnn	1	0	DWord	✓

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size R/W	
DBmmm.DBXnnnn.b	mmm=1-255 nnnn=0-8190 ; b=0-7	DBmmm.DBXnnnn.b is bit address. It is in #b bit of #nnnn word with DBmmm	0xC0	0-7	Bit	✓

**Note 1:** When you specify the address of an On/off Block, use an address that its bit address ("b") is 0.

**Note 2:** The Workstation can read up to 256 bits in one read command.

3. Example of the connections between PWS & RS232 of CP340:

HMI-COM port		PLC-port RS232C	
25-pin female		9-pin female	
RXD	3	3	SD
TXD	2	2	RD
GND	7	5	SG
RTX	4	7	RS
CTX	5	8	CS
		6	DSR
		4	DTR
		1	DCD

HMI-COM port		PLC-port RS232C	
9-pin male	-----CABLE-----	9-pin female	
RXD	2	3	SD
TXD	3	2	RD
GND	5	5	SG
RTX	7	7	RS
CTX	8	8	CS
		6	DSR
		4	DTR
		1	DCD

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting
a.Communication Format	:CP340	
b.FUNCTION BLOCK	:FB2,FB3, FB40, DB2,DB3,FC40 for CP340/341	

## PLC Drivers, p277.tsk, SIEMENS S7-300 SERIES

### HMI

1. The table below shows the formats of every register the PWS can access.

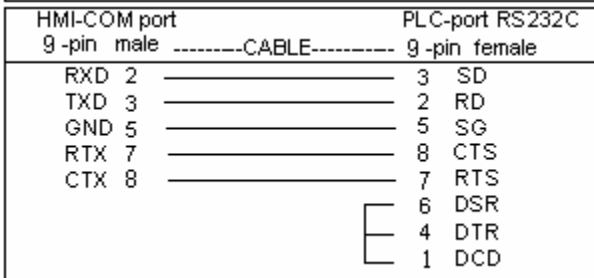
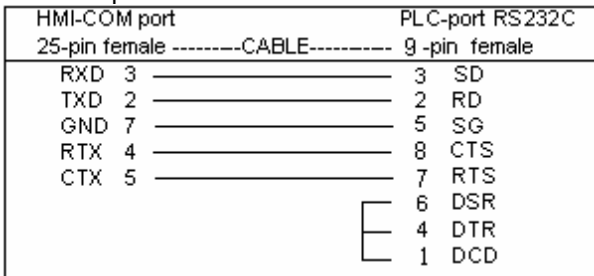
Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Input Image	IWnnnnn	nnnnn=0-65534 length=1-1023	0	0	Word	✓
Input Image	IDnnnnn	nnnnn=0-65532 length=1-1023	1	0	DWord	✓
Output Image	QWnnnnn	nnnnn=0-65534 length=1-1023	2	0	Word	✓
Output Image	QDnnnnn	nnnnn=0-65532 length=1-1023	3	0	DWord	✓
Bits	MWnnn	nnnnn=0-65534 length=1-128	4	0	Word	✓
Bits	MDnnn	nnnnn=0-65532 length=1-128	5	0	DWord	✓
Timer Image	Tnnnnn.10ms	nnnnn=0-65534 length=1-1023	6	0	Word	✓
Timer Image	Tnnnnn.100ms	nnnnn=0-65534 length=1-1023	7	0	Word	✓
Timer Image	Tnnnnn.1s	nnnnn=0-65534 length=1-1023	8	0	Word	✓
Timer Image	Tnnnnn.10s	nnnnn=0-65534 length=1-1023	9	0	Word	✓
Counter Image	Cnnnnn	nnnnn=0-65534 length=1-1023	10	0	Word	✓
DBmmm.DBWnnnn nn	mmm=1-255 nnnn=0-65534	nnnn=0-65534; DBWnnnn is a word address, the Byte nnnn & nnnn+1 make DBWnnnn	11	0	Word	✓
DBmmm.DBDnn nnn	mmm=1-255 nnnn=0-65532	nnnnn=0-65532; DBDnnnn is a double word address, the DBWnnnn & DBWnnnn+1 make DBDnnnn	12	0	DWord	✓
Data Area (DB10)	DBWnnnnn	nnnnn=0-65534; DBWnnnnn is a word address, the Byte nnnnn & nnnnn+1 make DBWnnnnn	13	0	Word	✓
Data Area (DB10)	DBDnnnnn	nnnnn=0-65532; DBDnnnnn is a double word address, the DBWnnnn & DBWnnnn+1 make DBDnnnn	14	0	DWord	✓

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size R/W	
Input Image	Ixxxx.b	xxxxx=0-65535; b=0-7	0xC0	0-7	Bit	✓
Output Image	Qxxxx.b	xxxxx=0-65535; b=0-7	0xC1	0-7	Bit	✓
Bit	Mxxxx.b	xxxxx=0-65535; b=0-7	0xC2	0-7	Bit	✓
Data Area Bit	DBmm.DBXnn xxx.b	mmm=1-31 xxxxx=0-65535 ;b=0-7	0xC3	0-7	Bit	✓
Data Area Bit (=DB10)	DBxxxxxx.b	xxxxx=0-65535 ;b=0-7	0xC4	0-7	Bit	✓
(=DB10)	DB10.DBxxxxxx.b is a bit address, It is in #b bit of #xxxxxx word with DB10					

**Note 1:** When you specify the address of an On/off Block, use an address that its bit address ("b") is 0.

3. Example of the connections between PWS & HMI 6ES7-972-0CA10-0XA0:



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting
a.Communication Format	:HMI CABLE RS232	COM2=RS232
b.Node Address	:02	
c.Transmission Speed	:9600/19200/38400 bps	
d.Transmission Format	:8-bit, ODD, 1-bit	
e. OPEN DATA BLOCK	:DB block for S7-300-CPU	PWS Command Delay Setting



## PLC Drivers, p273.tsk, SIEMENS S7-300 SERIES

### MPI

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Input Image	IWnnnnn	nnnnn=0-65534	0	0	Word	✓
Input Image	IDnnnnn	nnnnn=0-65532	1	0	DWord	✓
Output Image	QWnnnnn	nnnnn=0-65534	2	0	Word	✓
Output Image	QDnnnnn	nnnnn=0-65532	3	0	DWord	✓
Bits	MWnnn	nnnnn=0-254	4	0	Word	✓
Bits	MDnnn	nnnnn=0-252	5	0	DWord	✓
Data Area (DB10)	VWnnnnn	nnnnn=0-65534	6	0	Word	✓
Data Area (DB10)	VDnnnnn	nnnnn=0-65532	7	0	DWord	✓
Data Area (DB10)	DBWnnnnn	nnnnn=0-65534; the Byte nnnnn & nnnnn+1 make DBWnnnnn	6	0	Word	✓
Data Area (DB10)	DBDnnnnn	nnnnn=0-65532; a double word address, the DBWnnnn & DBWnnnn+1 make DBDnnnn	7	0	DWord	✓
Data Area	DBmmm.DBWnnnnn	mmm=1-255 nnnnn=0-65534	8	0	Word	✓
Data Area	DBmmm.DBDnnnnn	mmm=1-255 nnnnn=0-65532	9	0	DWord	✓

