

Engineering Change Notice



Model: MS-80SH

Effective: 07/2023

Impacted Serial Number(s): S23038501~

Thank you very much for using EKO sensors & instruments.

We would like to inform you of the following changes to the MS-80SH:

1. Cable wiring for SDI-12 output
2. Method of switching between Modbus RTU/SDI-12 communication modes
3. Update to 'Hibi' software with connected MS-80SH units S23038501 and later (Ver.1.1.35.0)

Please see the detailed explanation of each point below.

1. Change of cable wiring for SDI-12 Output

Cable wiring for SDI-12 Data will be changed as follows (see Table 1 and Figures 1 and 2)

Before change: S23038500 or earlier: Brown/White/Blue

After change: S23038501 or later: Brown/White/Gray

No.	Wire Color	Modbus RTU	SDI-12	
			Serial Number S23038500 or earlier	Serial Number S23038501 or later
1	Brown (+)	5VDC(*) or DC8~30V(+)	DC12V	DC12V
2	White (-)	GND /RS485GND	GND	GND
3	Blue	RS485 +	SDI-12 Data	---
4	Black	RS485 -	---	---
5	Gray	---	---	SDI-12 Data
Shield	Shield	FG	FG	FG

(*)Dome heating functionality is not available when operating with a 5VDC power supply.

Table 1: Cable Color Codes

Before change: MS-80SH Wiring for SDI-12 output (S23038500 or earlier)

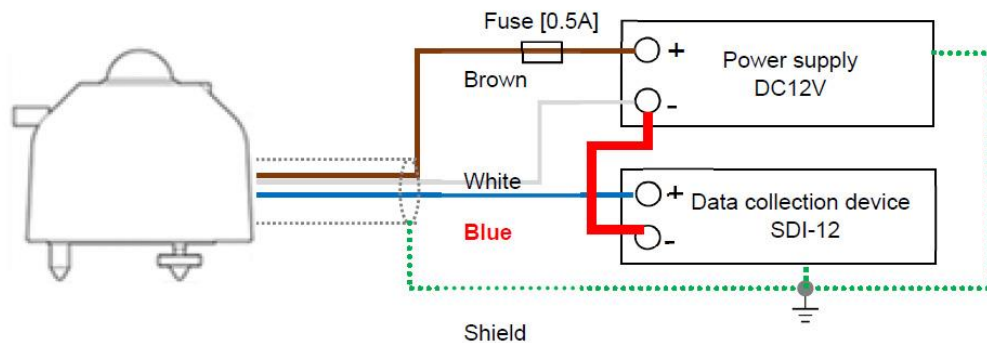


Figure 1. How to connect MS-80SH for SDI-12 (S23038500 or earlier)

After change: MS-80SH Wiring for SDI-12 output (S23038501 or later)

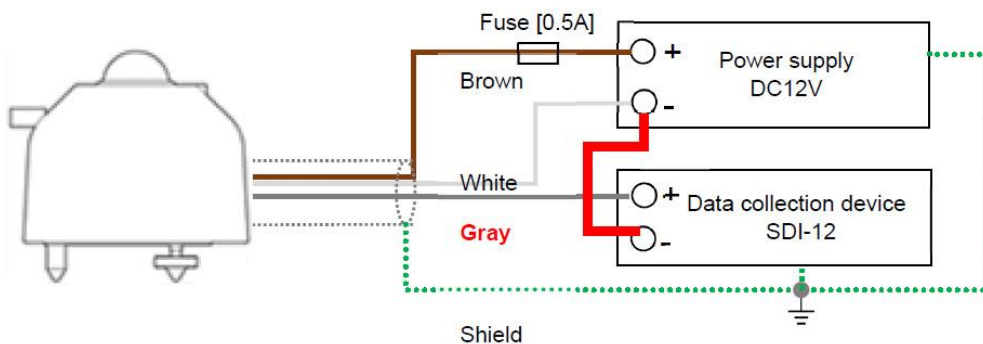


Figure 2. How to connect MS-80SH for SDI-12

2. Change of method for switching between Modbus RTU/SDI-12

The current MS-80SH (S23038500 or earlier)'s default communication mode is Modbus RTU, and can be switched to SDI-12 via the Hibi software settings.

