TEMPERATURE

Platinum Temperature Sensors

3FW – Product Series

Temperature Range: –200°C...+300°C

Platinum temperature sensor elements with flat wire (FW) connections
RoHs compliant

Advantage: Best price-performance ratio

Technical Data

Specification:	DIN EN 60751	
Temperature range:	-200°C to +300°C	
Temperature Coefficient:	TCR = 3850 ppm/K	
Tolerance Classes:	F 0.1 (Class Y)	-50°C to +150°C
	F 0.15 (Class A)	-90°C to +300°C
	F 0.3 (Class B)	-200°C to +300°C
	F 0.6 (Class C)	-200°C to +300°C
	1/5 F 0.3 (Class K)	on request
	1/10 F 0.3 (Class K)	on request
Leads:	Ni/Au wire, 0.2 x 0.4 mm (H x W) Recommended connection technology: Soldering, Welding, Crimping	
Lead Lengths:	7/10 mm	
Long-term stability:	Max. Drift = Less than 0.03% after 1000h at max. operating temperature	

RoHS

INNOVATIVE SENSOR TECHNOLOGY

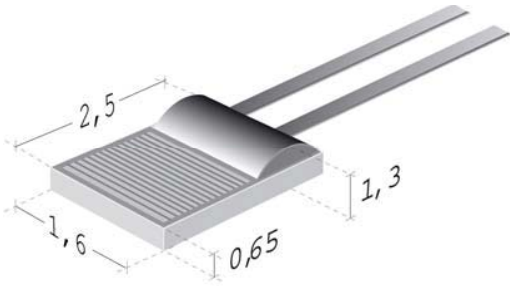
IST AG, Industriestrasse 2, CH-9630 Wattwil, Switzerland, Phone (+)41 71 987 73 73, Fax (+)41 71 987 73 77
e-mail info@ist-ag.com, www.ist-ag.com

Platinum Temperature Sensors

3FW – Product Series — Temperature Range: –200°C...+300°C

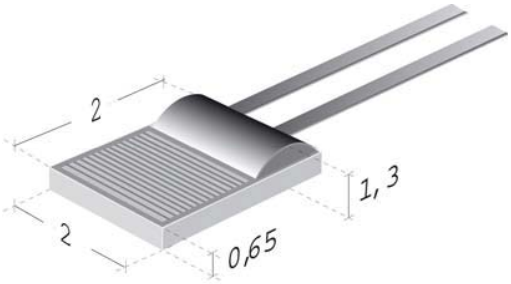
3FW 216

Chip Dimensions, L x W:	2.5 x 1.6 mm	
Nominal Resistance at 0°C (ohm) :	100/1000	
Self Heating (mK):	Water (v= 0 m/s) Air (v= 0 m/s)	ΔT_w = 2.8 at 0°C ΔT_a = 28 at 0°C
Response Time (s):	Water (v= 0.4 m/s) Air (v= 1 m/s)	$T_{0.5}$ = 0.12 $T_{0.63}$ = 0.18 $T_{0.9}$ = 0.42 $T_{0.5}$ = 4 $T_{0.63}$ = 5.4 $T_{0.9}$ = 11
Measuring Current (mA):	100 Ω: 1 1000 Ω: 0.3	



3FW 202

Dimensions, LxW:	2.0 x 2.0 mm	
Nominal Resistance at 0°C (ohm):	100/500/1000	
Self Heating (mK):	Water (v= 0 m/s) Air (v= 0 m/s)	ΔT_w = 3.1 at 0°C ΔT_a = 31 at 0°C
Response Time (s):	Water (v= 0.4 m/s) Air (v= 1 m/s)	$T_{0.5}$ = 0.11 $T_{0.63}$ = 0.16 $T_{0.9}$ = 0.38 $T_{0.5}$ = 3.6 $T_{0.63}$ = 4.9 $T_{0.9}$ = 10.2
Measuring Current (mA):	100 Ω: 1 500 Ω: 0.5 1000 Ω: 0.3	



