Application Note for Sensirion Mass Flow Meters
Extended I²C Command Set for the SFM3xxx Series

Summary

This document provides an extended list of I²C commands for the SFM3xxx Series Mass Flow Meters. As such, it is a supplement to the application note "I²C Functional Description for SFM3000 Series".

1. Extended Command Set

Task	Command [16 bit]	# of bytes to read back	Detailed Command Description
Start flow measurement	0x1000	2	Start continuous measurement and/or move internal pointer to flow measurement result register
Start temperature measurement*	0x1001	2	Start continuous measurement and/or move internal pointer to temperature measurement result register. Bit <1:0> are always zero.
Read scale factor	0x30DE	2	Combining both bytes yields the flow scale factor
Read offset	0x30DF	2	Combining both bytes yields the flow offset
Read article number	0x31E3	2	In order to read out the product type/article number, two commands have to be sent to the sensor resulting in 4 bytes of data (bits <31:0>). The command 0x31E3 results in the first two bytes (bits <31:16>) followed by command 0x31E4 with another two bytes (bits <15:0>).
	0x31E4	2	
Read serial number	0x31AE	2	In order to read out the serial number, two commands have to be sent to the sensor resulting in 4 bytes of data (bits <31:0>). The command 0x31AE results in the first two bytes (bits <31:16>) followed by command 0x31AF with another two bytes (bits <15:0>).
	0x31AF	2	
Soft reset	0x2000	NA	Soft reset command

SFM3xxx-AW versions only! There is an additional EEPROM on the SFM3300-AW and SFM3400-AW to allow storage of customer-specific data (e.g. usage hours). Please see all details in the datasheet of the EEPROM. The EEPROM is of type 24LC01BT-I/MC. No additional validation or modification of EEPROM settings has been performed by Sensirion.

* Allows read out of the chip temperature. However, it is important to understand that the sensor temperature not necessarily reflects the temperature of the gas flowing through the sensor. See additional application note.

2. Revision history

Date	Author	Version	Changes
January 2019	GKLI/DAT	1.0	First release

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