## Industrial Automation

### piconet Selection Guide

<table>
<thead>
<tr>
<th>Gateway</th>
<th>Higher Level System</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DeviceNet™</td>
<td>D5</td>
</tr>
<tr>
<td></td>
<td>PROFIBUS ®-DP</td>
<td>D7</td>
</tr>
<tr>
<td></td>
<td>Ethernet</td>
<td>D9</td>
</tr>
<tr>
<td></td>
<td>CANopen</td>
<td>D11</td>
</tr>
</tbody>
</table>

### Gateway Higher Level System

<table>
<thead>
<tr>
<th>Gateways</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>DeviceNet™</td>
<td>D5</td>
</tr>
<tr>
<td>PROFIBUS ®-DP</td>
<td>D7</td>
</tr>
<tr>
<td>Ethernet</td>
<td>D9</td>
</tr>
<tr>
<td>CANopen</td>
<td>D11</td>
</tr>
</tbody>
</table>

## Industrial Automation

### piconet Selection Guide

<table>
<thead>
<tr>
<th>Modules</th>
<th>Type</th>
<th>I/O Direction</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Discrete</td>
<td>Input</td>
<td>D13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Output</td>
<td>D15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Input &amp; Output</td>
<td>D17</td>
</tr>
<tr>
<td></td>
<td>Analog</td>
<td>Input</td>
<td>D21</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Output</td>
<td>D25</td>
</tr>
<tr>
<td></td>
<td>Counter</td>
<td>Input</td>
<td>D27</td>
</tr>
<tr>
<td></td>
<td>Encoder</td>
<td>Input</td>
<td>D29</td>
</tr>
<tr>
<td></td>
<td>Serial</td>
<td>Input &amp; Output</td>
<td>D31</td>
</tr>
<tr>
<td></td>
<td>Accessories</td>
<td></td>
<td>D35</td>
</tr>
</tbody>
</table>
The piconet System

piconet combines the rugged connectorized concept of TURCK's AIM™ stations with the modular I/O concept of the BL20 and BL67 systems. piconet stations are IP 67 rated and designed to be mounted directly on the machine with no need for a separate enclosure. Like the BL BL20, BL67) systems, piconet consists of a gateway with connected I/O modules, but instead of connecting the I/O to a fixed backplane, piconet uses a distributed fiber-optic ring to communicate between the gateway and I/O.

piconet stations are available as stand alone units for DeviceNet™, PROFIBUS®-DP and CANopen systems; this section focuses on piconet subnetwork systems. Subnetwork systems offer a very flexible approach to connectorized I/O, while allowing individual stations to be mounted as close as possible to I/O devices.

Up to 255 extension modules may be connected to one gateway, with no more than 1.5 m of fiber-optic cable between each module.
Addressing

As a node on a network, piconet® systems have an address that is dependent on the network system being used. Each network gateway has a set of rotary switches used to set the address for the node.

DeviceNet and CANopen gateways may be addressed between 0 and 63 via two switches (one for the 10's digit and one for the 1's digit). For example, to set the address to 37 you would set the 10's switch to 3 and the 1's switch to 7. The third switch on these gateways can be used to set the communication rate of the network interface. PROFIBUS-DP gateways also use two switches, but may be addressed as high as 99.

Power

piconet® gateways and extension modules accept two 24 VDC power supplies via a male/female pair of 4-pin picofast® (M8) connectors. One of the supplies is for the station electronics and inputs, while the other is used to power outputs. Power may be connected from module to module by using picofast extension cords, or individual modules or groups of modules may be powered from separate supplies.
D5
TURCK Inc.   3000 Campus Drive   Minneapolis, MN 55441   Application Support: 1-800-544-7769 Fax: (763) 553-0708 www.turck.com

TURCK
Industrial I/O piconet Products

DeviceNet Gateway

- Rugged, Fully Potted Stations
- Small Footprint
- IP 67 Protection
- Flexible I/O Subnetwork

Electrical
- Operating Current: <75 mA plus sensor currents (from U_b)
- Sensor Current: <500 mA total of all sensors (from U_b)
- Output Current: <500 mA per output (from U_b)

Power Distribution
- Inputs: U_b Power supply
- Outputs: U_i Power supply

Mechanical
- Operating Temperature: 0 to +55°C (+32 to +131°F)
- Protection: IEC IP 67
- Vibration: IEC 68, part 2-6

Material
- Connectors: Nickel-plated brass
- Housing: Nylon

Diagnostics (Physical)
- One LED indicates an I/O fault for the entire station
- LEDs to indicate status of DeviceNet communication

SDNL-0404D-0003

Power Distribution

- Inputs: UB Power supply
- Outputs: UL Power supply

Mechanical
- Operating Temperature: 0 to +55°C (+32 to +131°F)
- Protection: IEC IP 67
- Vibration: IEC 68, part 2-6

Material
- Connectors: Nickel-plated brass
- Housing: Nylon

Diagnostics (Physical)
- One LED indicates an I/O fault for the entire station
- LEDs to indicate status of DeviceNet communication