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Input Image	Innnnn.b	nnnnn=0-65535; b=0-7	0xC0	0-7	Bit	✓
Output Image	Qnnnnn.b	nnnnn=0-65535; b=0-7	0xC1	0-7	Bit	✓
Bit	Mnnn.b	nnn=0-255; b=0-7	0xC2	0-7	Bit	✓
Data Area Bit (=DB10)	Vnnnnn.b	nnnnn=0-65535; b=0-7	0xC3	0-7	Bit	✓
Data Area Bit (=DB10)	DBXnnnn.b	nnnnn=0-65535; b=0-7	0xC4	0-7	Bit	✓
	DB10.DBXnnnn.b is a bit address, It is in #b bit of #nnnnn word with DB10					
Data Area Bit	DBmm.DBXnnn.b	mm=1-31 nnnnn=0-65535; b=0-7	0xC5	0-7	Bit	✓

Note 1: When you specify the address of an On/off Block, use an address that its bit address

("b") is 0.

3. Example of the connections between PWS & HMI 6ES7-972-0CA10-0XA0:

HMI-COM port	PLC-port RS232C
25-pin female -----CABLE-----	9-pin female
RXD 3	3 SD
TXD 2	2 RD
GND 7	5 SG
RTX 4	8 CTS
CTX 5	7 RTS
	6 DSR
	4 DTR
	1 DCD

3.1 Example of the connections between PWS & MPI 6ES7-972-0CA21-0XA0:

HMI-COM port	PLC-port RS232C
25-pin female -----CABLE-----	9-pin female
RXD 3	3 SD
TXD 2	2 RD
GND 7	5 SG
RTX 4	8 CTS
CTX 5	7 RTS
	6 DSR
	4 DTR
	1 DCD

HMI-COM port	PLC-port RS232C
9-pin male -----CABLE-----	9-pin female
RXD 2	3 SD
TXD 3	2 RD
GND 5	5 SG
RTX 7	8 CTS
CTX 8	7 RTS
	6 DSR
	4 DTR
	1 DCD

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting
a.Communication Format	:MPI CABLE RS232	COM2=RS232
b.Node Address.	:02	
c.Transmission Speed	:19200/38400 bps	
d.Transmission Format	:8-bit, ODD, 1-bit	
e. OPEN DATA BLOCK	:DB10 block for S7-300-CPU	PWS Command Delay Setting

PLC Drivers, pd03.tsk, SQUARE-D 400-700 SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size R/W	
I/O and Data Registers	Snnnn	nnnn=1-8000	0	0	Word	✓
Control Registers	Snnnn	nnnn=8001-8192	1	0	Word	✓

**Note 1:** The Workstation can read up to 128 words in one read command.

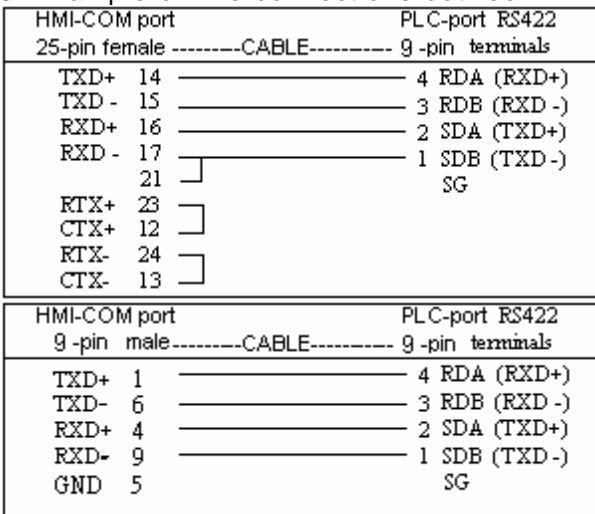
2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size R/W	
I/O and Data Registers	Snnnn/bb	nnnn=1-8000; bb=1-16	0xC0	0	Bit	✓
Control Registers	Snnnn/bb	nnnn=8001-8192; bb=1-16	0xC1	0	Bit	✓

**Note 2:** When you specify the address of an On/off Block, the bit address ("bb") should be 01.

**Note 3:** The Workstation can read up to 2048 bits in one read command.

3. Example of The connections between PWS & RS422 of PLC:



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS422	
b.Transmission Speed :9600 /19200bps	
c.Transmission Format :8-bit,EVEN,1	
d.Routing codes	

## Station Numbers

If your Workstation is connected directly to the processor module, it doesn't matter what station numbers you enter for the PLC and Workstation.

For application where one or more Workstations are connected to one or more PLCs, Square D provides Network Interface Modules(NIMs) that provide ports for the Workstation, the PLC, and the SY/NET network. You must set the PLC and Workstation numbers to their respective NIM addresses. For example, if you set the rotary switches on the NIM to 24, and if the Workstation is connected to port 0 and the PLC to port 1, then the Workstation's station number is 024 and the PLC's station number is 214.

You must set the DIP switches on NIM for SY/MAX operation. On DIP switches S4 and S5, be sure that switches 2 and 3 are in the down position. Also make sure that switch 1 has the factory setting of up, which disables the receive broadcast mode.

Square D refers to station numbers as "routing numbers," where the Workstation is the "source" and PLC is the "destination." The Workstation supports only a single level of routing numbers, which means that it can access any PLC on the NIM's network, but cannot access a PLC on any other networks.

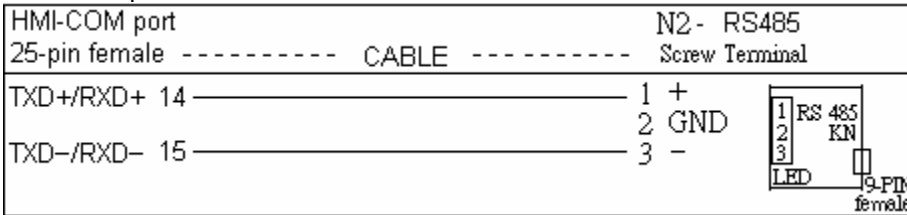
[PLC Drivers, py23.tsk, TAIAN N2 Inverter](#)

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
Function	Fnnn	nnn=0-125	0	0	Word	R/W
						✓

3. Example of Communication connections: PWS to PORT of FA-RS232-N2

3.1 Example of Communication connections: PWS to PORT of FA-RS485-KN



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS Setting
a.Communication Format :RS232/RS485	
b.Node Address :01	
c.Transmission Speed :9600bps	
d.Transmission Format :7-bit,odd,1-bit	

4. Note:

- a. Please use unsigned binary data format.
2. F125 cannot be used. (displays 33333)
3. F0, F21, F42, F63, F84, F105 for high speed data block read.  
(BLOCK SIZE are 21, 21, 21, 21, 21, 23 for separately.)
4. If data display “ 33333 ”, it means this Function was reserved.
5. Please set command delay time if PWS display comm. 0020 error message.

