Process Protection
Acoustic sensors for material flow monitoring

SITRANS CU02 control unit

Overview

SITRANS CU02 is an alarm control unit, for use with SITRANS AS100 acoustic sensor, that provides reliable continuous protection for bulk solids flow.

Benefits

- 4 to 20 mA output
- Two programmable relays
- Adjustable independent time delay for each relay
- Adjustable start-up time delay
- DIN rail mounting provides easy installation
- Built-in password protection to parameters

Application

SITRANS CU02 receives a 0 to 10 V DC input signal from the SITRANS AS100 sensor, providing relay and analog outputs for interface into a process.

- Key applications: with SITRANS AS100 for bulk solids flow

Function

The system can be readily configured for set points indicating such conditions as high flow, low flow or no flow. Alternatively, it can be added to a control loop via a 4 to 20 mA isolated output for trend monitoring proportional to the signal from the sensor.

Two relays are fully programmable and independent of each other and can be used to operate an alarm or control device. Alarming may be provided above or below a setpoint or within a band. Readings are also displayed locally by the SITRANS CU02 on its LCD.

The SITRANS CU02 may be mounted up to 500 m (1 500 ft) from the sensor.

Technical specifications

Mode of operation	
Measuring principle	Controller for acoustic sensing (SITRANS AS100)
Typical application	Connects to SITRANS AS100 to detect burst filter bag
Input	0 … 10 V DC, from sensor
Output	
Output signal	4 … 20 mA isolated output, 2 Form C relays - latching or non-latching - 5 amp at 250 V AC non-inductive
Sensor excitation	26 V DC
Max. load	750 Ω
Rated operating conditions	
Installation conditions	
• Location	Indoor
Ambient conditions	
• Ambient temperature for enclosure	-20 … +50 °C (-4 … +122 °F)
• Relative humidity	80 % for temperatures up to 50 °C (122 °F)
• Degree of protection	IP20
• Installation category	II
• Pollution degree	2
Design	
Weight	550 g (18 oz)
Dimensions (W x H x D)	55 x 75 x 110 mm (2.2 x 3 x 4.4 inch)
Material enclosure	Polycarbonate
Mounting	DIN Rail (DIN 46277 or DIN EN 50022), or wall mount, up to 500 m (1 500 ft) from sensor
Cable	2 twisted pair, 24 AWG (22 mm²), shielded. Mount up to 500 m (1 500 ft) from sensor
Display	Liquid crystal, three digits, 9 mm (0.35 inch), high and multi-segment graphic symbols for operation status
Power supply	
Supply voltage	100, 115, 200, 230 V AC ± 15 %, 50/60 Hz, factory set
Power consumption	Max. 10 VA
Approvals	CSA$_{US/C}$, CE, RCM, EAC

Selection and Ordering data	Article No.
SITRANS CU02 Control Unit	**7 MH7 5 6 2 -**
Alarm control unit for use with SITRANS AS100 acoustic sensor to provide reliable continuous protection for bulk solid flow	■■■
↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	
Power Supply	
100 V AC ●	1
115 V AC ●	2
200 V AC ●	3
230 V AC ●	4
Enclosure	
Standard DIN Rail ●	A
Approvals	
CSA_{US/C}, CE, RCM ●	A

● We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ●. For details see page 9/5 in the appendix.

Selection and Ordering data	Order code
Further designs	
Please add **"-Z"** to Article No. and specify Order code(s).	
Manufacturer's test certificate: According to EN 10204-2.2 ●	**C11**
Acrylic coated, stainless steel tag [38 x 51 mm (1.5 x 2 inch)]: Measuring-point number/identification (max. 16 characters), specify in plain text ●	**Y18**

Operating Instructions	Article No.
English	**7ML1998-5DN01**
German	**7ML1998-5DN31**

Note: The operating instructions should be ordered as a separate item on the order.

All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation

This device is shipped with the Siemens Level and Weighing manual DVD containing the complete operating instructions library.

● We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ●. For details see page 9/5 in the appendix.

