

## | SIGNAL CONDITIONING & MODULAR I/O UNITS

Our signal conditioning range removes earth loop problems and provides electrically clean and isolated signal outputs. They can also convert virtually any process signal into high level 4-20mA or Voltage outputs for input into PLC, HMI or other data acquisition systems.

Applications range from the isolation and conversion of process inputs in water utility telemetry panels to using the SC-E-100 Modular I/O system as a temperature compensated water, steam or gas meter. With over 30 years' experience in process measurement and signal conditioning we can isolate and convert almost any process signal.

Modules range from simple single 4-20mA isolators through universal input/output Trip Amplifiers to RS485 or Ethernet I/O systems which allow up to 256 parameters, including temperature, pressure, position, AC and DC voltages and current, to be monitored in real time.

### TYPICAL APPLICATIONS

- Water Industry installations
- System Integrators
- Industrial dosing control
- Sensor conversion & alarming function for sensor OEMs
- PLC I/O expansion system
- Remote monitoring analogue & digital Inputs

### SIGNAL CONDITIONING AND TRIP AMPLIFIERS



Our range of Signal Conditioners accept almost any process signal and provide galvanically isolated 4-20mA or DC voltage outputs:

- Inputs include: mA, mV, AC or DC voltages and a wide range of sensors such as thermocouples, RTDs, strain gauges, load cells, potentiometers and AC current transformers
  - Outputs include standard 4-20mA and 0-10Vdc analogue outputs, relay digital outputs
- Power supply variants include wide range DC and AC voltage options. Custom linearisation and I/O types allow almost all OEM conversion applications to be achieved.



The SC-E-100 Communications Gateway connected to the SC-ISOSLICE range of isolated I/O modules allow virtually any process control variable or equipment to be connected to an Industrial Communications Network. The systems also provide galvanic isolation between the process input and the communications network and system power supply. Communication options include RS232, RS485 and Ethernet. All current readings are held in the SC-E-100 as Modbus registers which are read via the chosen communications port.

- Inputs include: mA, mV, AC or DC voltages and a wide range of sensors such as thermocouples, digital switch inputs and AC current transformers
  - Outputs include standard 4-20mA and 0-10Vdc analogue output and relay digital outputs
- Custom software written for the SC-E-100 allows functions such as mass flow computing and steam pressure/temperature corrections to be achieved.

## Key Products

### SC-ISOCON-6 and SC-ISOCON-3 Signal Converters

The new SC-ISOCON6 Isolating Signal Converter can accept a wide range of inputs including 4-20mA, thermocouple, RTD and voltage signals. The units produce a high level DC output of either voltage or current. Full 3 port isolation is standard as is an isolated transmitter supply which can be used to power any standard 2-wire 4-20mA transmitter.



- Universal input/output- user selectable
- mA, voltage, thermocouple & RTD inputs
- Dual output unit available see Dualcon
- Selectable mA or voltage output
- 12-32Vac or 12-36Vdc supply
- Isolated transmitter supply
- Very high accuracy, low cost
- Only 12.5mm wide on DIN rail

User selectable inputs:

- mA, voltage, thermocouples, RTD, potentiometers etc.
- 12-32Vac or 12-36Vdc supply Isolated transmitter
- Supply only 12.5mm wide on DIN rail
- 31 point custom linearization and other OEM options available

### SC-4002ALM-6 Universal input Trip Amplifier

The SC4002ALM-6 trip-amplifier can accept a wide range of inputs including 4- 20mA, thermocouple, RTD and voltage types. The unit can have up to two relay outputs and each can operate as a high or low trip. The unit also produces an isolated high level output of mA or DC voltage. The relay outputs are single pole changeover relays with mains voltage rating. Each trip can be configured so that the alarm condition can be above or below the setpoint.



- Wide range of user configurable inputs
- Configurable trip action and fail-safe mode
- Isolated re-transmission
- Isolated input stage and isolated transmitter supply
- LED display of input, setpoints and configuration

The relays can be energised or de-energised in the alarm condition, satisfying fail-safe and non-fail safe applications.

### SC-E-100 Communications Gateway

The SC-E-100 Ethernet Gateway module provides a straightforward method of interfacing analogue and digital process parameters to an Ethernet or RS232/485 network. The SC-E-100 allows the user to view the status of the individual inputs via the front panel display. The SC-E-100 unit can have one or two analogue inputs but the system can be expanded through the use of the optional SC-ISOSLICE slice I/O modules.



These modules connect automatically via the DIN rail mounted bus connector, allowing the easy addition and removal of extra I/O. A built-in display allows local monitoring of the individual inputs and outputs, a useful commissioning and operations tool. Additionally, the Ethernet version has a built-in webserver which can be used to alter the configuration via any standard web browser. Using the SC-E-100 is a simple way to implement an Ethernet measurement and control system or it can be used to add additional inputs and outputs to an existing Ethernet or RS232/485 installation.

- MODBUS TCP or RTU protocol
- Ethernet or RS232/485 comms Port
- Universal configurable analogue input
- IsoSlice I/O system for additional I/O
- Built in web-page for live monitoring of data

Systems with up to 256 process parameters inputs can be implemented with an SC-E-100 and up to 32 SC-ISOSLICE I/O modules.

These values can be read by any software package or PLC with standard Modbus TCP or RTU drivers.