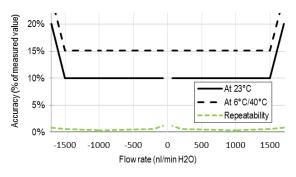
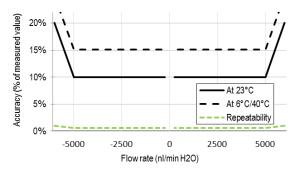


# 2 Specifications Charts

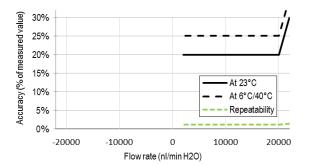




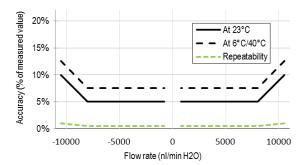
SLG-0075 Precision Mode Relative Accuracy with H<sub>2</sub>O

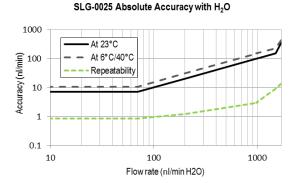


SLG-0075 Extended Mode Relative Accuracy with H<sub>2</sub>O

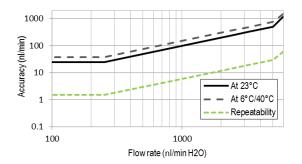


SLG-0150 Relative Accuracy with H<sub>2</sub>O

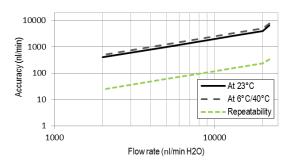




SLG-0075 Precision Mode Absolute Accuracy with  $\rm H_{2}O$ 



SLG-0075 Extended Mode Absolute Accuracy with H<sub>2</sub>O



SLG-0150 Absolute Accuracy with H<sub>2</sub>O

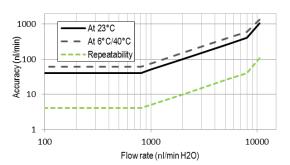


Figure 1: Flow meter accuracy and repeatability across the flow range. Relative error in % of measured value (left column) and absolute error in nl/min (right column) for H<sub>2</sub>O



# 3 Communication with the Sensor

The SLG flow meter shows bidirectional, linear transfer characteristics. The product comes fully calibrated for water.

Digital Sampling Time, 16 bit	74 ms
Digital Sampling Time, 9 bit	1 ms

### 3.1 Electrical Specifications

Table 2: DC Characteristics

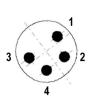
Parameter	Conditions	Min.	Тур.	Max.	Units
Power Supply DC, VDD	Sensor only	4	5	6	V
	w. SCC1-RS485	4	5	6	V
	w. SCC1-Analog	12	24	36	V
Operating Current	VDD = 4-6 V		5.1		mA
	w. SCC1-RS485		20	70	mA
	w. SCC1-Analog		4.3		mA

## 3.2 Electrical Connector and Pinout

The flow meter is equipped with a male connector type M8, 4-pin, threaded lock according to IEC 61076-2-101 (Ed. 1)/ IEC 60947-5-2, and is compatible with Sensirion's SCC1 interface cables.

Table 3: Electrical pinout

Pin	
1	SDA (data)
2	GND
3	VDD
4	SCL (clock)



### 3.3 Communication via USB cable

The Sensirion USB Sensor Cable provides an easy to use USB Interface for laboratory and desktop use.

For further information please see the SCC1-USB Sensor Cable datasheet, available on www.sensirion.com/liquidflow-download.

### 3.4 Digital Communication via RS485-Bus

The SCC1-RS485 Sensor Cable for flow sensors allows the communication via RS485 interface for use in a demanding industrial automation environment. In addition to the standard commands available in the I<sup>2</sup>C interface of the sensor, the incorporated microcontroller of the cable provides more complex logic such as a dispense volume totalizer, automatic dispense detection, automatic heater control and data buffer for asynchronous read-out.

For further information please see the SCC1-RS485 Sensor Cable datasheet, available on www.sensirion.com/liquidflow-download.

## 3.5 Analog Communication

The SCC1-ANALOG Sensor Cable allows simple and quick readout of Sensirion's liquid flow meters by converting the digital sensor reading to a 0...10.5 V analog voltage output. Additionally, a digital (high/low) output with two different modes of operation is available (Flow Switch / Volume Counter).

For further information please see the SCC1-Analog Sensor Cable datasheet, available on www.sensirion.com/liguidflow-download.

### 3.6 Digital Communication via I<sup>2</sup>C-Bus

Digital communication between a master and the SLI sensor runs via the standard I<sup>2</sup>C-interface. The physical interface consists of two bus lines, a data line (SDA) and a clock line (SCL) which need to be connected via pull-up resistors to the bus voltage of the system.

These lines can be used on 3.3V or 5.0V level with a clock frequency of 100 kHz. For the detailed specifications of this I<sup>2</sup>C communication, please refer to specific I<sup>2</sup>C Application Notes from Sensirion.

Parameter	Min.	Тур.	Max.	Units
I <sup>2</sup> C Bus Clock Frequency	100			kHz
Output Voltage Low (SDA/SCL), I <sub>sink</sub> = 6mA		0.1	0.5	V
Low Level Output Current (SDA/SCL)			6	mA
High Level Input Voltage (SDA/SCL)	2.0			V
Low Level Input Voltage (SDA/SCL)			1.0	V

#### Table 4: I<sup>2</sup>C Output Characteristics