General Specifications

Model TB750G
Right Angle Scattered Light Turbidimeter

General

There are increasing demands for good quality water for both industrial-use and drinking water applications because of rapid industrial development and consumer demands for better quality of life. A large amount of the waste water from both applications has been drained or discharged into rivers, causing pollution to worsen year after year. This has caused serious social problems. Therefore, turbidimeters, conventionally used for the operation and control of water purification plants, are nowadays being required to measure the amount of matter suspended in various sorts of industrial waste water and to measure the turbidity of chemical processes.

Since their sales began in 1959, Yokogawa’s turbidimeters have been continuously developed and improved using various measurement principles suited for various applications. With its many achievements, Yokogawa has earned its customers’ confidence.

Developed based on years of experience and applications in process fields, the TB750G Turbidity Measuring System using right angle light scattering method provides highly reliable measurement and improved maintainability which improve upon what previous models could offer.

Features

- Highly reliable measurement with excellent linearity and repeatability
  - Linearity: ±2% of reading or ±0.01 NTU, whichever is greater
  - Repeatability: ±1% of reading or ±0.002 NTU, whichever is greater
  - Display resolution: 0.001 NTU
- Easy-to-clean cell
- Compact, lightweight converter and detector
- User configurable measuring range
  - Measuring range: 0-0.2 NTU to 0-100 NTU
- Measuring range switching (2 or 3 ranges)
- Enhanced self-diagnostic function as standard
  - Light source failure, input element failure, calibration failure, various circuit failures, etc.
- Detector structure to remove sudden reading change caused by bubbles
- A wide range of measurement conditions
  - Low flow rate: 0.05 to 20 l/min
  - High pressure: 500 kPa maximum
  - Temperature: 0 to 50°C
- Detector can be connected for in-line analysis
- 2 analog outputs, 3 relay contact outputs, and 1 serial communication
- Many options available
  - Ultrasonic transducer and oscillator for ultrasonic cleaning
  - Various head tanks to accommodate application requirements
- Measurement method is based on US EPA 180.1

System Configuration

Example: Typical system

Example: System with ultrasonic oscillator and zero turbidity filter
### Standard Specifications

1. **TB750G Right Angle Scattered Light Turbidimeter**

   **Measurement:** Turbidity of finished water and water used in general processes
   **Measurement method:** Right angle light scattering method
   **Measuring range:** 0.000 to 100.0 NTU
   **Display:** 4 digit LCD (6 digits in message area), negative value indication enabled/disabled
   **Unit:** NTU
   **Resolution:** 0.001 NTU
   **Turbidity standard:** Formazin
   **Analog output:**
   - Analog output 1: 4 to 20 mA DC, isolated
   - Analog output 2: 0 to 20 mA DC, selectable, isolated (Both analog outputs are not isolated.)
   **Load resistance:** 550Ω max.
   **Output range:** Configurable within the measuring range
   **Minimum range:** 0 to 0.2 NTU
   **Maximum range:** 0 to 100 NTU
   **Minimum span:** 20% or more of upper limit of the range or 0.2 NTU, whichever is greater.
   **Note:** When auto range switching is selected, lower limit of the range is 0 NTU.
   **Range switching:**
   - Enabled/disabled in either analog output 1 or 2. Not available in both outputs.
   - Manual (local) range/auto range/remote 2-range/remote 3-range switching selectable.
   **Output signal in maintenance:**
   - Output hold enabled/disabled
   **Hold output:** Last measured value or fixed value (between 2.0 and 22.0 mA for 4 to 20 mA DC output; between 0.0 and 22.0 mA for 0 to 20 mA DC output) selectable
   **Output signal in FAIL:** Output hold enabled/disabled
   **Hold output:** Last measured value or fixed value (between 2.0 and 22.0 mA for 4 to 20 mA DC output; between 0.0 and 22.0 mA for 0 to 20 mA DC output) selectable
   **Negative value indication:** Enabled/disabled

