

gSKIN® Heat Flux Sensors for R&D

- Ultra-high resolution of thermal energies and temperature differences
- Low invasiveness & thickness
- Versions with connectors compatible with all gSKIN® DLOG data loggers
- All sensors with conductive heat flux calibration cohering to ISO 8301



gSKIN®-XM



gSKIN®-XP



gSKIN®-XI



gSKIN®-XO

Product Name	gSKIN®		gSKIN®		gSKIN®		gSKIN®	Unit
	-XM 26 9C	-XM 27 9C	-XP 26 9C	-XP 27 9C	-XI 26 9C	-XI 27 9C	-XO 67 7C	
Article Number	A-044336	A-044339	A-044573	A-044577	A-044628	A-044630	A-044717	
Termination	Bare wires 	DLOG Connector 	Bare wires 	DLOG Connector 	Bare wires 	DLOG Connector 	DLOG Connector 	
Cable type	2 conductor (2x 32 AWG), shielded, 1.5mm outer diameter, PFA insulation		2 conductor (2x 32 AWG), shielded, 1.5mm outer diameter, PFA insulation		2 conductor (2x 32 AWG), shielded, 1.5mm outer diameter, PFA insulation		2 conductor (2x 32 AWG), shielded, 1.5mm outer diameter, PFA insulation	
Cable length	100		100		100		100	cm
Detector Type	Thermoelectric		Thermoelectric		Thermoelectric		Thermoelectric	
Surface Material (Sensing Area)	Anodized Aluminum		Anodized Aluminum		Anodized Aluminum		Polyamide	
Sensing Dimensions (a x b x d)	4.4 x 4.4 x 0.5		10.0 x 10.0 x 0.5		18.0 x 18.0 x 0.5		30.0 x 30.0 x 3.3	mm
Flexprint length (f)	50		50		50		n/a	mm
Max Heat Flux Measurement Range	70		80		80		9	kW/m²
Sensitivity @22.5°C	4.0 (typical) 1.5 (min)		20.0 (typical) 10.0 (min)		65.0 (typical) 35.0 (min)		14.0 (typical) 7.0 (min)	µV/(W/m²)
Typical Noise Equivalent Heat Flux ^a	0.25 (typical)		0.05 (typical)		0.015 (typical)		0.07 (typical)	W/m²
Minimal Heat Flux Resolution with gSKIN® DLOG ^b	0.41 (min)		0.06 (min)		0.017 (min)		0.09 (min)	W/m²
Temperature Coefficient ^d of S	+0.2 (typical)		+0.2 (typical)		+0.2 (typical)		+0.2 (typical)	%/°C
Response Time ^e (0-95%)	1.6 (typical)		1.6 (typical)		1.6 (typical)		< 10 seconds (estimated)	s
Electrical Resistance [Ohm]	20 (max)		150 (max)		400 (max)		150 (max)	Ohm
Thermal Conductivity	1.1 (typical)		1.2 (typical)		1.3 (typical)		0.9 (typical)	W/(m*K)
Max. Compressive Force when clamped	2 (max)		10 (max)		32 (max)		32 (max)	kgf
Operating Temperature Range Min/Max [°C]	-40 to +85		-40 to +85		-40 to +85		-15 to +85	°C
Calibration Temperature Range Min/Max [°C]	+10 to +40		+10 to +40		+10 to +40		+10 to +40	°C
Calibration Accuracy	±3		±3		±3		±3	%
Homogeneity ^f	±10		±10		±10		N/A (guarded sensor)	%
Non-Linearity with Power	±1		±1		±1		±1	%

^a Experimentally evaluated values under optimal steady state conditions.

^b Guaranteed minimum heat flux resolution using the gSKIN® DLOG-4219 (not applicable for XO-Temp)

^c Only a reference point.

^d The sensitivity increases (decreases) as the temperature goes above (below) 22.5 °C.

^e Refers to the heat flux measurement.

^f Conductive heat flux calibration cohering to the ISO8301 standard with mean temperature of 22.5 °C.

^g Position dependent signal change across sensing area.