## 5.Function data table and data format.

	Data range		Data range		Data range		Data range
F0*	1-19	F32	0000	F64	reserve	F96	parameter
F1	0.1-3600.0	F33	1-100	F65	0.00-400.00	F97	0000
F2	0.1-3600.0	F34	0.0-800.0	F66	0.00-400.00	F98	0000
F3	0000	F35	0-10	F67	0.00-400.00	F99	reserve
F4	0000	F36	2-72	F68	0.00-10.00	F100*	1-32
F5*	0-18	F37*	50.00-400.00	F69	0000	F101*	0-3
F6*	0.00-400.00	F38	0.0-100.0	F70	0.1-	F102*	0000
F7	0.00-400.00	F39*	0.11-400.00	F71	0000	F103	parameter
F8	0.00-400.00	F40	0.0-100.0	F72	0.0-10.0	F104	parameter
F9	0.00-30.00	F41	0.0-100.0	F73	reserve	F105	parameter
F10	0-1	F42	0.10-10.00	F74	reserve	F106	parameter
F11	0-3	F43	0-15	F75	0.1-	F107	parameter
F12	0000	F44	0000	F76	0.00-6.00	F108	parameter
F13	30-200	F45	0-200	F77	0000	F109	parameter
F14	30-200	F46	0-3	F78	30-200	F110	parameter
F15	0.1-3600.0	F47	0000	F79	0.0-25.0	F111	parameter
F16	0000	F48	0000	F80	0.0-4.0	F112	parameter
F17	0.00-400.00	F49	0.0-3600.0	F81	0.0-4.0	F113	parameter
F18	0.00-400.00	F50	0.1-3600.0	F82	0000	F114	parameter
F19	0.00-400.00	F51	0-5	F83	0-100	F115	parameter
F20	0.00-400.00	F52	0-9999	F84	0000	F116	parameter
F21	0.00-400.00	F53	0.0-25.5	F85	0.0-3600.0	F117	parameter
F22	0.00-400.00	F54	0.1-10.0	F86	0.0-3600.0	F118	parameter
F23	0.00-400.00	F55	0.0-20.0	F87	0.0-3600.0	F119	parameter
F24	0.00-400.00	F56	00-31	F88	0.0-3600.0	F120	parameter
F25	0.00-400.00	F57	00-31	F89	0.0-3600.0	F121	parameter
F26	0.00-400.00	F58	00-31	F90	0.0-3600.0	F122	parameter
F27	0.0-100.0	F59	reserve	F91	0.0-3600.0	F123*	0000
F28	0.0-999.9	F60	reserve	F92	1-100	F124*	n.n
F29	0-1	F61	00-11	F93	0.0-100.0	F125*	1.XXX
F30*	180.0-528.0	F62	reserve	F94	0-30	F126*	2.XXX
F31	0.0-2.0	F63	reserve	F95	parameter	F127*	3.XXX

PLC Drivers, py03.tsk, TAIAN TP01 SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size R/W	
Input Register	WXnn	nn=1-24	0	0	Word	✓
Output Register	WYnn	nn=1-27	1	0	Word	✓
Special Register	WSnn	nn=1-40	2	0	Word	✓
Constant Register	WCnnn	nnn=1-512	3	0	Word	✓
Data Register	Vnnnn	nnnn=1-1024	4	0	Word	✓

**Note 1:** The Workstation can read up to 60 words with one read command.

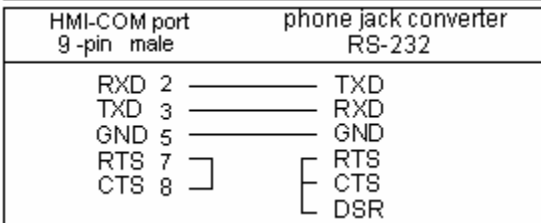
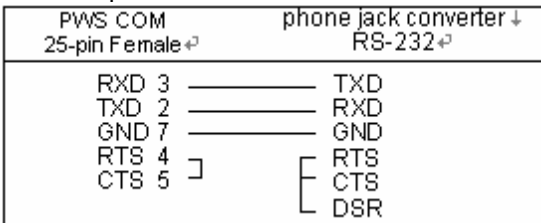
2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size R/W	
Input Relay	Xnnn	nnnn=1-384	0xC0	0	Bit	✓
Output Relay	Ynnn	nnnn=1-384	0xC1	0	Bit	✓
Auxiliary Relay	Cnnnn	nnnn=1-1024	0xC2	0	Bit	✓

**Note 2:** When you specify the address of an On/Off Block register, use an address that is a multiple of 16 plus 1.

**Note 3:** The Workstation can read up to 960 bits with one read command.

3. Example of Communication connections:



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS Setting
a.Communication Format :RS232 b.Node Address :0 c.Transmission Speed :9600bps d.Transmission Format :8-bit,odd,1-bit	



## PLC Drivers, py13.tsk, TAIAN TP02 SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Input Register	Xnnn	nn=1-369 (must be 1 or a multiple of 16 plus 1)	0	0	Word	✓
Output Register	Ynnn	nn=1-369 (must be 1 or a multiple of 16 plus 1)	1	0	Word	✓
Auxiliary Register	Vnnnn	nnnn=1-1024	2	0	Word	✓
Auxiliary Register	Dnnnn	nnnn=1-2048	3	0	Word	✓
System Register	WSnnn	nnn=1-128	4	0	Word	✓
Auxiliary Relay Register	Cnnnn	nnnn=1-2033 (must be 1 or a multiple of 16 plus 1)	5	0	Word	✓
Constant Register	WCnnn	nnn=1-912	6	0	Word	✓

**Note 1:** The Workstation can read up to 60 words with one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Input Relay	Xnnn	nnnn=1-384	0xC0	0	Bit	✓
Output Relay	Ynnn	nnnn=1-384	0xC1	0	Bit	✓
Special Relay	SCnnn	nnnn=1-128	0xC2	0	Bit	✓
Auxiliary Relay	Cnnnn	nnnn=1-2048	0xC3	0	Bit	✓

**Note 2:** When you specify the address of an On/Off Block register, use an address that is a multiple of 16 plus 1.

**Note 3:** The Workstation can read up to 960 bits with one read command.

3. Example of Communication connections: PWS to RS422 PORT of TP02.

HMI-COM port	PLC-port RS422
25-pin female	9-pin male
-----CABLE-----	
TXD+ 14	2 RDA (RXD+)
TXD- 15	7 RDB (RXD-)
RXD+ 16	3 SDA (TXD+)
RXD- 17	8 SDB (TXD-)
GND 7	5 SG
RTX+ 23	4 PG/COM
CTX+ 12	
RTX- 24	
CTX- 13	