#### Serial communication:

- **Number of outputs:** 1
- **Communication signal:** RS-422 or RS-232C, isolated
- **Command:** Requests of turbidity measurement, error information, and output range switching
- **Communication data:** Turbidity, status (measurement/maintenance/calibration, FAIL, high/low alarm, output range), error information
- **Communication method:** Start-stop synchronization, non-procedural
- **Communication setting:** 9600 bps, parity (even), stop bit 1 bit, data length 8 bit
- **Distance:**
  - RS-422: 1000 m max.
  - RS-232C: 10 m max.
- **Cable:**
  - RS-422: Twisted pair cable with shield (AWG 20 to 16)
  - RS-232C: Cable with shield

#### Contact output:

- **Type:** Relay contact output

#### Calibration:

- **Zero calibration:** Zero water (filtered water with zero turbidity)
- **Span calibration:** Sensitivity calibration using check block or turbidity standard solutions

#### 2-point calibration:

- **Turbidity standard solutions**
- **Grab sample calibration:** Zero point and sensitivity correction using grab sample

#### Self-diagnostics:

- **Light source failure, input element failure, calibration failure, AD circuit failure, memory failure, etc.**

#### Installation location:

- **Indoor (Weather protection is required for outdoor installation)**
  - **Ambient temperature:** -5 to 50°C (Sample and tap water may need protection against freezing)
  - **Ambient humidity:** 5 to 95%RH (non-condensing)
  - **Storage temperature:** -30 to 70°C
  - **Sample water conditions:**
    - **Flow rate:** 0.05 to 20 l/min
    - **Temperature:** 0 to 50°C

---

Contact input:

- **Type:** Voltage-free contact input
- **Number of contacts:** 2
- **Function:** Remote range switching

#### Contact output:

- **Type:** Relay contact output
- **Number of contacts:** 3
- **Function:** On/Off
- **Rating:**
  - 250 V AC, 2 A, 125 VA max. (resistance load) or 30 V DC, 3 A, 60 W max. (resistance load)

#### Contact status:

**Remote 2-range switching**

<table>
<thead>
<tr>
<th>Contact</th>
<th>When Range Switching is Selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN1-COM</td>
<td>Range A</td>
</tr>
<tr>
<td></td>
<td>Range B</td>
</tr>
</tbody>
</table>

**Remote 3-range switching**

<table>
<thead>
<tr>
<th>Contact</th>
<th>When Range Switching is Selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN1-COM</td>
<td>Range A</td>
</tr>
<tr>
<td>IN2-COM</td>
<td>Range B</td>
</tr>
<tr>
<td>Range C</td>
<td></td>
</tr>
</tbody>
</table>

---

**Contact input:**

- **Type:** Voltage-free contact input
- **Number of contacts:** 2
- **Function:** Remote range switching

#### Contact output:

- **Type:** Relay contact output
- **Number of contacts:** 3
- **Function:** On/Off
- **Rating:**
  - 250 V AC, 2 A, 125 VA max. (resistance load) or 30 V DC, 3 A, 60 W max. (resistance load)

