

## 0.8 Everest I.R. Surface Temperature Sensor

### *Quick Reference*

The older model Everest IRT sensor, the “4000B” also known as the “4000.2” is no longer available. It included a less than weatherproof electronics enclosure, an LCD display and RS-232 output. The newer “4000.4GL” model is self-contained and has an analog output with an extended operating temperature range. The “4000.4ZL” replaced the 4000.4GL but they are identical except that the newer ZL unit uses a Zinc-Selenide lens whereas the GL uses Germanium.

Specifications and differences between the 4000.2 and 4000.4GL:

Spec	4000.2 / 4000B	4000.4GL	4004.ZL
Range:	-30 C to 100 C	-40 C to 100 C	
Optics:	Fresnel lens	germanium coated optics	Zinc-Selenide optics
Accuracy:	?	+/- 0.5 deg C	
Outputs:	mV and RS-232	10mV/degC (0-5V optional)	
Construction:	aluminum or steel	stainless steel	
		connectors sealed with O-rings	

#### E V E R E S T 4000.4-GL / 4000.4-ZL I . R . T E M P .

Sensor Output:      millivolts  
                             10mV/degC  
                             -40degC to 100degC,  
                             -400mV to 1000mV

EVE Input:            Voltage range: -1 to +1 Volts,  
                             Scaling: 10  
                             Input channel 4

REMEMBER: this, or any other open channel which is in use, will cause off-set errors if not grounded on the EVE data system.

ANALOG: Everest .5Hz

#snsr	chan	gain	multiplier	offset
Tsfc	4	10	0.048852	0

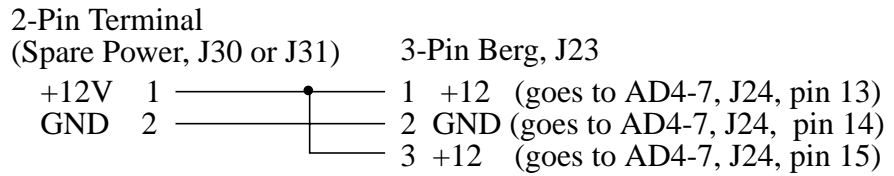
### Everest 4000.4 WIRING:

Power connector inside PAM box / Front Panel

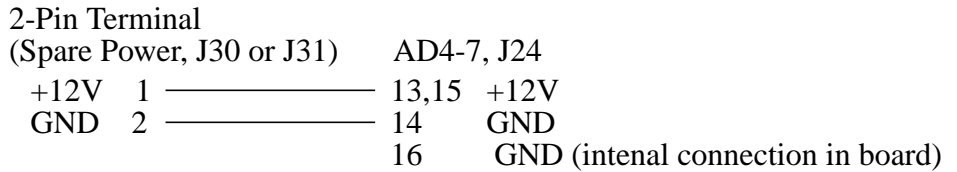
The standard 16 pin analog output connector normally doesn't provide power however is modified by NCAR to provide +12VDC via a short cable that is

plugged into one of the 'spare power' jacks. The modification can be done by soldering cables directly onto the 16-pin Amp connector pins or else by building a plug which goes onto the AD1 spare jumper pad labeled J23 on the PAMIII Panel AD connections schematic (page 5 of 8).

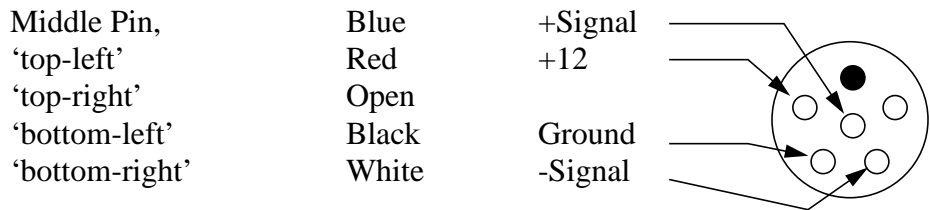
The 3-pin jumper is wired:



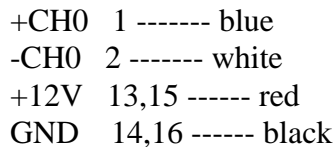
The direct connection is wired:



Everest Connector:            Looking into connector at Key Post:



Wiring Everest directly onto 16 PIN AMP Connector "AD1" (channel 4)



N/C -- green, armor case shield (should be grounded automatically at other end because case to tower is metal.)

Wiring Everest through 9-Pin AMP connector (goes into "AD1" Pig-Tail Connector on EVE box):