DeviceNet Pinout

| Male | 1 = Shield |
| 2 = V_+  |
| 3 = V_-  |
| 4 = CAN_H |
| 5 = CAN_L |

Aux. Power

<table>
<thead>
<tr>
<th>piconet Male</th>
<th>piconet Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = U_b+</td>
<td></td>
</tr>
<tr>
<td>2 = U_b+</td>
<td></td>
</tr>
<tr>
<td>3 = Gnd</td>
<td></td>
</tr>
<tr>
<td>4 = Gnd</td>
<td></td>
</tr>
</tbody>
</table>

Rugged, Fully Potted Stations
- Small Footprint
- Flexible I/O Subnetwork

Male
- 5-Pin

Male
- 5-Pin

Female
- 4-Pin

Female
- 4-Pin

D5
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Courtesy of Steven Engineering, Inc.-230 Ryan Way, South San Francisco, CA 94080-6370-Main Office: (650) 588-9200-Outside Local Area: (800) 258-9200-www.stevenengineering.com
<table>
<thead>
<tr>
<th>Part Number</th>
<th>Input Connectors</th>
<th>Outputs Connectors</th>
<th>Input Count</th>
<th>Connectors</th>
<th>Pinout</th>
<th>Outputs Count</th>
<th>Connectors</th>
<th>Pinout</th>
<th>Inputs per Connector</th>
<th>Individual Diagnostics</th>
<th>Wire-Break Detection</th>
<th>Outputs per Connector</th>
<th>Current</th>
<th>Individual Diagnostics</th>
<th>Wire-Break Detection</th>
<th>I/O Map</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDNL-0404D-0003</td>
<td>4</td>
<td>O-3</td>
<td>PI</td>
<td>1</td>
<td>PNP</td>
<td>4</td>
<td>4-7</td>
<td>PO</td>
<td>1</td>
<td>0.5 A</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Input/Output Connectors**

**PI**

- In
  - Bit 0: Data from next input module
  - Bit 7: I-3
  - Bit 6: I-2
  - Bit 5: I-1
  - Bit 4: I-0

**PO**

- Out
  - Bit 0: Data for next output module
  - Bit 3: O-3
  - Bit 2: O-2
  - Bit 1: O-1
  - Bit 0: O-0

**Mating cordset:**

- PI: PSG 3M-*
- PO: PSG 3M-*

**I/O Data Map 1**

<table>
<thead>
<tr>
<th>In</th>
<th>Byte</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1-3</td>
<td>1-2</td>
<td>1-1</td>
<td>1-0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Out</th>
<th>Byte</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td>0-3</td>
<td>0-2</td>
<td>0-1</td>
<td>0-0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TURCK Industrial I/O piconet Products

PROFIBUS-DP Gateways
- Rugged, Fully Potted Stations
- Small Footprint
- IP 67 Protection
- Automatic Baud Rate Sensing

Electrical
- Operating Current: <75 mA plus sensor currents (from $U_b$)
- Sensor Current: <500 mA total of all sensors (from $U_b$)
- Output Current: <500 mA per output (from $U_L$)

Power Distribution
- Inputs: $U_b$ Power supply
- Outputs: $U_L$ Power supply

Mechanical
- Operating Temperature: 0 to +55°C (+32 to +131°F)
- Protection: IP 67
- Vibration: IEC 68, part 2-6

Material
- Connectors: Nickel-plated brass
- Housing: Nylon

Diagnostics (Physical)
- One LED indicates an I/O fault for the entire station
- LEDs to indicate status of PROFIBUS-DP communication

SDPL-0404D-0003
SDPL-0404D-0004
SDPL-0404D-1003
SDPL-0404D-1004

---

PROFIBUS eurofast® Pinouts

<table>
<thead>
<tr>
<th>5-Pin</th>
<th>5-Pin</th>
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</thead>
<tbody>
<tr>
<td>1 = 5 VDC</td>
<td>4 = BUS_B</td>
</tr>
<tr>
<td>2 = BUS_A</td>
<td>5 = Shield</td>
</tr>
<tr>
<td>3 = Gnd</td>
<td></td>
</tr>
</tbody>
</table>

...1003 and ...1004 have both male and female PROFIBUS-DP connections

Aux. Power

<table>
<thead>
<tr>
<th>picofast Male</th>
<th>picofast Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = $U_b$+</td>
<td>3 = Gnd</td>
</tr>
<tr>
<td>2 = $U_l$+</td>
<td>4 = Gnd</td>
</tr>
</tbody>
</table>
### Industrial Automation

#### Part Number

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Connections</th>
<th>Inputs for Connectors</th>
<th>Sensor Style</th>
<th>Individual Diagnostics</th>
<th>Monitoring</th>
<th>Group Diagnostics</th>
<th>Individual Diagnostics</th>
<th>Wire-Break Detection</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDPL-0404D-0003</td>
<td>4 O-1 PI 1 PNP</td>
<td>4 4-7 PO 1 0.5 A</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SDPL-0404D-0004</td>
<td>4 O-1 2S 2 PNP</td>
<td>4 2-3 2G 2 0.5 A</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SDPL-0404D-1003</td>
<td>4 O-1 PI 1 PNP</td>
<td>4 4-7 PO 1 0.5 A</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SDPL-0404D-1004</td>
<td>4 O-1 2S 2 PNP</td>
<td>4 2-3 2G 2 0.5 A</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Input/Output Connectors