HMI-COM port	PLC-port RS422
9-pin male	9-pin male
-----CABLE-----	
TXD+ 1	2 RDA (RXD+)
TXD- 6	7 RDB (RXD-)
RXD+ 4	3 SDA (TXD+)
RXD- 9	8 SDB (TXD-)
GND 7	5 SG
	4 PG/COM

3.1 Example of Communication connections: PWS to RS485 terminals of TP02.

HMI-COM port	PLC-port RS485
25-pin female	Terminals
-----CABLE-----	
RXD/TXD+ 14	T/R+
RXD/TXD- 15	T/R-
SG 7	SHLD

HMI-COM port	PLC-port RS485
9-pin male	Terminals
-----CABLE-----	
RXD/TXD+ 1	T/R+
RXD/TXD- 6	T/R-
SG 5	SHLD

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS Setting
a.Communication Format :RS422/485	
b.Node Address :01;RS422=WS042	
:01;RS485=WS045	
c.Transmission Speed :19200bps RS422=WS041	
:data=0120H, RS485=WS044	
d.Transmission Format :7-bit,even,2-bit	

## PLC Drivers, pw03.tsk, TELEMECANIQUE TSX SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Internal Word %MWnnnn	Wnnnn	nnnn=0-9999	0	0	Word	✓

**Note 1:** The Workstation can read up to 60 words with one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Bit of Internal Word	Wnnnn:bb	nnnn=0-9999; bb=0-15	0xC0	0-15	Bit	✓

**Note 2:** When you specify the address of an On/off Block, use an address that its bit address ("bb") is 00.

**Note 3:** The Workstation can read up to 960 bits with one read command.

When the Workstation changes a bit, it reads a word from the PLC that contains 16 bits, changes the desired bit, and writes the word to the PLC. These steps require more than one PLC scan to complete, so your PLC ladder program must not control other bits within the same word. If it does, there is a risk that the Workstation will reverse a change that the PLC makes.

For example, if the Workstation changes W1234:7, it reads W1234:0 through W1234:15 as a single word, changes bit 7 within that word, and writes that entire word back to the PLC. If your PLC ladder changes some other relay within that word in the meantime, then the Workstation's subsequent write will cancel that change.

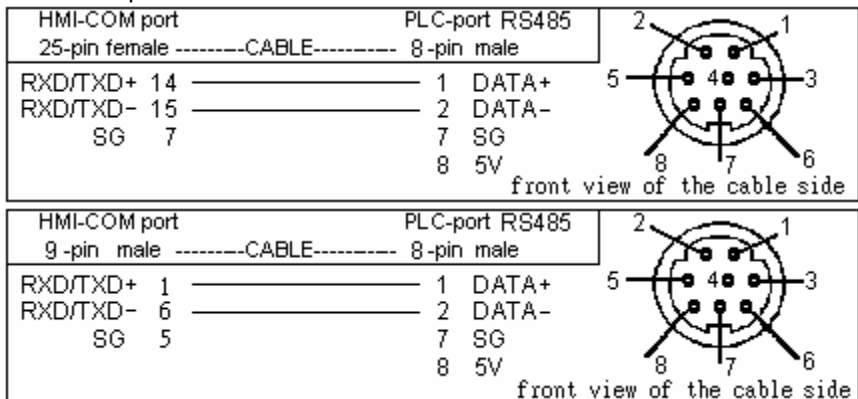
3. Example of the connections between PWS & RS232 of PLC TSXPCU1030:

HMI-COM port		PLC-port RS232C	
25-pin	-----CABLE-----	g-pin male	
RXD 3	=====	2	SD
TXD 2	=====	3	RD
GND 7	=====	5	SG
RTX 4	=====	7	CTS
CTX 5	=====	8	RTS

HMI-COM port		PLC-port RS232C	
9-pin male	-----CABLE-----	g-pin male	
RXD 2	=====	2	SD
TXD 3	=====	3	RD
GND 5	=====	5	SG
RTX 7	=====	7	CTS
CTX 8	=====	8	RTS

3.1 Example of the connections between PWS & RS485 of Micro-CPU TER-port:



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS232 RS485	COM2=RS232/485 RS485; DIP-Switch SW10 set ON
b.NODE ADDRESS. :0-8 MASTER	Communication set by PWS software PWS node address is 1—8 SLAVE
c.Transmission Speed :9600bps/19200bps	
d.Transmission Format :8-bit,ODD,1-bit	

## PLC Drivers, p923.tsk, TI325/330 SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
TMR/CTR Accumulator	nnn	nnn=octal number 600-677	0	0	Word	✓
Register Values	mmm	mmm=octal number 400-576	1	0	Even Bytes	✓

**Note1:** Although the registers are 8 bits wide, the Workstation handles each pair of registers as if it were a single 16-bit register, where the even-numbered register contains the low byte and the odd-numbered register contains the high byte. For example, if you specify register 406, then 406 is the low byte and 407 is the high byte. ADP3 doesn't accept odd-numbered register addresses.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

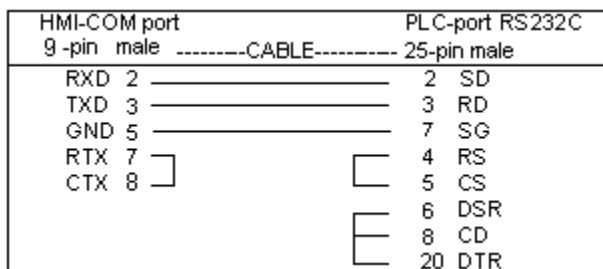
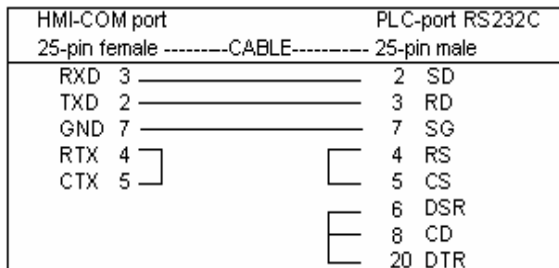
Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Input/Output Bits	Bnnn	nnn=octal number 0-157	0xC0	0	Bit	✓
Input/Output Bits	Bnnn	nnn=octal number 700-767	0xC1	0	Bit	✓
Internal Relay Bits	Bnnn	nnn=octal number 160-377	0xC2	0	Bit	✓
Shift Register Bits	Bnnn	nnn=octal number 400-577	0xC3	0	Bit	✓
TMR/CTR Bits	Bnnn	nnn=octal number 600-677	0xC4	0	Bit	✓

