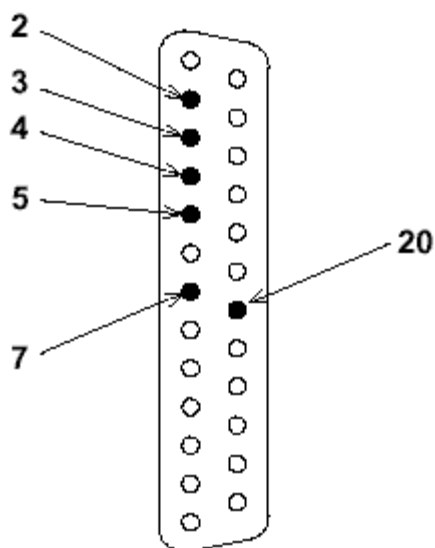


## Technical Note

# Yokogawa Darwin Serial Cable Diagrams

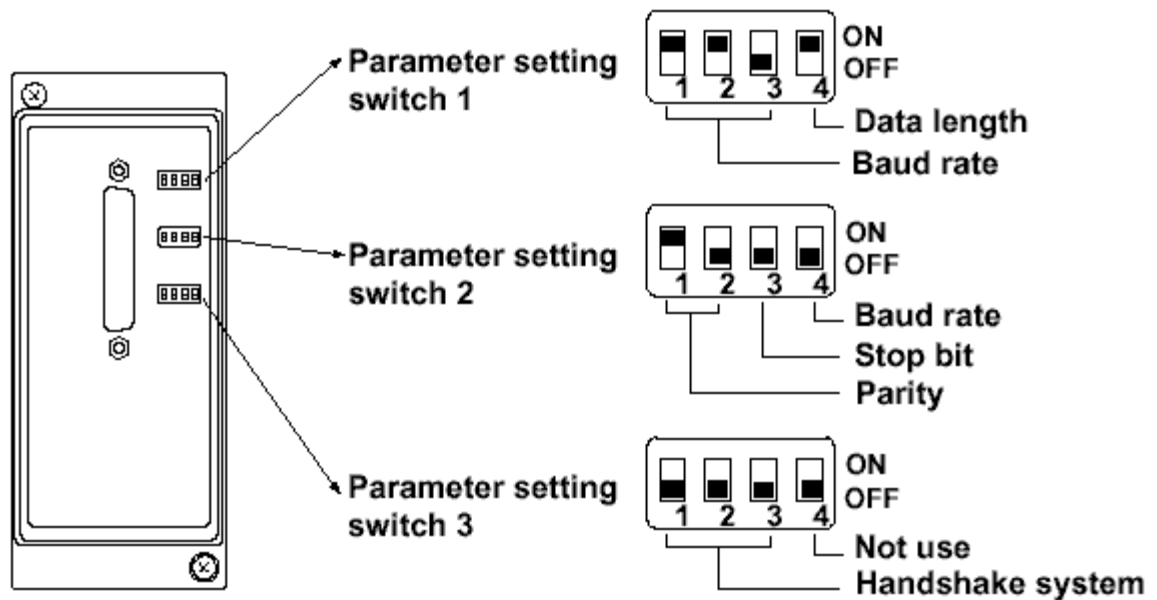
### 1. RS-232 Connector and Signal Names



2	<b>TXD (Send Data):</b> Data transmitted to the host computer
3	<b>RXD (Received Data):</b> Data received from the host computer
4	<b>RTS (Request to Send):</b> Handshake signal for data reception from the host computer
5	<b>CTS (Clear to Send):</b> Handshake signal for data transmission to the host computer
7	<b>GND (Signal Ground):</b> Signal ground connection
20	<b>DTR (Equipment Ready):</b> Handshake signal for data reception from the host computer

● **Note:** Pin numbers 1, 6 and 8 to 19 **and 21 to 25** are not used.

## 2. RS-232 Communications Module Settings



### Baud Rate (No.1 to 3 of Setting Switch 1 and No.4 of Setting Switch 2)

Default settings are indicated in bold.

Baud Rate	No.1	No.2	No.3	No.4 (Sw2)
150	OFF	OFF	OFF	OFF
300	OFF	OFF	ON	OFF
600	OFF	ON	OFF	OFF
1200	OFF	ON	ON	OFF
2400	ON	OFF	OFF	OFF
4800	ON	OFF	ON	OFF
<b>9600</b>	<b>ON</b>	<b>ON</b>	<b>OFF</b>	<b>OFF</b>
19200	ON	ON	ON	OFF
38400	OFF	OFF	OFF	ON