<table>
<thead>
<tr>
<th>IO Data Map 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In</strong></td>
</tr>
<tr>
<td><strong>Out</strong></td>
</tr>
</tbody>
</table>

#### Mating Cordset and Splitter

- **PO**: RK 4.4T-* RS 4.4T
- **PI**: PSG 3M-*
- **2S**: RK 4.4T-* RS 4.4T
- **2G**: VBRS 4.4-2RK 4T-*/*
- **PI**: VBRS 4.4-2RK 4T-*/*

---

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Main Office: (650) 588-9200
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www.stevenengineering.com
Ethernet/IP Gateways

- Rugged, Fully Potted Stations
- Small Footprint
- IP 67 Protection
- Automatic Baud Rate Sensing

Electrical
- Operating Current: <75 mA plus sensor currents (from U_b)
- Sensor Current: <500 mA total of all sensors (from U_b)
- Output Current: <500 mA per output (from U_l)

Power Distribution
- Inputs: U_b Power supply
- Outputs: U_l Power supply

Mechanical
- Operating Temperature: 0 to +55°C (+32 to +131°F)
- Protection: IP 67
- Vibration: IEC 68, part 2-6

Material
- Connectors: Nickel-plated brass
- Housing: Nylon

Diagnostics (Physical)
- One LED indicates an I/O fault for the entire station
- LEDs to indicate status of Ethernet communication

Ethernet Pinout

4-Pin

Female

1 = TD-
2 = RD-
3 = TD+
4 = RD+

Aux. Power

4-Pin

picofast Male

1 = U_b+
2 = U_l+

picofast Female

3 = Gnd
4 = Gnd

Material

Connectors: Nickel-plated brass
Housing: Nylon

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### I/O Map 1

<table>
<thead>
<tr>
<th>In</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Data from next input modules:
- Bit 3: 1-3
- Bit 2: 1-2
- Bit 1: 1-1
- Bit 0: 1-0

<table>
<thead>
<tr>
<th>Out</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Data for next output modules:
- Bit 7: 0-3
- Bit 6: 0-2
- Bit 5: 0-1
- Bit 4: 0-0

---

**Input/Output Connectors**

**2S**

- Mating cordset: RS 4.4T.*-RS 4.4T
- Splitter: VBRS 4.4-2RK 4T-/*

**2G**

- Mating cordset: RS 4.4T.*-RS 4.4T
- Splitter: VBRS 4.4-2RK 4T-/*

**PI**

- Mating cordset: PSG 3M-*
**TURCK Industrial I/O piconet Products**

**CANopen Gateway**

- Rugged, Fully Potted Stations
- IP 67 Protection
- Small Footprint
- Flexible I/O Subnetwork

**Electrical**

- Operating Current: <75 mA plus sensor currents (from U_b)
- Sensor Current: <500 mA total of all sensors (from U_b)
- Output Current: <500 mA per output (from U_b)

**Power Distribution**

- Inputs: U_b Power supply
- Outputs: U_i Power supply

**Mechanical**

- Operating Temperature: 0 to +55°C (+32 to +131°F)
- Protection: IEC IP 67
- Vibration: IEC 68, part 2-6

**Material**

- Connectors: Nickel-plated brass
- Housing: Nylon

**Diagnostics (Physical)**

- One LED indicates an I/O fault for the entire station
- LEDs to indicate status of CANopen communication

---

**CANopen Pinout**

- Male:
  - 1 = Shield
  - 2 = NC
  - 3 = NC
  - 4 = CAN_H
  - 5 = CAN_L

- Female:
  - 1 = U_i+
  - 2 = U_i+
  - 3 = Gnd
  - 4 = Gnd

---

**SCOL-0404D-0003**

---

**D11**

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Minneapolis, MN 55441
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Fax: (763) 553-0708
www.turck.com

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Inputs

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Input Count</th>
<th>Output Count</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCOL-0404D-0003</td>
<td>4</td>
<td>4</td>
<td>PO 1 0.5 A 1</td>
</tr>
</tbody>
</table>

Input/Output Connectors

**Input (PI):**
- Mating cordset: PSG 3M-*

**Output (PO):**
- Mating cordset: PSG 3M-*

I/O Map 1

<table>
<thead>
<tr>
<th>In</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Data from next input modules</td>
<td>1-0</td>
<td>1-2</td>
<td>1-1</td>
<td>1-0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Out</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Data for next output modules</td>
<td>0-0</td>
<td>0-2</td>
<td>0-1</td>
<td>0-0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TURCK
Industrial I/O piconet Products

Input Module

- Rugged, Fully Potted Stations
- IP 67 Protection
- Small Footprint
- Modular I/O System

Electrical
- Operating Current: <75 mA plus sensor currents (from \( U_b \))
- Power Current: <500 mA total of all sensors (from \( U_f \))

Power Distribution
- Inputs: \( U_b \) Power supply

Mechanical
- Operating Temperature: 0 to +55 °C (+32 to +131°F)
- Protection: IEC IP 67
- Vibration: IEC 68, part 2-6

Material
- Connectors: Nickel-plated brass
- Housing: Nylon

Diagnostics (Physical)
- LEDs to indicate status of module and system communication

---

D13
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## Industrial Automation