#### Contact status:

- **Range A, Range B, Range C**

---

**Contact input:**

- **Type:** Voltage-free contact input
- **Number of contacts:** 2
- **Function:** Remote range switching
Pressure: 500 kPa max.
Mounting: Pipe, wall, rack or panel mounting
Piping connection (detector):
  Sample water inlet: Rc1/2 or 1/2NPT (optional)
  Sample water outlet: Rc1/2 or 1/2NPT (optional)
Drain port: Rc1 or 1NPT (optional)
Cable inlet port (detector and converter):
  DIN Pg 13.5 cable gland
Cable OD: 6 to 12 mm
Dimensions:
  Detector: 378W x 174H x 265D mm
  Converter: 144W x 144H x 142D mm
Material (main):
  Detector: Aluminum alloy casting, modified PPE resin
  Wetted parts: Modified PPE resin, glass, fluoric rubber, silicon rubber, SUS 316
  Converter: Aluminum alloy casting, Polycarbonate resin
Construction: JIS C 0920, IP65 Water-tight
Finish:
  Detector, converter:
    Baked polyurethane resin coating (standard)
    Baked epoxy resin coating (optional)
Color:
  Detector: Spring Black (Munsell 3.3PB2.5/0.5 or equivalent), Mint green (Munsell 5.6BG3.2/9 or equivalent)
  Converter: Silver Gray (Munsell 3.2PB7.4/1.2 or equivalent)
Weight:
  Detector: Approx. 5.8 kg
  Converter: Approx. 1.5 kg
Power supply:
  100 to 240 VAC -15%/+10%, 50/60 Hz
Grounding:
  Class D grounding
  Grounding resistance of 100Ω or less
Power consumption:
  Converter: 50 VA max.

Optional Specifications

Standard performance (under normal operating conditions)
  Repeatability: ±1% of reading or ±0.002 NTU, whichever is greater
  Linearity: ±2% of reading or ±0.01 NTU, whichever is greater
  Response time: Within 2 minutes (90% response, sample water flow rate 3 l/min)

Optional Specifications

Head tank:
  Simple head tank
  Application: Turbidity is 10 NTU or less. To remove relatively large air bubbles.
  Sample water conditions: Flow rate: 1 to 10 l/min
  Turbidity: 2 to 10 NTU
  Pressurized head tank for low turbidity
  Application: Turbidity is 2 NTU or less. To remove air bubbles and to prevent them from occurring.
  Sample water conditions:
    Flow rate: 0.05 to 10 l/min
    Turbidity: 2 NTU or less
    Pressure: 20 to 500 kPa
  Transducer for ultrasonic cleaning (TUS400G Ultrasonic Oscillator should be purchased separately.)

Regulatory Compliance

EMC Regulatory Arrangement in Australia and New Zealand
EN 55011 Class A, Group 1
Korea Electromagnetic Conformity Standard Class A

Characteristics

Zero turbidity filter
  When measuring range is 2.0 NTU or greater: 1 μm
  When measuring range is below 2.0 NTU:
    1 μm + 0.2 μm

2. TUS400G Ultrasonic Oscillator

Combination device: Turbidity converter (TB750G)
  Special cable (3-conductor shielded cable)
Cleaning method: Continuous ultrasonic emission
  (Frequency sweep method)
Oscillation frequency: Approx. 170 to 200 kHz (sweeping frequency: Approx. 160 to 250 kHz)
Output voltage: Approx. 40 to 80 V
Power supply: 100/110/115/200/220/240 V AC ±10%, 50/60 Hz
Power consumption: Approx. 30 VA
Insulation resistance:
  Power supply-G: 100 MΩ or more / 500 V DC
  Output terminals-G: 100 MΩ or more / 500 V DC
Withstand voltage:
  Power supply-G: 1000/1500 V AC for 1 min.
  Output terminals-G: 1000/1500 V AC for 1 min.
Ambient temperature: -10 to 50°C (hood may be fitted as option)
Storage temperature: -25 to 70°C
Construction: JIS C 0920 Water-tight (NEMA 4 equivalent waterproof construction)
Material:
  Case: Aluminum alloy casting
  Window: Polycarbonate
Finish:
  Baked polyurethane resin coating (standard)
  Baked epoxy resin coating (optional)
Color:
  Case: Frosty white (Munsell 2.5Y8.4/1.2 or equivalent)
  Cover: Deep sea-moss green (Munsell 0.6G3.1/2.9 or equivalent)
Mounting:
  Pipe mounting, wall or rack mounting or panel mounting
Mounting material: Stainless steel
cable inlet port: Ø22.7 hole x 2
  DIN Pg16 watertight plastic gland
  Cable/terminal: For 7 to 12 mm, M4 screw
Conduit adapter: Power supply side (optional)
Material: Polycarbonate resin
Connection: G1/2 or 1/2NPT
Weight:
  Body: Approx. 2.0 kg
  Mounting: Approx. 0.7 kg
Dimension: 162W x 180H x 115D mm
Note: 1. Output of ultrasonic oscillator changes with power supply voltage. The output is lower when the voltage is lower.
  2. Output of ultrasonic oscillator changes with connected cable. The output is lower when the length of the cable is longer.
Noise filter assembly:
  (for TUS400G-NN-RC, -KC)
Ambient temperature: -10 to 50°C (no dew condensation allowed)
Storage temperature: -25 to 70°C
Construction: JIS C 0920 Watertight (IP53)

