

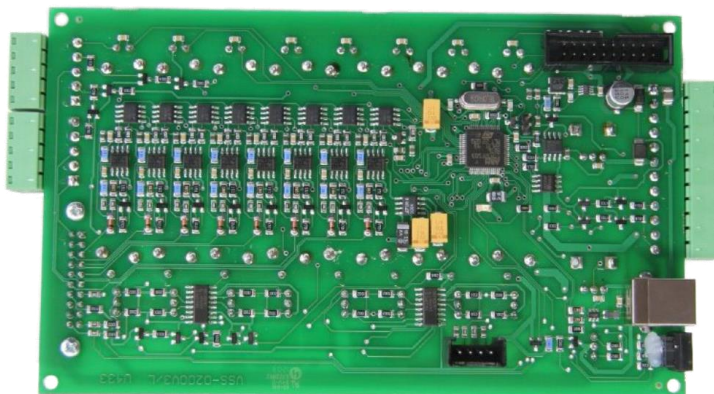


VELOMAT

MESSELEKTRONIK GmbH



Sensor simulator VSS-0100



Sensor simulator VSS-0100



The VSS-0100 device is used to simulate 8 sensors that supply current signals of 1 ... 9 mA or 4 ... 20 mA.

The system has the following features:

- One stable slider per sensor channel
- Clock signal simulation per channel from 2 switchable clock generators for simulating NAMUR sensors
- 2 clock generators with adjustable frequency range
- 4 connection options for the target system
- Calibration check signal simulation per connection
- USB connection for configuring the system (optional function)
- Rotary switch for selecting function modes

Technical Data

Power supply:	40 mA at 12 V DC supply without signal currents
Operating voltage U_b :	10 ... 28 V DC
USB:	virtual COM interface for realising special functions
Current output:	0 ... approx. 30 mA
Load resistance:	$R_b < (U_b - 5 \text{ V}) / 30 \text{ mA}$
CC signals:	internal pull UP 4k7
FREQ signal:	$U_{on} \geq U_b - 0,5 \text{ V}$ $U_{off} \leq 0,5 \text{ V}$ $I_{MAX} = 50 \text{ mA}$

Element	Signal	Function
POT 1	I-OUT 1	Current output 0.5 ... 9.5 mA or 3.5 ... 20.5 mA
POT 2	I-OUT 2	Current output 0.5 ... 9.5 mA or 3.5 ... 20.5 mA
POT 3	I-OUT 3	Current output 0.5 ... 9.5 mA or 3.5 ... 20.5 mA
POT 4	I-OUT 4	Current output 0.5 ... 9.5 mA or 3.5 ... 20.5 mA
POT 5	I-OUT 5	Current output 0.5 ... 9.5 mA or 3.5 ... 20.5 mA
POT 6	I-OUT 6	Current output 0.5 ... 9.5 mA or 3.5 ... 20.5 mA
POT 7	I-OUT 7	Current output 0.5 ... 9.5 mA or 3.5 ... 20.5 mA
POT 8	I-OUT 8	Current output 0.5 ... 9.5 mA or 3.5 ... 20.5 mA
POT 9	Generator 1	0 ... 100 Hz
POT 10	Generator 2	0 ... 100 Hz
SW 1	IOUT 1	Clock sensor simulation Generator 1 - OFF - Generator 2
SW 2	IOUT 2	Clock sensor simulation Generator 1 - OFF - Generator 2
SW 3	IOUT 3	Clock sensor simulation Generator 1 - OFF - Generator 2
SW 4	IOUT 4	Clock sensor simulation Generator 1 - OFF - Generator 2
SW 5	IOUT 5	Clock sensor simulation Generator 1 - OFF - Generator 2
SW 6	IOUT 6	Clock sensor simulation Generator 1 - OFF - Generator 2
SW 7	IOUT 7	Clock sensor simulation Generator 1 - OFF - Generator 2
SW 8	IOUT 8	Clock sensor simulation Generator 1 - OFF - Generator 2
SW 9	FREQU	Clock signal on X1 - 14 Generator 1 - OFF - Generator 2

Pin-assignment

Connection X1

Contact	Signal	Function
1, 2	+12 V	Power supply through target system
3, 4	GND	Power supply through target system
5	I-OUT 1	Current output 1
6	I-OUT 2	Current output 2
7	I-OUT 3	Current output 3
8	I-OUT 4	Current output 4
9	I-OUT 5	Current output 5
10	I-OUT 6	Current output 6
11	I-OUT 7	Current output 7
12	I-OUT 8	Current output 8
13	FREQ	Clock signal output active +12 V / active GND
14	CC_0	Calibration check for signal 1-8
15	GND	Signal reference Coding bridge 1 ... 9 mA / 4 ... 20 mA
19	MODE 9 mA	Coding bridge to GND for 1 ... 9 mA operation
20	MODE 20 mA	Coding bridge to GND for 4 ... 20 mA operation

Connection X2

Contact	Signal	Function
X2-1	+12 V	Power supply through target system
X2-2	GND	GND Power supply through target system
X2-3	I-OUT 7	Current output 7
X2-4	CC_7	Calibration check for IOU7 7
X2-5	GND	GND signal

Connection X3

Contact	Signal	Function
X3-1	+12 V	Power supply through target system
X3-2	GND	Power supply through target system
X3-3	I-OUT 8	Current output 8
X3-4	CC_8	Calibration check for IOU8 8
X3-5	GND	GND signal

Connection X4

Contact	Signal	Function
1	+12 V	Power supply through target system
2	I-OUT 1	Current output 1
3	I-OUT 2	Current output 2
4	I-OUT 3	Current output 3
5	I-OUT 4	Current output 4
6	GND	GND Power supply through target system
7	I-OUT 5	Current output 5
8	I-OUT 6	Current output 6
9	CC_1	Calibration check for IOU5 5 / 6
10	I-OUT 7	Current output 7
11	I-OUT 8	Current output 8
12	CC_2	Calibration check for IOU7 7 / 8

Preselection of the standard output range

A rotary coding switch is available for selecting simulation modes. Depending on its position, different modes can be selected.

Position	Function
0	MODE 1 ... 9 mA Output 0.5 ... 9.5 mA in the setting range of the potentiometer
1	Not used
2	MODE 4 ... 20 mA Output 3,5 ... 20,5 mA in the setting range of the potentiometer
3	Not used
4	Special mode 1
5	Not used
6	Special mode 2
7	Not used
8	Special mode 3
9	Not used
A	Special mode 4
B	Not used
C	Special mode 5
D	Not used
E	Firmware-Update
F	Not used