### Inputs Data

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Input Count</th>
<th>Connectors</th>
<th>Pinout</th>
<th>Input Style</th>
<th>Additional Diagnostics</th>
<th>Map</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNH-08000-0008</td>
<td>8</td>
<td>0-7 PI</td>
<td>1 PNP</td>
<td>I</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

### Input Connectors

#### Pin (PI)

- **Pinout:**
  - Bit 7
  - Bit 6
  - Bit 5
  - Bit 4
  - Bit 3
  - Bit 2
  - Bit 1
  - Bit 0

- **Map:**
  - Data from modules to left
  - Data from modules to right

#### Mating Cordset:

- PSG 3M-*

---

**I/O Data Map 1**

<table>
<thead>
<tr>
<th>In</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-1</td>
<td>n-1-1</td>
<td>n-1-0</td>
<td>n-1-1</td>
<td>n-1-0</td>
<td>n-1-1</td>
<td>n-1-0</td>
<td>n-1-1</td>
<td>n-1-0</td>
</tr>
<tr>
<td>n+1</td>
<td>n+1-1</td>
<td>n+1-0</td>
<td>n+1-1</td>
<td>n+1-0</td>
<td>n+1-1</td>
<td>n+1-0</td>
<td>n+1-1</td>
<td>n+1-0</td>
</tr>
</tbody>
</table>

---

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TURCK Industrial I/O piconet Products

Output Modules

- Rugged, Fully Potted Stations
- IP 67 Protection
- Small Footprint
- Modular I/O System

Electrical
- Operating Current: <75 mA plus sensor currents (from U_o)
- Output Current: See table on facing page (from U_i)

Power Distribution
- Outputs: U_i, Power supply

Mechanical
- Operating Temperature: 0 to +55°C (+32 to +131°F)
- Protection: IEC IP 67
- Vibration: IEC 68, part 2-6

Material
- Connectors: Nickel-plated brass
- Housing: Nylon

Diagnostics (Physical)
- LEDs to indicate status of module and system communication

SNNE-0008D-0006
SNNE-0008D-0002
Industrial Automation

Outputs

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Output Count</th>
<th>Connectors</th>
<th>Power</th>
<th>Number of Contacts</th>
<th>Current</th>
<th>I/O Map</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNNE-0008D-0006</td>
<td>8</td>
<td>0-7</td>
<td>PO</td>
<td>1</td>
<td>0.5 A</td>
<td>1</td>
</tr>
<tr>
<td>SNNE-0008D-0002</td>
<td>8</td>
<td>0-7</td>
<td>PO</td>
<td>1</td>
<td>2.4 A</td>
<td>5</td>
</tr>
</tbody>
</table>

*Note: Total output current for the station is limited to 4 A.

Output Connectors

I/O Data Map 1

<table>
<thead>
<tr>
<th>Byte</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0-7</td>
<td>0-6</td>
<td>0-5</td>
<td>0-4</td>
<td>0-3</td>
<td>0-2</td>
<td>0-1</td>
<td>0-0</td>
</tr>
<tr>
<td>n+1</td>
<td>Data for modules to left</td>
<td>Data for modules to right</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mating cordset: PSG 3M-
Input/Output Modules

- Rugged, Fully Potted Stations
- IP 67 Protection
- Small Footprint
- Modular I/O System

Electrical
- Operating Current: <75 mA plus sensor currents (from U_B)
- Sensor Current: <500 mA total of all sensors (from U_I)
- Output Current: See table on facing page (from U_I)

Power Distribution
- Inputs: U_B Power supply
- Outputs: U_I Power supply

Mechanical
- Operating Temperature: 0 to +55°C (+32 to +131°F)
- Protection: IEC IP 67
- Vibration: IEC 68, part 2-6

Material
- Connectors: Nickel-plated brass
- Housing: Nylon

Diagnostics (Physical)
- LEDs to indicate status of module and system communication
Industrial Automation

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Input Count</th>
<th>Connectors</th>
<th>Pinout</th>
<th>Output Count</th>
<th>Connectors</th>
<th>Pinout</th>
<th>Current</th>
<th>Wire-Break Detection</th>
<th>IO Map</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNNE-0404D-0005</td>
<td>4</td>
<td>Pi 1</td>
<td>PNP</td>
<td>4</td>
<td>4-7</td>
<td>Po 1</td>
<td>2 A</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>SNNE-0404D-0001</td>
<td>4</td>
<td>Pi 1</td>
<td>PNP</td>
<td>4</td>
<td>4-7</td>
<td>Po 1</td>
<td>0.5 A</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Note: Total output current for station is limited to 4 A.

