ASCON (Analog Signal CONverter)
Defining ASCON Transducers in simple terms

ASCON transducer is an electronic device that changes one form of energy into another. It converts temperature, voltage and current parameters into V, mV, mA and RS485 outputs.

Which actions are executed?

ASCON transducers measure input parameters and convert them to another signal form continuously.

Input, output and supply parts are electrically isolated from one another in order to provide protective isolation.

It is possible to configure different input ranges and output types by means of adjustment knobs.

Measured values can be transmitted to a PC through serial communication so that real time analog signal monitoring without PLC analog card is possible.

Which market are they used frequently?

- Scada System
- Electric power plants and substations
- Industrial Process
- Energy management systems
- Medium voltage modular cabinets
- Control and safety systems
- Telecontrol systems

Benefits and Advantages

- Serial Data Output
- Extended input range for voltage and current signals
- Extended temperature input range for PT100 and thermocouple sensors
- Easy configuration with knobs
- Excellent linearity
- Electrical isolation with a high test voltage
- Low residual noise
- Highly compact and light weight
- Self-Extinguishing plastic housing
Real Time Analog Signal & Temperature Monitoring

Voltage, current and temperature values which are read by ASCON 352, can be monitored instantaneously by a computer through serial data output. No need to use PLC analog input cards anymore.

Industrial Process Applications

Measurement of temperature is a vital part of instrumentation in petrochemical industries, heating systems, refrigerating applications etc. Thermocouple sensors are often used for their excellent temperature response. ASCON 331 presents best solution with combining TC sensors with PLC/Scada system.

Air conditioning and liquid temperature measurement

RTD’s provide wide temperature input range from -150°C to +800°C when accuracy and stability are a requirement of the customer’s specification in an industrial process in order to keep it in desired degree.

I/O applications

Conversion voltage and current of measurands, integration them with SCADA and RTU system.
<table>
<thead>
<tr>
<th>Specification</th>
<th>ASCON 311</th>
<th>ASCON 321</th>
<th>ASCON 331</th>
<th>ASCON 352</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td>Configurable Signal Transducer</td>
<td>Configurable PT100 Transducer</td>
<td>Configurable Termocouple Transducer</td>
<td>Signal - Temperature Transducer with RS485</td>
</tr>
<tr>
<td><strong>Order Number</strong></td>
<td>602300</td>
<td>602310</td>
<td>602320</td>
<td>602400</td>
</tr>
<tr>
<td><strong>Casing Width (mm)</strong></td>
<td>17.5</td>
<td>17.5</td>
<td>17.5</td>
<td>17.5</td>
</tr>
<tr>
<td><strong>Connection</strong></td>
<td>Screw terminal</td>
<td>Screw terminal</td>
<td>Screw terminal</td>
<td>Screw terminal</td>
</tr>
<tr>
<td><strong>Mounting</strong></td>
<td>Rail Mount</td>
<td>Rail Mount</td>
<td>Rail Mount</td>
<td>Rail Mount</td>
</tr>
<tr>
<td><strong>Supply Voltage</strong></td>
<td>11-30 VDC</td>
<td>11-30 VDC</td>
<td>11-30 VDC</td>
<td>11-30 VDC</td>
</tr>
<tr>
<td><strong>Input Type</strong></td>
<td>DC Voltage and Current (mV, V, mA)</td>
<td>PT100 (2,3,4 wires)</td>
<td>Termocouple (J, K, E, R and S types)</td>
<td>mV, V, mA, PT100 (2, 3 and 4 wire) and Termocouple (J,K,E,R and S types)</td>
</tr>
</tbody>
</table>
| **Input Range**                | 30 signal combinations; 4-20mA, 0-10V, ... etc | -150°C .. 800°C configurable | J : -200°C .. 1200 °C configurable  
K : -200°C .. 1350 °C configurable  
E : -200°C .. 950 °C configurable  
R : -50°C .. 1750 °C configurable  
S : -50°C .. 1750 °C configurable | ASCON 352 involves all input ranges which are indicated in left tables. |
| **Output Type**                | DC Voltage and Current (mV, V, mA) | DC Voltage and Current (mV, V, mA) | DC Voltage and Current (mV, V, mA) | RS485 data output |
| **Output Range**               | 10 signal combinations; 4-20mA, 0-10V, ... etc | 10 signal combinations; 4-20mA, 0-10V, ... etc | 10 signal combinations; 4-20mA, 0-10V, ... etc | - |
| **Isolation**                  | 3 way - 1.5 kV Rms | 3 way - 1.5 kV Rms | 3 way - 1.5 kV Rms | 3 way - 1.5 kV Rms |
| **Communication Protocol**     | -         | -         | -         | Modbus RTU |