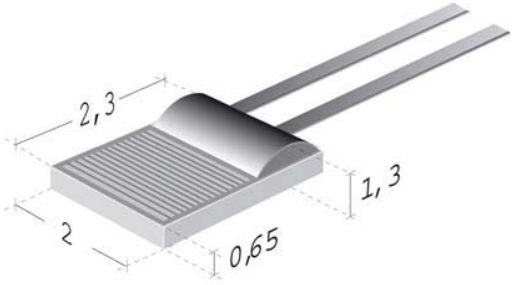
INNOVATIVE SENSOR TECHNOLOGY
IST AG, Industriestrasse 2, CH-9630 Wattwil, Switzerland, Phone (+)41 71 987 73 73, Fax (+)41 71 987 73 77
e-mail info@ist-ag.com, www.ist-ag.com

Platinum Temperature Sensors

3FW – Product Series — Temperature Range: –200°C...+300°C

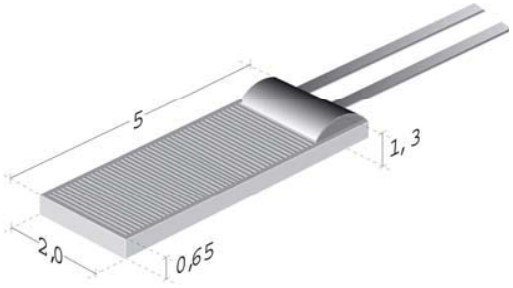
3FW 232

Dimensions, LxW:	2.3 x 2.0 mm	
Nominal Resistance at 0°C (ohm):	100/500/1000	
Self Heating (mK):	Water (v= 0 m/s)	ΔT_w = 2.5 at 0°C
	Air (v= 0 m/s)	ΔT_a = 25 at 0°C
Response Time (s):	Water (v= 0.4 m/s)	$T_{0.5}$ = 0.15
		$T_{0.63}$ = 0.2
		$T_{0.9}$ = 0.55
	Air (v= 1 m/s)	$T_{0.5}$ = 4.5
		$T_{0.63}$ = 6
		$T_{0.9}$ = 12
Measuring Current (mA):	100 Ω: 1 500 Ω: 0.5 1000 Ω: 0.3	



3FW 520

Dimensions, LxW:	5.0 x 2.0 mm	
Nominal Resistance at 0°C (ohm):	500/10,000	
Self Heating (mK):	Water (v= 0 m/s)	ΔT_w = 1.3 at 0°C
	Air (v= 0 m/s)	ΔT_a = 14 at 0°C
Response Time (s):	Water (v= 0.4 m/s)	$T_{0.5}$ = 0.25
		$T_{0.63}$ = 0.3
		$T_{0.9}$ = 0.75
	Air (v= 1 m/s)	$T_{0.5}$ = 6
		$T_{0.63}$ = 8.5
		$T_{0.9}$ = 18
Measuring Current (mA):	500 Ω: 0.5 10,000 Ω: 0.1	



INNOVATIVE SENSOR TECHNOLOGY
IST AG, Industriestrasse 2, CH-9630 Wattwil, Switzerland, Phone (+)41 71 987 73 73, Fax (+)41 71 987 73 77
e-mail info@ist-ag.com, www.ist-ag.com

TEMPERATURE

Platinum Temperature Sensors

3FW – Product Series

Temperature Range: –200°C...+300°C

Order Example:	P	1K0.	232.	3	FW.	B.	010
	1	2	3	4	5	6	7

1. *Material Identification = Platinum temperature sensor*
2. *Resistance Value in ohm = 1000Ω / 0°C*
3. *Chip Dimension = 2.3 x 2.0 mm*
4. *Temperature Range = -200 °C to +300 °C*
5. *Extension = Flat Wire*
6. *Tolerance Class = DIN EN 60751 F 0.3 (former Class B)*
7. *Connection length = 10 mm*

PRC Technologies Corp., Ltd.
Tel: 02 530 1714, 02 530 1619, 02 530 1621
Fax: 02 530 1731
Email: info@prctechth.com, www.prctechth.com

IST
INNOVATIVE SENSOR TECHNOLOGY

IST AG, Industriestrasse 2, CH-9630 Wattwil, Switzerland, Phone (+)41 71 987 73 73, Fax (+)41 71 987 73 77
e-mail info@ist-ag.com, www.ist-ag.com