Input/Output Connectors

- **Input (Pi)**
  - **Pinout**: 7
  - **Connector**: Pi 1
  - **Connection**: PNP
  - **Outputs**: 4-7
  - **Current**: 2 A
  - **IO Map**: 1

- **Output (Po)**
  - **Pinout**: 7
  - **Connector**: Pi 1
  - **Connection**: PNP
  - **Outputs**: 4-7
  - **Current**: 0.5 A
  - **IO Map**: 1

Mating cordset: PSG 3M-

**I/O Data Map 1**

```
<table>
<thead>
<tr>
<th>In</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>2-1</td>
</tr>
<tr>
<td>n+1</td>
<td>Data from modules to right</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Out</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>2-1</td>
</tr>
<tr>
<td>n+1</td>
<td>Data from modules to left</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```
TURCK
Industrial I/O piconet Products

Input/Output Modules

- Rugged, Fully Potted Stations
- IP 67 Protection
- Small Footprint
- Modular I/O System

Electrical
- Operating Current: <25 mA plus sensor currents (from U_b)
- Sensor Current: <500 mA total of all sensors (from U_i)
- Output Current: 0.5 A (from U_i)

Power Distribution
- Inputs: U_b Power supply
- Outputs: U_i Power supply

Mechanical
- Operating Temperature: 0 to +55°C (+32 to +131°F)
- Protection: IEC IP 67
- Vibration: IEC 68, part 2-6

Material
- Connectors: IP20 Tension clamp terminals
- Housing: Nylon

Diagnostics (Physical)
- LEDs to indicate status of module and system communication

SNNE-0808D-0003

Aux. Power

<table>
<thead>
<tr>
<th>picofast Male</th>
<th>picofast Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = U_b+</td>
<td>1 = U_i+</td>
</tr>
<tr>
<td>2 = U_i+</td>
<td>2 = GND</td>
</tr>
<tr>
<td>3 = GND</td>
<td>4 = GND</td>
</tr>
</tbody>
</table>

4-Pin 4-Pin
## Industrial Automation

### Inputs

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Input Group</th>
<th>Connectors</th>
<th>Pinout</th>
<th>Sensor Style</th>
<th>Group</th>
<th>Diagnostics</th>
<th>Output Count</th>
<th>Connectors</th>
<th>Pinout</th>
<th>Output Count</th>
<th>Current</th>
<th>Individual Diagnostics</th>
<th>Wire-Break Detection</th>
<th>I/O Map</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNNE-0808D-0003</td>
<td>8</td>
<td>0</td>
<td>TI</td>
<td>8</td>
<td>PNP</td>
<td>0</td>
<td>2</td>
<td>PO</td>
<td>0</td>
<td>0.5 A</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: Total output current for station is limited to 4 A.

### Input/Output Connectors

#### I/O Data Map 1

<table>
<thead>
<tr>
<th>Ln</th>
<th>Byte</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>In</td>
<td>–1</td>
<td>Data from modules to left</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n</td>
<td>1–7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n+1</td>
<td>Data from modules to right</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Out</th>
<th>Byte</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>0–7</td>
<td>0–8</td>
<td>0–9</td>
<td>0–4</td>
<td>0–3</td>
<td>0–2</td>
<td>0–1</td>
<td>0–0</td>
<td></td>
</tr>
<tr>
<td>n+1</td>
<td>Data for modules to left</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ln</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Out</td>
<td>Data for modules to right</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TURCK
Industrial I/O piconet Products

Analog Input Stations

- Rugged, Fully Potted Stations
- IP 67 Protection
- Small Footprint
- Modular I/O System

Electrical
- Operating Current: <75 mA plus sensor currents (from U_b)

Power Distribution
- Inputs: U_b Power supply

Mechanical
- Operating Temperature: 0 to +55 °C (+32 to +131°F)
- Protection: IEC IP 67
- Vibration: IEC 68, part 2-6

Material
- Connectors: Nickel-plated brass
- Housing: Nylon

Diagnostics (Physical)
- LEDs to indicate status of module and system communication

SNNE-40A-0005
SNNE-40A-0007

4-Pin 4-Pin

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### Input/Output Connectors

**AI-I**

- **Mating cordset:**
  - Isolated Loop: RK 4.5T-*-M-RS 4.5T/S653
  - Loop Powered: RK 4.5T-*-M-RS 4.5T/LPS/S653

**Applications:**
- TURCK Sensors: LU; RK 4.4T-*-RS 4.4T/S1118
- LI; RK 4.4T-*-*RS 4.4T/S1120

---

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Input Count</th>
<th>Connector</th>
<th>Signal</th>
<th>Range</th>
<th>Group</th>
<th>Diagnostics</th>
<th>I/O Map</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNKE-40A-0005</td>
<td>4</td>
<td>D-1</td>
<td>Al</td>
<td>1</td>
<td>0 to 10 V</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>SNKE-40A-0007</td>
<td>4</td>
<td>D-1</td>
<td>Al</td>
<td>1</td>
<td>4 to 20 mA</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

---

**I/O Data Map 1**

- **In**
  - -1: Data from modules to left
  - n: Channel 0, MSB
  - n+1: Channel 0, LSB
  - n+2: Channel 1, MSB
  - n+3: Channel 1, LSB
  - n+4: Channel 2, MSB
  - n+5: Channel 2, LSB
  - n+6: Channel 3, MSB
  - n+7: Channel 3, LSB
  - n+8: Data from modules to right

---

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TURCK Industrial I/O piconet Products

Temperature Input Modules

- Rugged, Fully Potted Stations
- IP 67 Protection
- Small Footprint
- Modular I/O System

Electrical