### Data Length (Switch No.4 of Property Setting Switch 1)

Data Length	No.4
7	OFF
<b>8</b>	<b>ON</b>

### Parity (Switch No.1 and 2 of Property Setting Switch 2)

Parity	No.1	No.2
NONE	OFF	OFF
ODD	OFF	ON
EVEN	ON	OFF

### Stop Bit (Switch No.3 of Property Setting Switch 2)

Stop Bit	No.4
1	OFF
2	ON

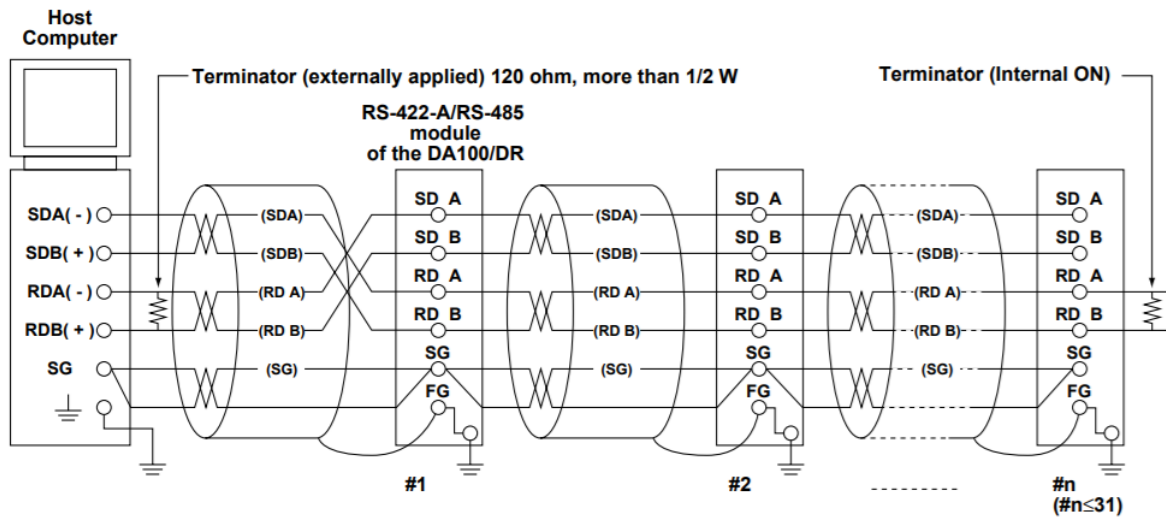
### Handshake System (Switch No.1 to 3 of Property Setting Switch 3)

Handshake System	No.1	No.2	No.3
<b>No Handshake</b>	<b>OFF</b>	<b>OFF</b>	<b>OFF</b>
XON-ER*	OFF	OFF	ON
XON-RS*	OFF	ON	OFF
CS-ER	OFF	ON	ON
CS-RS	ON	OFF	OFF

\*When the baud rate is set to 38400, there is no handshaking.

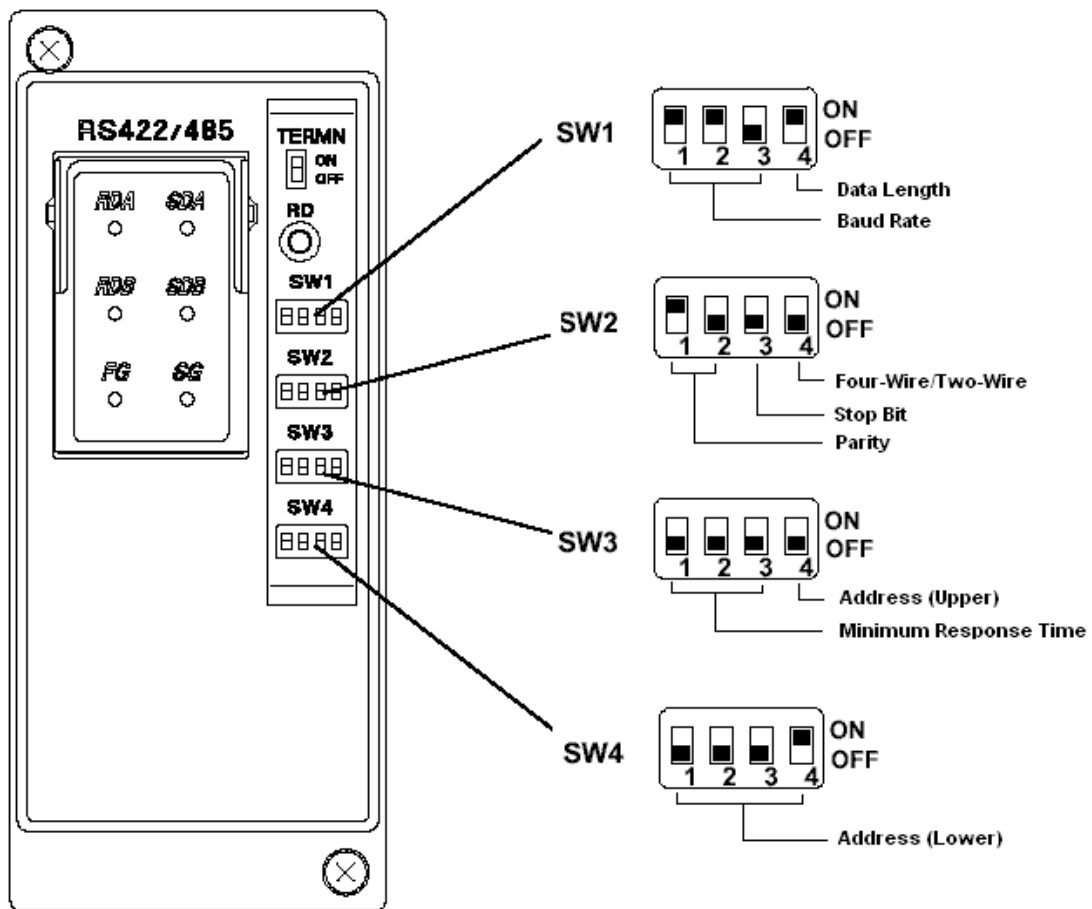
🔴 Handshaking must be set to **No Handshake** at all times.