Regulatory Compliance

( for TUS400G-NN-RC)
EMC Regulatory Arrangement in Australia and New Zealand
EN 55011 Class A, Group 1
( for TUS400G-NN-KC)
Korea Electromagnetic Conformity Standard Class A

한국 전자파적합성 기준

零浊度滤镜
  当测量范围为2.0 NTU或更大时：1 μm
  当测量范围为2.0 NTU以下时：
    1 μm + 0.2 μm

2. TUS400G 超声波发生器

组合装置：浊度转换器（TB750G）
  特殊电缆（3芯屏蔽电缆）
清洗方法：连续超声波发射
  （频率扫描方法）
振动频率：约170至200 kHz（扫描频率：约160至250 kHz）
输出电压：约40至80 V
电源：100/110/115/200/220/240 V AC ±10%，50/60 Hz
电源消耗：约30 VA
绝缘电阻：
  电源供应-G：100 MΩ或更多 / 500 V DC
  输出端口-G：1000/1500 V AC (1 min.)
环境温度：-10至50°C（可以作为选项进行安装）
储存温度：-25至70°C
构造：JIS C 0920 水密（NEMA 4 等价防水构造）
材料：
  框架：铝型材
  窗口：聚碳酸酯
表面处理：
  涂聚氨酯泡沫
  涂环氧树脂（可选）
颜色：
  框架：冷白色（Munsell 2.5Y8.4/1.2 或等价）
  盖子：深海藻绿色（Munsell 0.6G3.1/2.9 或等价）
安装模式：
  管道安装，墙面或轨安装
安装材料：不锈钢
cable inlet port：Ø22.7孔 x 2
  DIN Pg16防水塑料盖
  线缆/接头：7至12 mm，M4螺丝
线缆适配器：电源供应侧（可选）
材料：聚碳酸酯
连接：G1/2或1/2NPT
重量：
  机身：约2.0 kg
  安装：约0.7 kg
尺寸：162W x 180H x 115D mm
注意：1. 超声波发生器的输出会根据电源电压变化。
   2. 超声波发生器的输出会根据连接电缆变化。
   在电源电压较低时，输出较低。
   当电缆长度较长时，输出较低。
噪声滤波器组装：
  （适用于TUS400G-NN-RC，-KC）
环境温度：-10至50°C（不允许结露）
储存温度：-25至70°C
构造：JIS C 0920 密封（IP53）

法规符合性

（适用于TUS400G-NN-RC）
澳大利亚和新西兰电磁兼容性安排
EN 55011 Class A, Group 1
（适用于TUS400G-NN-KC）
韩国电磁兼容性标准 Class A

한국 전자파적합성 기준
1. TB750G Right Angle Scattered Light Turbidimeter

<table>
<thead>
<tr>
<th>Model</th>
<th>Suffix Code</th>
<th>Option Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TB750G</td>
<td></td>
<td>-ST</td>
<td>Right angle scattered light turbidimeter</td>
</tr>
</tbody>
</table>

| Application |            |             | Turbidity standard and measuring range NTU       |