- Operating Current: <75 mA plus sensor currents (from UB)
- Input Type: Pt100, Pt200, Pt500, Pt1000, Ni100, Ni120, Ni1000 RTDs
  (0009) Type J,K,L,B,E,N,R,S,T,U thermocouples (0004)

Power Distribution

- Inputs: UB Power supply

Mechanical

- Operating Temperature: 0 to +55 °C (+32 to +131°F)
- Protection: IEC IP 67
- Vibration: IEC 68, part 2-6

Material

- Connectors: Nickel-plated brass
- Housing: Nylon

Diagnostics (Physical)

- LEDs to indicate status of module and system communication

---

SNNE-40A-0004
SNNE-40A-0009

---

Aux. Power

---

1 = UB+
2 = UL+
3 = GND
4 = GND

---

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## Inputs

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Input Group</th>
<th>Connection</th>
<th>Channels</th>
<th>Input Description</th>
<th>Sensors Style</th>
<th>Output Style</th>
<th>Time Domain</th>
<th>Single Watch</th>
<th>Multiple Watch</th>
<th>Interfacing Modules</th>
<th>I/O Map</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNNE-40A-0004</td>
<td>4</td>
<td>0-3 TC</td>
<td>1</td>
<td>Thermocouple</td>
<td>1 TC</td>
<td>1 RTD</td>
<td>1</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>SNNE-40A-0009</td>
<td>4</td>
<td>0-3 RTD</td>
<td>1</td>
<td>RTD</td>
<td>1 RTD</td>
<td>1 RTD</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Input/Output Connectors

**TC**

- Mating cordset: RK 4.5T*-RS 4.5T

**RTD**

- Mating cordset: RK 4.5T*-RS 4.5T

### I/O Data Map 1

<table>
<thead>
<tr>
<th>Byte</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1</td>
<td></td>
<td></td>
<td></td>
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<td>a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>n2</td>
<td></td>
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<td>n3</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>n4</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n5</td>
<td></td>
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<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>n8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Data from modules to left
- Channel 0, MSB
- Channel 0, LSB
- Channel 1, MSB
- Channel 1, LSB
- Channel 2, MSB
- Channel 2, LSB
- Channel 3, MSB
- Channel 3, LSB
- Data from modules to right

---

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TURCK Industrial I/O piconet Products

Analog Output Stations

- Rugged, Fully Potted Stations
- IP 67 Protection
- Small Footprint
- Modular I/O System

Electrical
- Operating Current: ≤ 75 mA (from \( U_p \))

Power Distribution
- Outputs: \( U_p \), Power supply

Mechanical
- Operating Temperature: 0 to +55 °C (+32 to +131°F)
- Protection: IEC IP 67
- Vibration: IEC 68, part 2-6

Material
- Connectors: Nickel-plated brass
- Housing: Nylon

Diagnostics (Physical)
- LEDs to indicate status of module and system communication

SNNE-04A-0009
SNNE-04A-0007

---

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### Industrial Automation

#### Outputs Data

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Output Count</th>
<th>Connectors</th>
<th>Panel</th>
<th>Configuration Options</th>
<th>Output Style</th>
<th>Individual Diagnostics</th>
<th>Wires/Coaxial</th>
<th>Device Width</th>
<th>IO Map</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNK-444-0009</td>
<td>4</td>
<td>0-3 AOI</td>
<td>1</td>
<td>0 to 20 mA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>SNK-444-0007</td>
<td>4</td>
<td>0-3 AOV</td>
<td>1</td>
<td>-100 to 10 V</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

#### Output Connectors

**AOV**

- Mating cordset: RK 4.5T-* RS 4.5T

**AOI**

- Mating cordset: RK 4.5T-* RS 4.5T

#### I/O Data Map 1

<table>
<thead>
<tr>
<th>Out</th>
<th>Byte 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>–1</td>
<td>Data for modules to left</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n0</td>
<td>Channel 0, MSB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n1</td>
<td>Channel 0, LSB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n2</td>
<td>Channel 1, MSB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n3</td>
<td>Channel 1, LSB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n4</td>
<td>Channel 2, MSB</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>n5</td>
<td>Channel 2, LSB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n6</td>
<td>Channel 3, MSB</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>n7</td>
<td>Channel 3, LSB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n8</td>
<td>Data for modules to right</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TURCK
Industrial I/O piconet Products

Counter Station

- Rugged, Fully Potted Stations
- Small Footprint
- IP 67 Protection
- Automatic Baud Rate Sensing

Electrical

- Operating Current: <75 mA plus device currents (from U₀)
- Input Current: <500 mA total of all sensors (from U₀)
- Output Current: <500 mA per output (from U₀)
- Maximum Frequency: 100 KHz

Power Distribution

- Inputs: U₀ Power supply
- Outputs: U₀ Power supply

Mechanical

- Operating Temperature: 0 to +55°C (+32 to +131°F)
- Protection: IEC IP 67
- Vibration: IEC 68, part 2-6