■ **Dimensional drawings**
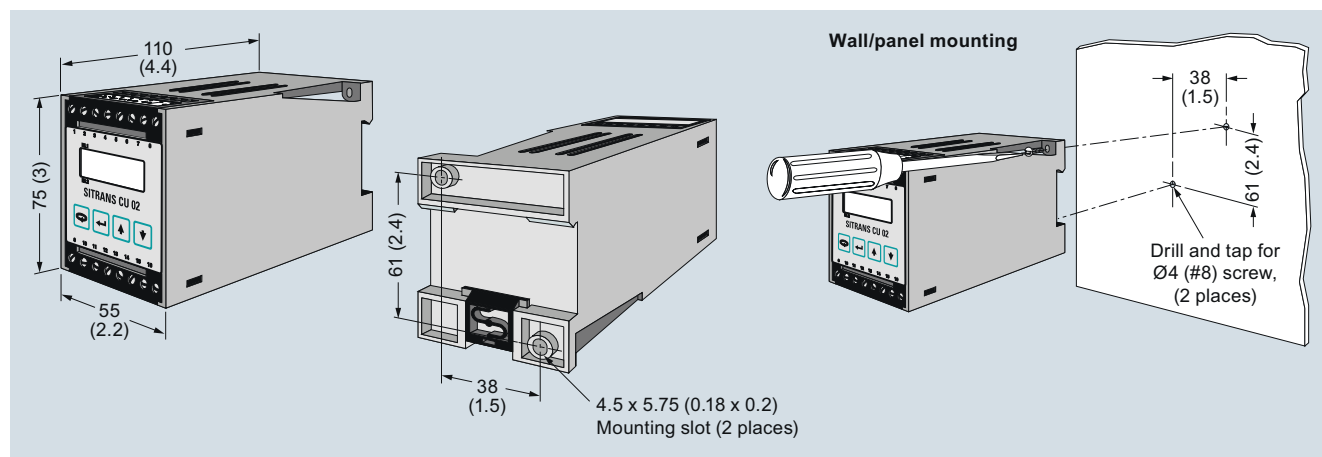
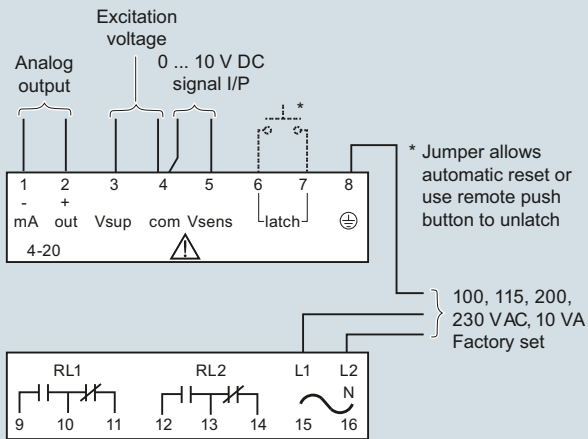SITRANS CU02, dimensions in mm (inch)

Process Protection

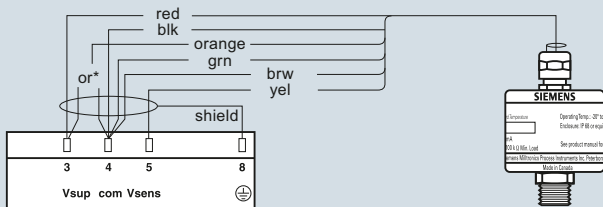Acoustic sensors for material flow monitoring

SITRANS CU02 control unit

■ **Schematics**

SITRANS CU02 connections
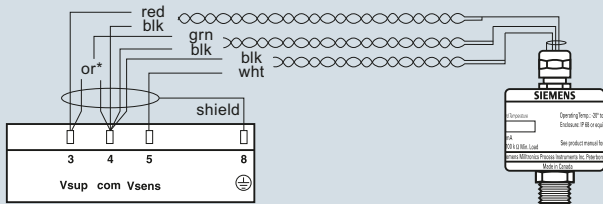
Mounting
Installation shall only be performed by qualified personnel and in accordance with local governing regulations.
This product is susceptible to electrostatic shock. Follow proper grounding procedures.

Interconnection
All field wiring must have insulation suitable for at least 250 V.
Relay contact terminals are for use with equipment having no accessible live parts and wiring having insulation suitable for at least 250 V.
The maximum allowable working voltage between adjacent relay contacts shall be 250 V. If sensor case is grounded, do not connect shield of cable to SITRANS CU02 ground terminal.