<table>
<thead>
<tr>
<th>Output</th>
<th></th>
<th>-N1</th>
<th>4 to 20 mA DC, RS-422</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>-N2</td>
<td>4 to 20 mA DC, RS-232C</td>
</tr>
</tbody>
</table>

| Sampling system |            | -NN         | Without sampling system                       |
| Sampling system material and mounting |            | -NN         | Without sampling system                       |

| Cable length between converter and detector |     | -1         | 1 m                                            |
|                                              |     | -2         | 2 m                                            |
|                                              |     | -3         | 3 m                                            |

| Option | Detector process connection |            | Montage hardware NPT                          |
|        | Mounting hardware           |            | Rack wall mounting hardware (SUS)            |
|        |                            |            | Panel mounting hardware (SUS)                |
|        | Conduit adapter             |            | ANSI 1/2NPT "2"                              |
|        | Head tank                   |            | Pressurized head tank for low turbidity      |
|        | Tag plate                   |            | Stainless steel tag plate                    |
|        | Special painting            |            | Epoxy painting "4"                            |
|        | Ultrasonic transducer       |            | Transducer for ultrasonic cleaning "5"       |

*1: When option "NPT" is specified, the piping connections of sample water inlet, sample water outlet, and drain port are 1/2NPT, 1/2NPT, and 1/2NPT respectively. Unless option "NPT" is specified, they are Rc1/2, Rc1/2, and Rc1 respectively.

*2: This bracket is also available to the detector of Turbidimeter 1702E and 1702D manufactured by HACH. It is separate type, each for detector and converter.

*3: Conduit adapter is for power supply, output and input wiring provided by customer.

*4: Converter and detector case are painted with epoxy resin.

*5: Specify option "US" (ultrasonic transducer) for ultrasonic cleaning. Also TUS400G Ultrasonic Oscillator should be purchased separately.

Note: When ultrasonic cleaning is continuously used after the Model 8562 Turbidity Transmitter has been replaced with the TB750G Turbidimeter, this "US" option must be specified.

2. TUS400G Ultrasonic Oscillator

<table>
<thead>
<tr>
<th>Model</th>
<th>Suffix Code</th>
<th>Option Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUS400G</td>
<td></td>
<td>-NN</td>
<td>Ultrasonic oscillator for turbidimeter</td>
</tr>
</tbody>
</table>

| Application |            | -NN         | always -NN                                     |

| Supply voltage |   | -1          | 100 V AC, 50/60 Hz                              |
|               |   | -2          | 110 V AC, 50/60 Hz                              |
|               |   | -3          | 115 V AC, 50/60 Hz                              |
|               |   | -4          | 200 V AC, 50/60 Hz                              |
|               |   | -5          | 220 V AC, 50/60 Hz                              |
|               |   | -6          | 240 V AC, 50/60 Hz                              |

| Ultrasonic vibrator connecting cable |     | -L0         | None                                            |
|                                      |     | -L1         | 1 m (for Model TB700G or TB750G)                |
|                                      |     | -L2         | 5 m (for Model TB700G or TB750G)                |
|                                      |     | -L3         | 10 m (for Model TB700G or TB750G)               |
|                                      |     | -L4         | 15 m (for Model TB700G or TB750G)               |
|                                      |     | -L5         | 5 m (for Model 8562)                            |
|                                      |     | -L6         | 10 m (for Model 8562)                           |
|                                      |     | -L7         | 15 m (for Model 8562)                           |

| Language for directions |     | -J          | Japanese (Directions indicated on product: Some are written both in Japanese and in English.) |
|                        |     | -E          | English (Directions indicated on product: Some are written both in Japanese and in English.) |

| Option | Mounting hardware |            | Pipe mounting (SUS)                            |
|        | Wall mounting (SUS) |            | Sunshade hood                                 |
|        | Panel mounting (SUS) |            | Stainless steel tag plate                     |
|        | Epoxy painting     |            | Stainless steel tag plate                     |
|        | #1/2NPT            |            | Transducer for ultrasonic cleaning "5"       |

| 3. Zero Turbidity Filter Assembly |

<table>
<thead>
<tr>
<th>Part Name</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filter Assembly, 1 μm</td>
<td>K9411UA</td>
</tr>
<tr>
<td>Filter Assembly, 0.2 μm</td>
<td>K9726EF</td>
</tr>
</tbody>
</table>