Material

- Connectors: Nickel-plated brass
- Housing: Nylon

Diagnostics (Physical)

- One LED indicates an I/O fault for the entire station
- LEDs to indicate status of piconet communication

---

<table>
<thead>
<tr>
<th>Aux. Power</th>
<th>picofast Male</th>
<th>picofast Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 = U₀⁺</td>
<td>1 = 2 = 3 = U₀⁺</td>
</tr>
<tr>
<td></td>
<td>2 = U₀⁻</td>
<td>2 = 3 = Gndb</td>
</tr>
<tr>
<td></td>
<td>3 = Gnd₀</td>
<td>4 = Gnd₀</td>
</tr>
<tr>
<td></td>
<td>4 = Power</td>
<td></td>
</tr>
</tbody>
</table>

---

SNNE-0202D-0003

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### Inputs

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Counters</th>
<th>Connectors</th>
<th>Pinout</th>
<th>Inputs</th>
<th>Connectors</th>
<th>Pinout</th>
<th>Outputs</th>
<th>Connectors</th>
<th>Pinout</th>
<th>Diagnostics</th>
<th>I/O Map</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNNE-0202D-0003</td>
<td>2</td>
<td>0-3</td>
<td>PCNT 2</td>
<td>Counter</td>
<td>2</td>
<td>0-3</td>
<td>PCNT</td>
<td>2</td>
<td>0.5 A</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

#### Input/Output Connectors

- **Mating cordset:** RK 4.5T-*RS 4.5T

#### I/O Data Map 1

<table>
<thead>
<tr>
<th>Byte</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>In</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Out</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Mating Cordsets

- **Mating cordset:** RK 4.5T-*RS 4.5T

#### I/O Data Map 2

<table>
<thead>
<tr>
<th>Byte</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>In</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Out</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TURCK
Industrial I/O piconet Products

SNNE-10S-0001

- Rugged, Fully Potted Stations
- Small Footprint
- IP 67 Protection
- Automatic Baud Rate Sensing

Electrical
- Operating Current: <75 mA plus device currents (from \( U_b \))

Power Distribution
- Inputs: \( U_b \) Power supply

Mechanical
- Operating Temperature: 0 to +55°C (+32 to +131°F)
- Protection: IEC IP 67
- Vibration: IEC 68, part 2-6

Material
- Connectors: Nickel-plated brass
- Housing: Nylon

Diagnostics (Physical)
- One LED indicates an I/O fault for the entire station
- LEDs to indicate status of Piconet communication

---

Incremental Encoder Station

SNNE-10S-0001

- Rugged, Fully Potted Stations
- Small Footprint
- IP 67 Protection
- Automatic Baud Rate Sensing

Electrical
- Operating Current: <75 mA plus device currents (from \( U_b \))

Power Distribution
- Inputs: \( U_b \) Power supply

Mechanical
- Operating Temperature: 0 to +55°C (+32 to +131°F)
- Protection: IEC IP 67
- Vibration: IEC 68, part 2-6

Material
- Connectors: Nickel-plated brass
- Housing: Nylon

Diagnostics (Physical)
- One LED indicates an I/O fault for the entire station
- LEDs to indicate status of Piconet communication

---

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Industrial Automation

Inputs

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Input Count</th>
<th>Connector</th>
<th>Input Count</th>
<th>Input Pinout</th>
<th>Input Connectors</th>
<th>Input Connectors</th>
<th>Input Connectors</th>
<th>Input Connectors</th>
<th>Input Connectors</th>
<th>Input Connectors</th>
<th>Input Connectors</th>
<th>Input Connectors</th>
<th>Input Connectors</th>
<th>Input Connectors</th>
<th>Input Connectors</th>
<th>Input Connectors</th>
<th>Input Connectors</th>
<th>Input Connectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNNE-103-0001</td>
<td>1</td>
<td>0-1</td>
<td>ENC</td>
<td>1 Encoder</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Input/Output Connectors

ENC

1 = V+  
2 = Gate  
3 = Grid  
4 = Latch  
5 = Shield

1 = B  
2 = +5 VDC  
3 = Zero  
4 = Zero  
5 = A  
6 = A  
7 = Status  
8 = B  
9 = NC  
10 = Grid  
11 = Grid  
12 = V+

I/O Data Map 1

<table>
<thead>
<tr>
<th>Dyn</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>In</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Counter - Status</td>
<td></td>
</tr>
<tr>
<td>e+1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Count Value - High (MSB)</td>
<td></td>
</tr>
<tr>
<td>e+2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Count Value - Low (LSB)</td>
<td></td>
</tr>
<tr>
<td>e+3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Data from next modules</td>
<td></td>
</tr>
<tr>
<td>n</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Counter - Control</td>
<td></td>
</tr>
<tr>
<td>e+1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Set Value - High (MSB)</td>
<td></td>
</tr>
<tr>
<td>e+2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Set Value - Low (LSB)</td>
<td></td>
</tr>
<tr>
<td>e+3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Data for next modules</td>
<td></td>
</tr>
<tr>
<td>Out</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Counter - Control</td>
<td></td>
</tr>
<tr>
<td>e+1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Set Value - High (MSB)</td>
<td></td>
</tr>
<tr>
<td>e+2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Set Value - Low (LSB)</td>
<td></td>
</tr>
<tr>