**Note2:** When you specify the address of an On/off Block, use an address that the last digit must be 0.

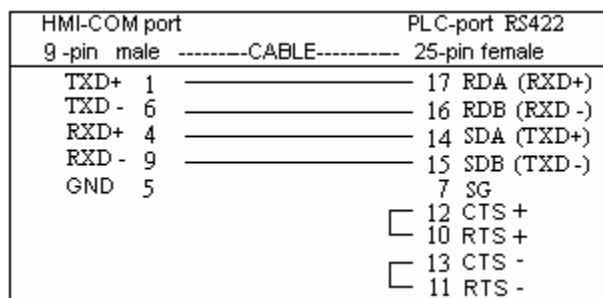
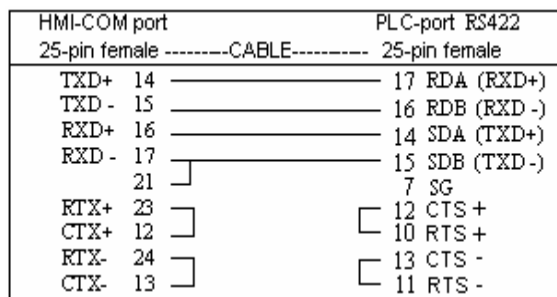
**Note3:** When the Workstation changes a relay, it reads a byte from the PLC that contains 8 relays, changes the desired bit, and writes the byte to the PLC. These steps require more than one PLC scan to complete, so your PLC ladder program must not control other bits within the same byte. If it does, there is a risk that the Workstation will reverse a change that the PLC makes.

For example, if the Workstation changes B3, it reads B0 through B7 as a single byte, changes B3 within that byte, and writes that entire byte back to the PLC. If your PLC ladder changes some other relay within that byte in the meantime, then the Workstation's subsequent write will cancel that change.

3. Example of the connections between PWS & RS232 of PLC TI305-03 DM:



3.1 Example of the connections between PWS & RS422 of PLC TI305-02 DM:



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS Setting
a.Communication Format :RS422 or RS232C	
b.NODE ADDRESS. :None	
c.Transmission Speed :9600/19200 bps	
d.Transmission Format :8-bit; ODD or NONE; 1-bit	
e.Operation Mode :RUN Mode / HEX MODE.	

PLC Drivers, p913.tsk, TI435 SERIES  
p913.tsk, Koyo Direct DL SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Timer Accumulated	Vnnn	nnn=octal number 0-177	0	0	Word	✓
Counter Accumulated	Vnnnn	nnnn=octal number 1000-1177	1	0	Word	✓
V Memory	Vnnnn	nnnn=octal number 1400-7777	2	0	Word	✓
Link Relays	Vnnnnn	nnnnn=octal number 40000-40037	3	0	Word	✓
Input Status	Vnnnnn	nnnnn=octal number 40400-40423	4	0	Word	✓
Output Status	Vnnnnn	Nnnnn=octal number 40500-40523	5	0	Word	✓
Control Relays	Vnnnnn	nnnnn=octal number 40600-40635	6	0	Word	✓
Stage	Vnnnnn	nnnnn=octal number 41000-41027	7	0	Word	✓
Timer Status	Vnnnnn	Nnnnn=octal number 41100-41107	8	0	Word	✓
Counter Status	Vnnnnn	nnnnn=octal number 41140-41147	9	0	Word	✓
Spec. Relay 1	Vnnnnn	nnnnn=octal number 41200-41205	10	0	Word	✓
Spec. Relay 2	Vnnnnn	nnnnn=octal number 41216-41230	11	0	Word	✓

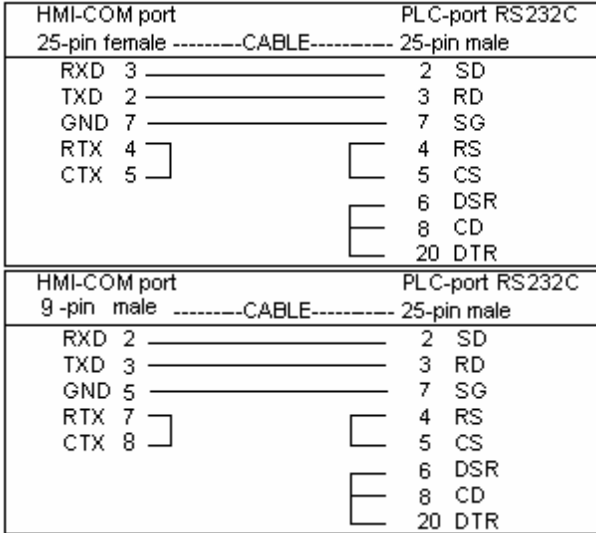
2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Input Status	Xnnn	nnn=octal number 0-477	0xC0	0	Bit	✓
Output Status	Ynnn	nnn=octal number 0-477	0xC1	0	Bit	✓
Control Relays	Cnnn	nnn=octal number 0-737	0xC2	0	Bit	✓
Stage	Snnn	nnn=octal number 0-577	0xC3	0	Bit	✓
Timer Status	Tnnn	nnn=octal number 0-177	0xC4	0	Bit	✓
Counter Status	CTnnn	nnn=octal number 0-177	0xC5	0	Bit	✓
Spec. Relay 1	SPnnn	nnn=octal number 0-137	0xC6	0	Bit	✓
Spec. Relay 2	SPnnn	nnn=octal number 320-617	0xC7	0	Bit	✓

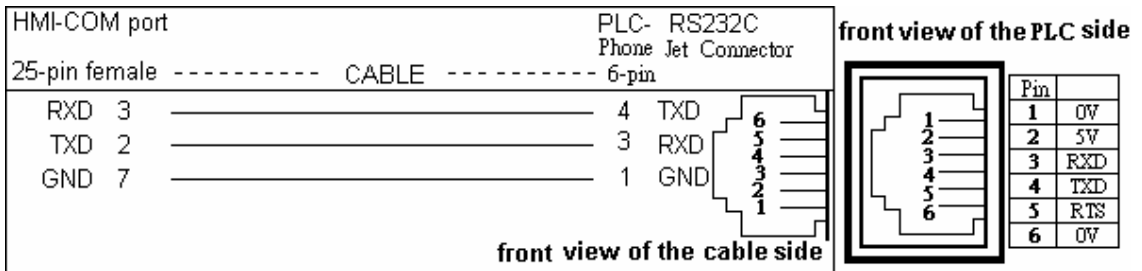
Note 1: When you specify the address of an On/off Block, use an address the last digit must be

0.