4. Consumables

<table>
<thead>
<tr>
<th>Part Name</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filter Element, 1 μm</td>
<td>K9008ZD</td>
</tr>
<tr>
<td>Filter Element, 0.2 μm</td>
<td>K9726EH</td>
</tr>
<tr>
<td>Lamp Assembly</td>
<td>K9657PW</td>
</tr>
<tr>
<td>Fuse (3.15 A)</td>
<td>A1113EF</td>
</tr>
<tr>
<td>Desiccant (4 pcs) *1</td>
<td>K9657RJ</td>
</tr>
</tbody>
</table>

*1: Use within a year after purchasing.

5. Head Tank

<table>
<thead>
<tr>
<th>Part Name</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressurized head tank</td>
<td>K9725WA</td>
</tr>
<tr>
<td>Same as option code /D1</td>
<td></td>
</tr>
<tr>
<td>Simple head tank</td>
<td>K9658YA</td>
</tr>
<tr>
<td>Same as option code /D2</td>
<td></td>
</tr>
</tbody>
</table>

*1: The SUS screws with Teflon coating are used at the four corners of the cover.

*2: The power supply to TB700G or TB750G should be determined in accordance with the supply voltage specified here.
## Dimensions

1. TB750G Right Angle Scattered Light Turbidimeter
   - Converter

   ![Converter Diagram]

   - Detector

   ![Detector Diagram]

   - Conduit adapter (option code: /AFTG, /ANSI)

   ![Conduit Adapter Diagram]
Pipe mounting (option code: /U)

Converter

Detector

Rack or wall mounting (option code: /R)

Converter

(Note) Dedicated cable is omitted.
Detector (The dedicated mounting bracket is not attached. Install the detector with four M5 screws.)

Panel mounting (option code: /PM)

Converter

Detector (The dedicated mounting bracket is not attached. Install the detector with four M5 screws.)
Mounting for Model 8562 or Model TB500G replacement (option code: /TBC)

Converter

Detector

(Note) Dedicated cable is omitted.
● Pressurized head tank for low turbidity (option code: /D1)

Pressure gauge (Range: 0 to 500 kPa)
Needle valve (Material: SUS316)

Pressure gauge

Needle valve (Material: SUS316)

Drain ø6/ø4 PE tube coupling

Sample water outlet (to detector) ø6/ø4 PE tube coupling

Sample water inlet ø10/ø8 PE tube coupling

Pressure gauge

Needle valve (Material: SUS316)

Drain ø6/ø4 PE tube coupling

Sample water outlet (to detector) ø6/ø4 PE tube coupling

Sample water inlet ø10/ø8 PE tube coupling

Unit: mm

Unit: mm

● Simple head tank (option code: /D2)

Drain

TS socket type

Nominal 20A (ø26.2 ID)

Sample water outlet (to detector) Rp1/2

Sample water inlet Rc3/8

Sample water outlet (to detector) Rp1/2

TS socket type

Nominal 20A (ø26.2 ID)

Unit: mm
2. TUS400G Ultrasonic Oscillator

- Hood (optional)
- Ground terminal (M4 screw)
- Power supply cable inlet port, with cable gland (DIN Pg16 or equivalent)
- Ultrasonic transducer cable inlet port, with cable gland (DIN Pg16 or equivalent)

- Dedicated cable (not applicable in case of "-00")

- External dimensions of additional noise filter assembly when TUS400G-NN-RC or TUS400G-NN-KC

- External power cable inlet (cable OD of Ø6 to Ø12)
- Dedicated power cable outlet

- Weight of noise filter assembly: Approx. 2 kg
- Weight of power cable: Approx. 0.2 kg

- Dedicated power cable for noise filter assembly
  - Black L1
  - White L2
  - Green G