<td>e+3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Data for next modules</td>
<td></td>
</tr>
</tbody>
</table>
TURCK Industrial I/O piconet Products

Serial Interface Modules

- Rugged, Fully Potted Stations
- IP 67 Protection
- Small Footprint
- Modular I/O System

Electrical
- Operating Current: <75 mA (from U_b)

Mechanical
- Operating Temperature: 0 to +55 °C (+32 to +131°F)
- Protection: IEC IP 67
- Vibration: IEC 68, part 2-6

Material
- Connectors: Nickel-plated brass
- Housing: Nylon

Diagnostics (Physical)
- LEDs to indicate status of module and system communication

SNNE-10S-0002
SNNE-10S-0004

![Image of serial interface modules]

µ38 [3.5]
MOUNTING HOLE

Diagnostic LEDs

1.181 [30.0]

4.961 [128.0]

1 = UB+
2 = UL+
3 = GND
4 = GND

Aux. Power

<table>
<thead>
<tr>
<th>picofast Male</th>
<th>picofast Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

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## Industrial Automation

### Input/Output Connectors

- **232**: Mating cordset: RK 4.5T-*-RS 4.5T
- **485**: Mating cordset: RK 4.5T-*-RS 4.5T

### I/O Data Map 1

<table>
<thead>
<tr>
<th>Byte</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>In</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>–1</td>
<td>Data from modules to left</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n</td>
<td>Data Byte 0</td>
<td>n+1</td>
<td>Status</td>
<td>n+2</td>
<td>Data Byte 2</td>
<td>n+3</td>
<td>Data Byte 1</td>
<td>n+4</td>
</tr>
<tr>
<td>Out</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>–1</td>
<td>Data for modules to left</td>
<td>n</td>
<td>Data Byte 0</td>
<td>n+1</td>
<td>Control</td>
<td>n+2</td>
<td>Data Byte 2</td>
<td>n+3</td>
</tr>
</tbody>
</table>

* Note: Default configuration of 3 data bytes shown. Up to 5 data bytes can be transferred. Consult user manual for details.
TURCK Industrial I/O piconet Products

SSI Station

- Rugged, Fully Potted Stations
- IP 67 Protection
- Small Footprint
- Automatic Baud Rate Sensing

Electrical
- Operating Current: <75 mA plus sensor currents (from U_B)

Mechanical
- Operating Temperature: 0 to +55°C (+32 to +131°F)
- Protection: IEC IP 67
- Vibration: IEC 68, part 2-6

Material
- Connectors: Nickel-plated brass
- Housing: Nylon

Diagnostics (Physical)
- One LED indicates an I/O fault for the entire station
- LEDs to indicate status of Piconet communication

SNNE-10S-0005

---

Rugged, Fully Potted Stations
- IP 67 Protection
- Automatic Baud Rate Sensing

Electrical
- Operating Current: <75 mA plus sensor currents (from U_B)

Mechanical
- Operating Temperature: 0 to +55°C (+32 to +131°F)
- Protection: IEC IP 67
- Vibration: IEC 68, part 2-6

Material
- Connectors: Nickel-plated brass
- Housing: Nylon

Diagnostics (Physical)
- One LED indicates an I/O fault for the entire station
- LEDs to indicate status of Piconet communication

---

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# Industrial Automation

## Inputs

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Channel Count</th>
<th>Connectors</th>
<th>Place</th>
<th>Channel Type</th>
<th>Interface Type</th>
<th>Data Bytes per Transaction</th>
<th>Node ID</th>
<th>Individual Diagnostics</th>
<th>Node ID</th>
<th>UV-Map</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNE-105-0005</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>SSI</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Input Connectors

1 = Clock
2 = Clock +
3 = Data +
4 = Data -
5 = NC
6 = NC
7 = NC
8 = NC
9 = NC
10 = NC
11 = V +
12 = Ground

**Mating cordset:**
CKM 12-12-*S817

### I/O Data Map 1

<table>
<thead>
<tr>
<th>In</th>
<th>Byte</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
</tr>
</tbody>
</table>

- n = Data Byte 1
- n1 = Data Byte 0 (LSB)
- n2 = Data Byte 3 (MSB)
- n3 = Data from next modules
- n4 = Data Byte 2

* Note: One additional status byte (in) and control byte (out) may be configured.
## TURCK Industrial I/O piconet Products

### Accessories

<table>
<thead>
<tr>
<th>Housing</th>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clip for Fiber Optic Connections</td>
<td>SFOL-CLIP</td>
<td>Secures fiber optic connectors in place on piconet subnetwork systems.</td>
</tr>
<tr>
<td>Fiber Optic Bridge</td>
<td>SFOB-0001</td>
<td>Power bridge connector for use when close-mounting piconet subnetwork (SNNE) nodes.</td>
</tr>
<tr>
<td>Power Bridge</td>
<td>IPSK94-0.12-SSP4/S90/S2154</td>
<td>Power bridge connector for use when close-mounting piconet subnetwork (SNNE) nodes.</td>
</tr>
<tr>
<td>Programming Cable</td>
<td>ADAPTER CABLE - PICONET</td>
<td>Cable for connecting piconet system to I/O Assistant for commissioning and debugging</td>
</tr>
<tr>
<td>Fiber Optic Cable</td>
<td>SFOL-*M</td>
<td>Fiber optic cable for connecting piconet network devices to IP Link</td>
</tr>
<tr>
<td>Power Distribution Block</td>
<td>8MBM8 4MBM4</td>
<td>Uses minifast power connection and distributes it to M8 connectors for Piconet devices</td>
</tr>
</tbody>
</table>
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Visit our site for new product releases, approvals, white papers, application support and more.