

E2007-HF Heat Flux Transmitter

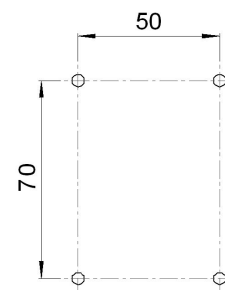


Features

- Industrial IP65 protected enclosure
- Two 0-10 V analog outputs
- RS485 Modbus RTU digital interface
- Range of high accuracy heat flux sensors

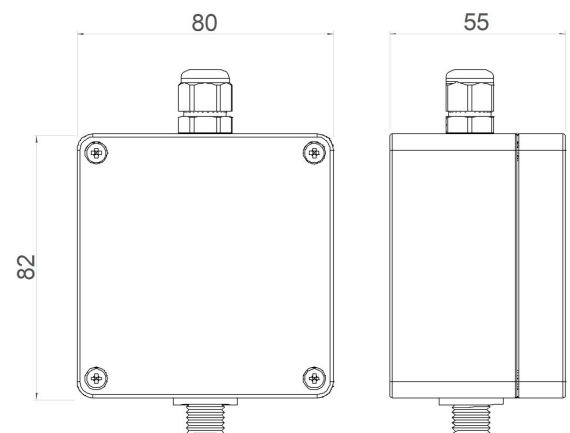
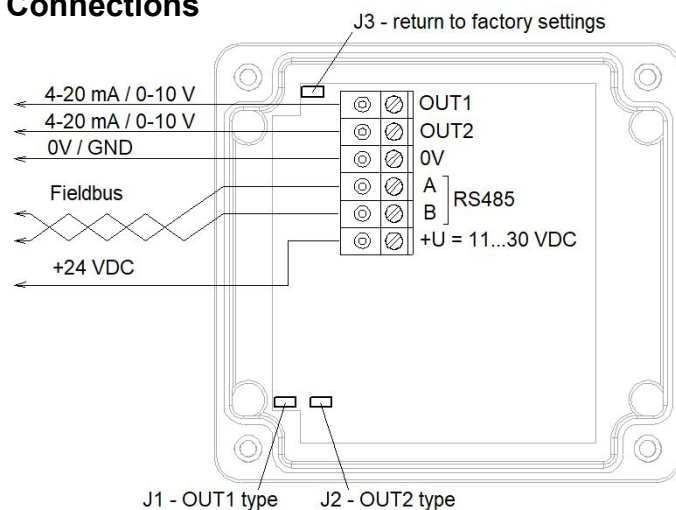
Specifications

Sensor probe types	Hukseflux HFP series Heat flux sensors
Measurement range (RS485 interface)	$\pm 500 \text{ W/m}^2$ (HFP03 sensor) $\pm 2000 \text{ W/m}^2$ (HFP01 sensor)
Resolution	$0,01 \text{ W/m}^2$
Warm-up time	$\leq 1 \text{ min}$
Digital interface	RS485, Modbus RTU protocol, no galvanic isolation
Analog outputs	$2 \times 0-10 \text{ V}$
Power supply	12...36 VDC (default), 24 VDC option
Probe connector	M12, type A, 4 pole
Weatherproof enclosure	dark grey ABS plastic $80 \times 82 \times 55 \text{ mm}$, wall mount, protection class IP65
Operating conditions	$-40 \dots +85 \text{ }^\circ\text{C}$, $0 \dots 95 \text{ \%RH}$, non-condensing
EMC Emissions	to EN 61000-6-3, EN 61326-1
EMC Immunity	to EN 61000-6-1, EN 61000-6-2



Mounting holes $\varnothing 4 \text{ mm}$

Connections



Communication settings	Permitted values	Default
Supported baudrates	1200, 2400, 4800, 9600, 19200, 38400, 57600	9600
Data bits	8	8
Parity	none, odd, even	none
Stop bits	1, 2	1
Protocol	Modbus RTU	
Supported Modbus functions	03 - read multiple registers 06 - write single register	
Error codes	01 - illegal function 02 - illegal data address 03 - illegal data value 04 - slave device failure	

Modbus holding registers (decimal, 1-based)			
Register	Type	Parameter	Unit
40005	RW, unsigned integer	Slave ID [1...247], default 1	-
40006	RW, unsigned integer	Baud rate, default 9600	baud
40007	RW, unsigned integer	response delay [1...255], default 10	ms
40008	RW, unsigned integer	stop and parity bits options [1,2,3,4], default 1	1 – no parity bit, 1 stop bit 2 – no parity bit, 2 stop bits 3 – odd parity, 1 stop bit 4 – even parity, 1 stop bit
40018	RW, unsigned integer	write dec '42330' / hex 'A55A' to restart	-
40169	RW*, unsigned integer	integrating time [0...32000], default 30	s
40260	R, signed integer	Heat flux	0,01 W/m ² (XXX = X,XX W/m ²)

NB! New Slave ID, baud rate and stop bits values apply after restart

* integrating time can be changed by authorized persons only using 'factory key'

Analog outputs			
Output	Type	Parameter	Scale
OUT1	0-10 V ($R_L > 250 \text{ k}\Omega$)	Heat flux	-10 - +10 W/m ²
OUT2	0-10 V ($R_L > 250 \text{ k}\Omega$)	Heat flux	-10 - +10 W/m ²

Warranty

This product is warranted to be free from defects in material and workmanship for a period of one year from the date of original sale. During this warranty period Manufacturer will, at its option, either repair or replace product that proves to be defective. This warranty is void if the product has been operated in conditions outside ranges specified by Manufacturer or damaged by customer error or negligence or if there has been an unauthorized modification.