- Cable length: Approx. 0.7 m

Unit: mm

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**Pipe mounting (option code: /PS)**

Pipe mounting for noize filter assembly (TUS400G-NN-RC..../PS, TUS400G-NN-KC..../PS)

- 5-Ø6.5 holes
- Ø6.5 x 13 hole
- Pipe mounting bracket 1
- 2-Ø5.5 holes
- Pipe mounting bracket 2
- 2-Ø9 holes
- 4-Ø10 holes

Weight: Approx. 0.7 kg

Unit: mm

**Panel mounting (option code: /PA)**

Panel mounting hardware

Unit: mm

**Wall mounting (option code: /W)**

Unit: mm
3. Zero Turbidity Filter Assembly

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Filtering size</th>
</tr>
</thead>
<tbody>
<tr>
<td>K9411UA</td>
<td>1 μm</td>
</tr>
<tr>
<td>K9726EF</td>
<td>0.2 μm</td>
</tr>
</tbody>
</table>

Adapter for conduit work (option code: /AFTG, /ANSI)
Wiring

TB750G Turbidity detector
(Terminal: M4)

Power supply *5

Grounding *1
(100Ω or less)

TB750G Turbidity converter
(Terminal: M3)

Sensor

Serial communication *3 *4
(RS-422)

Analog output 1
(4-20 mA DC) *3

Analog output 2
(4-20 mA DC or 0-20 mA DC) *3

Contact output S1

Contact output S2

Contact output FAIL

Range

Contact output FAIL

Contact output S2

Contact output S1

Range

Contact input

Range

Contact input

(Note) Dotted wiring is external wiring. Use cable with 6 to 12 mm OD for wiring.

*1 Power terminal "G" on detector, detector case, and converter case must be grounded (ground resistance: 100Ω or less).

*2 External grounding terminal of ultrasonic oscillator must be grounded (ground resistance: 100Ω or less).

*3 Use 2-conductor shielded cable for analog output wiring and serial communication wiring.

*4 The wiring configuration is described below in case that RS-232C serial communication is selected.

*5 When option code "US" is specified, TUS400G should be purchased separately.

When TUS400G is used in system, the power supply to TB750G should be the same as the supply voltage specified in the MS Code of TUS400G.

*6 For TUS400G-NN-RC, TUS400G-NN-KC.
Enquiry Specifications Sheet for Model TB750G Right Angle Scattered Light Turbidimeter

For enquires on the Yokogawa sampling system, please tick (✓) the appropriate box ☐ and write down the relevant information in the blanks.

1. General Information
   Company name: __________________________
   Contact Person: __________________________ Department: __________________________
   Plant name: __________________________
   Measurement location: __________________________
   Purpose of use; ☐ Indication, ☐ Recording, ☐ Alarm, ☐ Control
   Power supply; ________ V AC, ________ Hz

2. Measurement Conditions
   (1) Sample water temperature; ________ to ________, Normally ________ [°C]
   (2) Sample water pressure; ________ to ________, Normally ________ [kPa]
   (3) Sample water flow rate; ________ to ________ [l/min]
   (4) Slurry or contaminations; ☐ No, ☐ Yes ________________
   (5) Components of sample water; __________________________
   (6) Others; __________________________

3. Installation Site
   (1) Ambient temperature; approx. ________ [°C]
   (2) Location; ☐ Indoors __________________________
   (3) Others; __________________________

4. Requirements
   (1) Measuring range; ________ to ________ NTU
   (2) System configuration selection; ☐ Pressurized head tank for low turbidity measurement
      (recommended if turbidity is 2.0 NTU or less.),
      ☐ Simple head tank, ☐ TUS400G Ultrasonic Oscillator
      ☐ Zero turbidity filter (1 μm), ☐ Zero turbidity filter (0.2 μm)
   (3) Cable length between converter and detector; ☐ 1 m, ☐ 2 m, ☐ 3 m
   (4) Others; __________________________