However, for MS-80SH units with a serial number of 'S23038501' or later, there is no default communication mode. Simply connect the wiring of your desired output, and the appropriate mode (Modbus RTU or SDI-12) will automatically be recognized and used.

When switching the communication mode, first turn off the MS-80SH, then change the wiring (see Table 2 below).

	Default mode	Method of switching communication modes
S23038500 or earlier	Modbus RTU	Change settings via 'Hibi' software
S23038501 or later	None	Change of wiring (The power must be turned off)

Table 2: Method of switching communication modes

3. Update to Hibi software → Ver. 1.1.35.0

For MS-80SH units with a serial number of 'S23038501' or later, please use the latest version of the Hibi software (Ver. 1.1.35.0), which can be downloaded from the MS-80SH Product Page.

When using this latest version of Hibi with an 'S23038501' or later MS-80SH unit connected, the Settings screen will no longer allow for switching communication modes between Modbus and SDI-12 because the mode will now be automatically recognized by changing the wiring (see Figures 3 and 4 below).

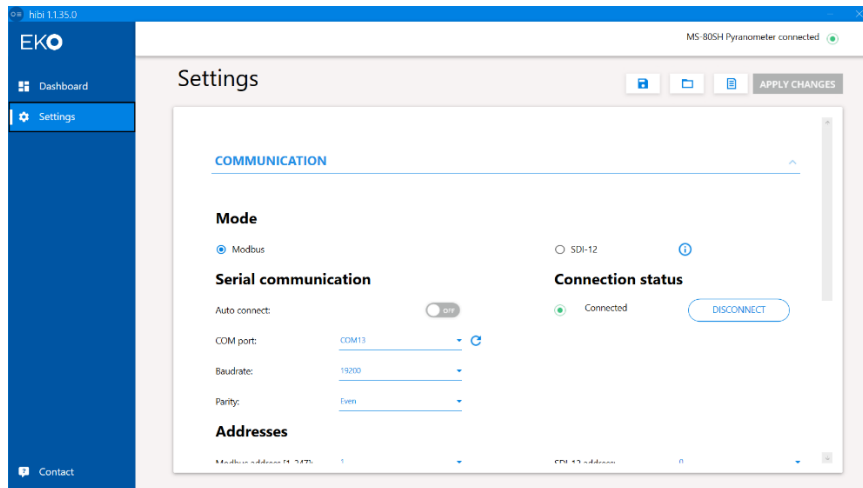


Figure 3. Hibi communication setting screen prior to change

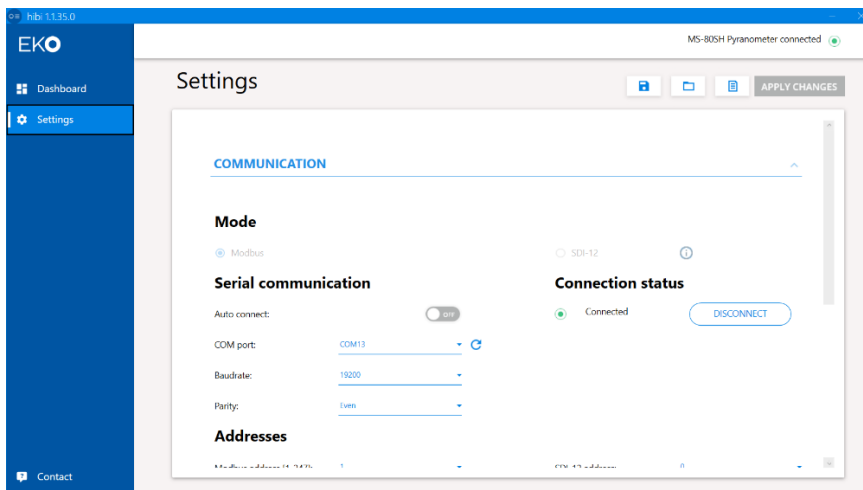


Figure 4. Hibi communication setting screen after change (S23038501 or later)

If you have any questions about the changes described above, please contact EKO Instruments.

<https://www.eko-instruments.com/contact>

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