### 3. RS-422 Cable Diagram



- No terminators are inserted between #1 through #n-1 (internal OFF).

### 4. RS-422 Communications Module Settings



**Baud Rate (No.1 to 3 of SW1)**

Baud Rate	No.1	No.2	No.3
300	OFF	OFF	ON
600	OFF	ON	OFF
1200	OFF	ON	ON
2400	ON	OFF	OFF
4800	ON	OFF	ON
<b>9600</b>	<b>ON</b>	<b>ON</b>	<b>OFF</b>
19200	ON	ON	ON
38400	OFF	OFF	OFF

**Data Length (No.4 of SW1)**

Data Length	No.4
7	OFF
<b>8</b>	<b>ON</b>

**Parity (No.1 to 2 of SW2)**

Parity	No.1	No.2
NONE	OFF	OFF
ODD	OFF	ON
<b>EVEN</b>	<b>ON</b>	<b>OFF</b>

**Stop Bit (No.3 of SW2)**

Stop Bit	No.3
<b>1</b>	<b>OFF</b>
2	ON

**Switch between Four-Wire/Two-Wire Systems (No.4 of SW2)**

<b>Four-Wire/Two-Wire</b>	<b>No.4</b>
<b>Four-Wire</b>	<b>OFF</b>
Two-Wire	ON

**Minimum Response Time (No.1 to 3 of SW3)**

<b>Minimum Response Time</b>	<b>No.1</b>	<b>No.2</b>	<b>No.3</b>
<b>0ms</b>	<b>OFF</b>	<b>OFF</b>	<b>OFF</b>
10ms	OFF	OFF	ON
20ms	OFF	ON	OFF
50ms	OFF	ON	ON
100ms	ON	OFF	OFF

**Address (No.4 of SW3 and No.1 to 4 of SW4)**

<b>Address</b>	<b>No.4 (SW3)</b>	<b>No.1 (SW4)</b>	<b>No.2 (SW4)</b>	<b>No.3 (SW4)</b>	<b>No.4 (SW4)</b>
<b>1</b>	<b>OFF</b>	<b>OFF</b>	<b>OFF</b>	<b>OFF</b>	<b>ON</b>
2	OFF	OFF	OFF	ON	OFF
3	OFF	OFF	OFF	ON	ON
4	OFF	OFF	ON	OFF	OFF
5	OFF	OFF	ON	OFF	ON
6	OFF	OFF	ON	ON	OFF
7	OFF	OFF	ON	ON	ON
8	OFF	ON	OFF	OFF	OFF
9	OFF	ON	OFF	OFF	ON
10	OFF	ON	OFF	ON	OFF
11	OFF	ON	OFF	ON	ON
12	OFF	ON	ON	OFF	OFF
13	OFF	ON	ON	OFF	ON
14	OFF	ON	ON	ON	OFF
15	OFF	ON	ON	ON	ON
16	ON	OFF	OFF	OFF	OFF

<b>Address</b>	<b>No.4 (SW3)</b>	<b>No.1 (SW4)</b>	<b>No.2 (SW4)</b>	<b>No.3 (SW4)</b>	<b>No.4 (SW4)</b>
17	ON	OFF	OFF	OFF	ON
18	ON	OFF	OFF	ON	OFF
19	ON	OFF	OFF	ON	ON
20	ON	OFF	ON	OFF	OFF
21	ON	OFF	ON	OFF	ON
22	ON	OFF	ON	ON	OFF
23	ON	OFF	ON	ON	ON
24	ON	ON	OFF	OFF	OFF
25	ON	ON	OFF	OFF	ON
26	ON	ON	OFF	ON	OFF
27	ON	ON	OFF	ON	ON
28	ON	ON	ON	OFF	OFF
29	ON	ON	ON	OFF	ON
30	ON	ON	ON	ON	OFF
31	ON	ON	ON	ON	ON