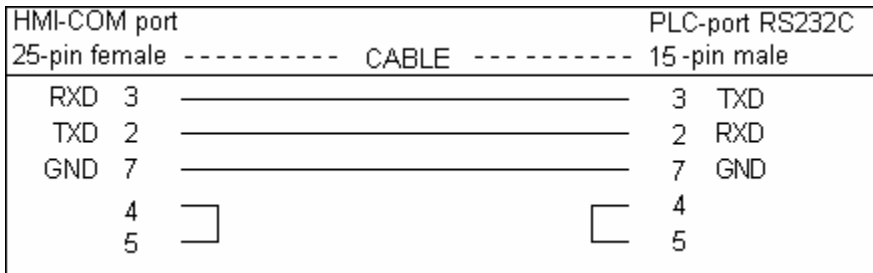
3. Example of the connections between PWS & RS232 of PLC Link port:



3.1 Example of the connections between PWS & RS232 of CPU240 Link Port:



3.2 Example of the connections between PWS & RS232 of CPU250 Link Port:



3.3 Example of the connections between PWS & RS422 of DL405 Link Port:



HMI-COM port 25-pin female	CABLE	DL405-RS422 port 25-pin male
TXD+ 14	_____	9 RXD+
TXD- 15	_____	10 RXD-
RXD+ 16	_____	14 TXD+
RXD- 17	_____	16 TXD-
SG 7	_____	7 GND

#### 4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting
a.Communication Format	:RS232C	# TI435 & KOYO SU6 / DL Series P.L.C are the same.
b.Node Address	:01	
c.Transmission Speed	:9600 bps	
d.Transmission Format	:8-bit; ODD ; 1-bit	
e.Data Encoding	:HEX. (TISOFT AUX26)	
f.Protocol Mode	:Directnet	

If this port is setup in the "ASCII" mode, then the Workstation will not communicate with the PLC.

PLC Drivers, p903.tsk, TI500/505/545 SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
V Memory	Vnnnnn	nnnn=1-65535	0	0	Word	✓
Input Registers	WXnnnn	nnnn=1-4095	1	0	Word	✓
Output Registers	WYnnnn	nnnn=1-4095	2	0	Word	✓
Timer/Counter Presets	TCPnnnnn	nnnn=1-10240	3	0	Word	✓
Timer/Counter Current	TCCnnnnn	nnnn=1-10240	4	0	Word	✓
Drum Counter Presets	DPCddd/ss	ddd=drum 1-255 ; ss=step 1-16	5	0	Word	✓
Drum Counter Current	DCCddd	ddd=drum 1-255	6	0	Word	✓
Drum Step Presets	DSPddd	ddd=drum 1-255	7	0	Word	✓
Drum Step Current	DSCddd	ddd=drum 1-255	8	0	Word	✓
Drum Time Base	DTBddd	ddd=drum 1-255	9	0	Word	✓

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Discrete Inputs	Xnnnn	nnnn=1-4095	0xC0	0	Bit	✓
Discrete Outputs	Ynnnn	nnnn=1-4095	0xC1	0	Bit	✓
Control Relays	Cnnnn	nnnn=1-4095	0xC2	0	Bit	✓

Note 1: When you specify the address of an On/off Block register, use an address that is a multiple of 16 plus 1.

## 3. Example of the connections between PWS &amp; RS232 of PLC link port:

HMI-COM port 25-pin female	PLC-port RS232C 9-pin male	HMI-COM port 25-pin female	PLC-port RS232C 25-pin male
RXD 3	3 SD	RXD 3	2 SD
TXD 2	2 RD	TXD 2	3 RD
GND 7	5 SG	GND 7	7 SG
RTX 4	8 CTS	RTX 4	5 CTS
CTX 5	7 RTS	CTX 5	4 RTS
	6 DSR		6 DSR
	4 DTR		8 CD
	1 DCD		20 DTR

HMI-COM port 9-pin male	PLC-port RS232C 9-pin male	HMI-COM port 9-pin male	PLC-port RS232C 25-pin male
RXD 2	3 SD	RXD 2	2 SD
TXD 3	2 RD	TXD 3	3 RD
GND 5	5 SG	GND 5	7 SG
RTX 7	8 CTS	RTX 7	5 CTS
CTX 8	7 RTS	CTX 8	4 RTS
	6 DSR		6 DSR
	4 DTR		8 CD
	1 DCD		20 DTR

## 3.1 Example of the connections between PWS &amp; RS422 of PLC link port:

HMI-COM port 25-pin female	PLC-port RS422 9-pin male
TXD+ 14	5 RDA (RXD+)
TXD- 15	8 RDB (RXD-)
RXD+ 16	1 SDA (TXD+)
RXD- 17	7 SDB (TXD-)
21	SG
RTX+ 23	
CTX+ 12	
RTX- 24	
CTX- 13	

HMI-COM port 9-pin male	PLC-port RS422 9-pin male
TXD+ 1	5 RDA (RXD+)
TXD- 6	8 RDB (RXD-)
RXD+ 4	1 SDA (TXD+)
RXD- 9	7 SDB (TXD-)
GND 5	SG

## 4. P.L.C. &amp; PWS setting:

Please set the communication parameters &amp; the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS422or RS232C	COM2=RS232/422/485
b.Node Address :None	
c.Transmission Speed :9600 bps	
d.Transmission Format :7-bit,odd,1-stop bit	

PLC Drivers, pt03.tsk, TOSHIBA M20/M40 SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Input Relay Register	XWnn	nn=0-63	0	0	Word	✓
Output Relay Register	YWnn	nn=0-63	1	0	Word	✓
Internal Relay Register	RWnn	nn=0-63	2	0	Word	✓
Link Register	ZWnn	nn=0-31	3	0	Word	✓
Timer Register	Tnnn	nnn=0-127	4	0	Word	✓
Counter Register	Cnn	nn=0-95	5	0	Word	✓
Data Register	Dnnnn	nnnn=0-1535	6	0	Word	✓

**Note 1:** The Workstation can read up to 32 words in one read command.

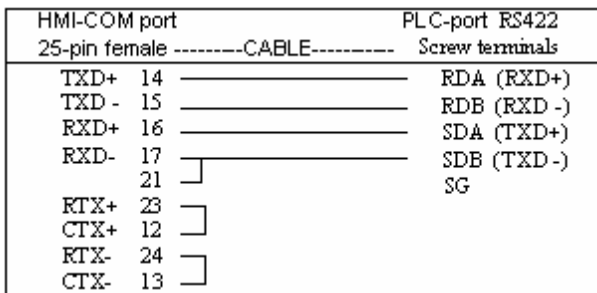
2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Input Relay	Xnnb	nn=0-31 ; b=0-f	0xC0	0	Bit	✓
Output Relay	Ynnb	nn=0-31 ; b=0-f	0xC1	0	Bit	✓
Internal Relay	Rnnb	nn=0-63 ; b=0-f	0xC2	0	Bit	✓
Link Relay	Znnb	nn=0-31 ; b=0-f	0xC3	0	Bit	✓

**Note 2:** The Workstation can read up to 512 bits in one read command.

**Note 3:** When you specify the address of an On/off Block, use an address that its bit address ("b") is 0.

3. Example of the connections between PWS & RS422 of PLC:



HMI-COM port 9-pin male	-----CABLE-----	PLC-port RS422 Screw terminals
TXD+ 1	=====	RDA (RXD+)
TXD- 6	=====	RDB (RXD-)
RXD+ 4	=====	SDA (TXD+)
RXD- 9	=====	SDB (TXD-)
GND 5		SG

#### 4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS Setting
a.Communication Format	:RS422	
Programmer / computer link	:Computer link can be used	
b.Node Address	:0	
c.Transmission Speed	:9600bps	
d.Transmission Format	:(8,E,1);(8,O,1); (8,N,1)	

PLC Drivers, pt13.tsk, TOSHIBA T1/T2 SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
External input register	XWnn	nn=0-63	0	0	Word	✓
Output Relay Register	YWnn	nn=0-63	1	0	Word	✓
Auxiliary relay register	RWnnn	nnn=0-127	2	0	Word	✓
Special register	SWnnn	nnn=0-255	3	0	Word	✓
Timer register	Tnnn	nnn=0-255	4	0	Word	✓
Counter register	Cnnn	nnn=0-255	5	0	Word	✓
Data register	Dnnnn	nnnn=0-4095	6	0	Word	✓
Link register	Wnnnn	nnnn=0-1023	7	0	Word	✓
Link relay register	LWnnn	nnn=0-255	8	0	Word	✓
File register	Fnnnn	nnnn=0-1023	9	0	Word	✓

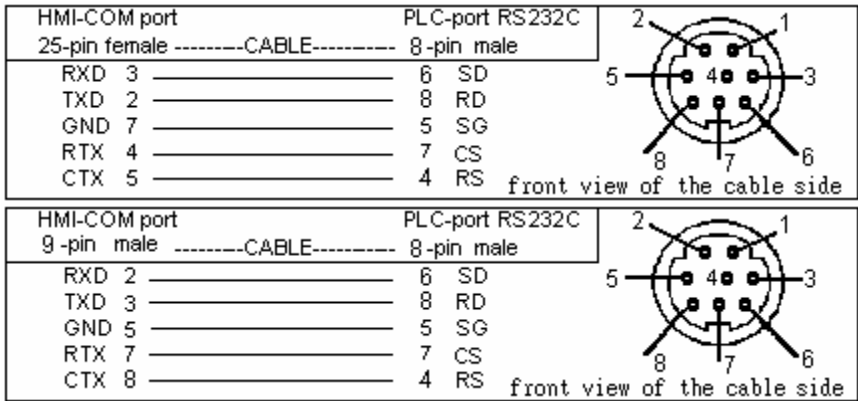
**Note 1:** The Workstation can read up to 32 words in one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
External input device	Xnnb	nn=0-63; b= hex number 0-f	0xC0	0	Bit	✓
External output device	Ynnb	nn=0-63; b= 0-f	0xC1	0	Bit	✓
Auxiliary relay device	Rnnnb	nnn=0-127; b= 0-f	0xC2	0	Bit	✓
Special device	Snnnb	nnn=0-255; b= 0-f	0xC3	0	Bit	✓
Link device	Znnnb	nnn=0-511; b= 0-f	0xC4	0	Bit	✓
Link relay	Lnnnb	nnn=0-255; b= 0-f	0xC5	0	Bit	✓

**Note 2:** When you specify the address of an On/off Block, use an address that its bit address ("b") is 0.

3. Example of the connections between PWS & RS232 of PLC T1 CPU-port:



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS232	
b.Node Address :T1=0	
c.Transmission Speed :9600bps	
d.Transmission Format :8-bit,ODD,1-bit	

PLC Drivers, p013.tsk, Unidriver UD70 SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size R/W	
Data Register	#70.00~#70.99	W 0 ~ W 198	0	0	DWord	✓
	#71.00~#71.99	W 200 ~ W 398	0	0	DWord	✓
	#72.00~#72.99	W 400 ~ W 598	0	0	DWord	✓
	#73.00~#73.99	W 600 ~ W 798	0	0	DWord	✓
	#18.01~#18.30	W 800 ~ W 858	0	0	DWord	✓
	#19.01~#19.30	W 860 ~ W 918	0	0	DWord	✓
	#20.01~#20.50	W 920 ~ W1018	0	0	DWord	✓
	#91.01~#91.10	W1020 ~ W1029	0	0	Word	✓

**Note 1:** The PWS can read up to 32 Words in one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size 0-15	
<b>BitRelay</b>	<b>#18.31~#18.50</b>	<b>B0 ~ B19</b>	<b>0xC0</b>	<b>0</b>	<b>B15</b>	✓
						✓



#### 4. PLC & PWS setting:

Please set the communication parameters & the DIP-Switch as below

A PLC-Setting		B PWS-Setting
a. Communication Format	:RS485	COMRS25
b. Node Address	:11 Set UD70 address #1401=11	
c. Transmission Speed	:9600bps	Refer to what PLC was set
d. Transmission Format	:7bit, EVEN, 1bit	
e. Comm Mode	:Set UD70 address #1402=06	PLC driver selects Computer as slave
f. Comm program of UD70	:UD01.DHL user mode PG	



## PLC Drivers, pn23.tsk, VIGOR M SERIES

1. The table below shows the formats of every register the PWS can access.

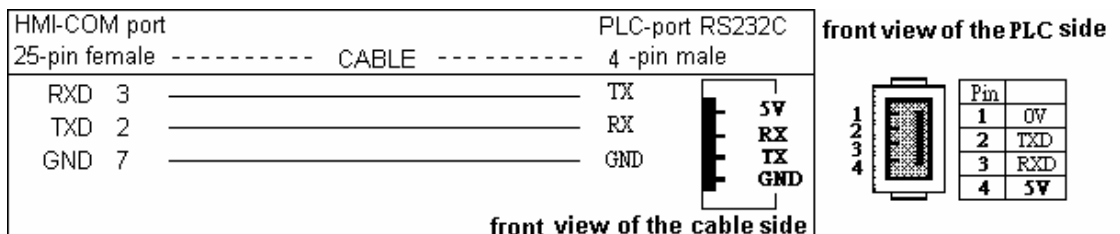
Register Type	Format	Range With the Register	Device Type / Aux. Address		Data Size	
						R/W
Input Relay	Xnnn	nnn=0-777	0	0	Bit	✓
Output Relay	Ynnn	nnn=0-777	1	0	Bit	✓
Auxiliary Relay	Mnnnn	nnnn=0-5119	2	0	Bit	✓
Step Relay	Snnn	nnn=0-999	3	0	Bit	✓
Special Relay	Mnnnn	nnnn=9000-9255	4	0	Bit	✓
Timer Register	Tnnn	nnn=0-255	9	0	Word	✓
Counter Register	Cnnn	nnn=0-199	A	0	Word	✓
Counter Register	Cnnn	nnn=200-255	B	0	DWord	✓
Data	Dnnnn	nnnn=0-8191	C	0	Word	✓
Special Data	Dnnnn	nnnn=9000-92555	D	0	Word	✓

**Note 1:** The PWS can read up to 32 Words in one read command.

2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type / Aux. Address		Data Size	
						R/W
Input Relay	Xnnn	nnn=0-777	0xC0	0	Bit	✓
Output Relay	Ynnn	nnn=0-777	0xC1	0	Bit	✓
Auxiliary Relay	Mnnnn	nnnn=0-5119	0xC2	0	Bit	✓
Step Relay	Snnn	nnn=0-999	0xC3	0	Bit	✓
Timer Contact	Tnnn	nnn=0-255	0xC4	0	Bit	✓
Counter Contact	Cnnn	nnnn=0-255	0xC5	0	Bit	✓
Timer Coil	Tnnn	nnn=0-255	0xC6	0	Bit	✓
Counter Coil	Cnnn	nnn=0-255	0xC7	0	Bit	✓

3. Example of the connections between PWS & RS232/422 of PLC CPU port:



HMI-COM port 25-pin female	----- CABLE -----	PLC-port <b>RS422</b> Screw Terminal
GND 7	_____	GND
TXD+ 14	_____	RDA
TXD- 15	_____	RDB
RXD+ 16	_____	SDA
RXD- 17	_____	SDB

4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting		B. PWS- Setting
a.Communication Format	:RS232/RS422	COM=RS232/422
b.Node Address	:RS232=0 :RS422=01	
c.Transmission Speed	:19200bps	Refer to what PLC was set
d.Transmission Format	: 7-bit, EVEN, 1-bit	

## PLC Drivers, py63.tsk, YOKOGAWA FA-M3 SERIES

1. The table below shows the formats of every register the PWS can access.

Register Type	Format	Range With the Register	Device Type /		Data Size	
			Aux. Address		R/W	
Input Relay	Xnnnnn	nnnnn=201-65499 (address does not continue)	0	0	Word	✓
Output Relay	Ynnnnn	nnnnn=201-65499 (address does not continue)	1	0	Word	✓
Intern Relay	Innnnn	nnnnn=1-16384	2	0	Word	✓
Common Relay	Ennnn	nnnn=1-4096	3	0	Word	✓
Link Relay	Lnnnnn	nnnnn=1-65499 (address does not continue)	4	0	Word	✓
Special Relay	Mnnnn	nnnn=1-9984	5	0	Word	✓
Preset Timer	TPnnnn	nnnn=1-3072	6	0	Word	✓
Set Timer	TSnnnn	nnnn=1-3072	7	0	Word	✓
Preset Counter	CPnnnn	nnnn=1-3072	8	0	Word	✓
Set Counter	CSnnnn	nnnn=1-3072	9	0	Word	✓
Data Register	Dnnnn	nnnn=1-8192	10	0	Word	✓
File Register	Bnnnnn	nnnnn=1-32768 (SP25 CPU)	11	0	Word	✓
Link Register	Wnnnn	nnnnn=1-65499 (address does not continue)	12	0	Word	✓
Special Register	Znnn	nnn=1-512	13	0	Word	✓
Index Register	Vnn	nn=1-64	14	0	Word	✓
Common Register	Rnnnn	nnnn=1-4096	15	0	Word	✓

**Note 1:** The Workstation can read up to 60 words in one read command.

使用 X, Y, L, W, 時須為 1 或 16 的倍數

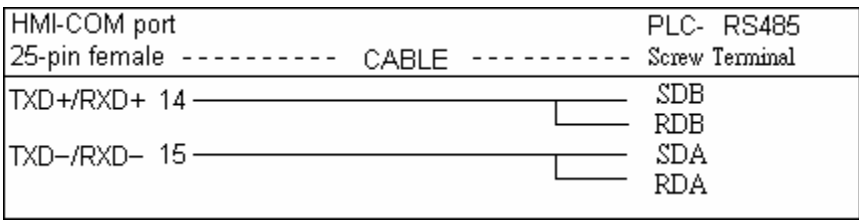
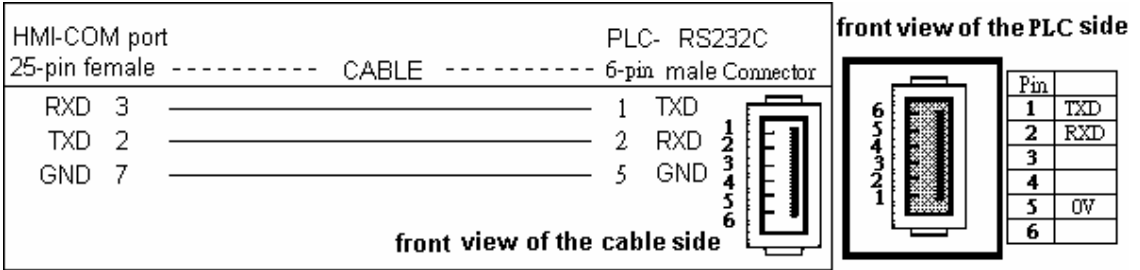
2. The table below shows the format of every on/off location the Workstation can access. When you specify the address of an On/off Block register, the Aux. address should be zero.

Relay Type	Format	Range With the Relay	Device Type /		Data Size	
			Aux. Address		R/W	
Input Relay	Xnnnnn	nnnnn=201-65499 (address does not continue)	0xC0	0	Bit	✓
Output Relay	Ynnnnn	nnnnn=201-65499 (address does not continue)	0xC1	0	Bit	✓
Intern RELAY	Innnnn	nnnn=1-16384	0xC2	0	Bit	✓
Common RELAY	Ennnn	nnnn=1-4096	0xC3	0	Bit	✓
Link RELAY	Lnnnnn	nnnn=1-65499	0xC4	0	Bit	✓
Special RELAY	Mnnnn	nnnn=1-9984	0xC5	0	Bit	✓
Timer	TUnnnn	nnnn=1-3072	0xC6	0	Bit	✓
Counter	CUnnnn	nnnn=1-3072	0xC7	0	Bit	✓

**Note 2:** When you specify the address of an On/off Block, use an address that its bit

address ("b") is 0.

3. Example of the connections between PWS & RS232 of PLC CPU-port:



4. P.L.C. & PWS setting:

Please set the communication parameters & the DIP-Switch as below:

A. P.L.C. Setting	B. PWS- Setting
a.Communication Format :RS232/RS485	PWS station number set as 1 when CPU locates at slot 1.
b.Node Address :1	
c.Transmission Speed :9600bps	
d.Transmission Format :8-bit,even,1-bit	

