

## **MOD WIRINGS - LAKOTA S & SC**

FERNDALE RENEWABLE ENERGY EVALUATION (F.R.E.E.)
WIND TEST CENTER

## TECHNICAL BULLETIN 002

Remove the back cover with a #2 Philips head screw driver and identify the three heavy multi-stranded black phase cables. Note there is a common green wire and three similar colored wire pairs, grey, orange and blue, in addition to three similar gauge single red, white and black wires.

Identify which colored pair lead is "T1" by checking it's continuity with the Green (Common Lead) using a multi-meter on "ohm" setting. If it does NOT have continuity with green it is a "T1" lead. Follow the color coded chart below and ensure all connections are crimped securely and shrink wrapped for good insulation and moisture protection.

Do not use plastic electricians tape to wrap wire ends or caps. Use heat shrink wrap to ensure the crimped ends do not come loose from the cap.

It does not matter which Phase Cable is used for each phase as long as the colored wires are connected as shown. Recheck your connections for correct pairing and security. Then replace the back cover. Take time to evaluate your local wind regime. Setting MOD 3 in a high wind CLASS can result in damage to the windings, not covered by warranty. Setting MOD 0 in a low wind class will result in lower energy output.

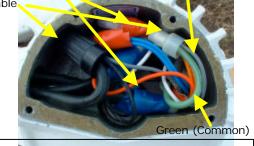
## **USE THE CORRECT SETTING FOR THE LOCAL AVERAGE WIND CLASS**

Wind Regime	Annual	Average Speed	LAKOTA Setting
	mph	m/s	
CLASS 1	10.1	4.5	Mod 3
CLASS 2	13.4	6.0	Mod 2
CLASS 3	15.0	6.7	Mod 2
CLASS 4	16.2	7.25	Mod 1
CLASS 5	17.3	7.75	Mod 1
CLASS 6	18.8	8.4	Mod 0
CLASS 7	22.3	9.95	Mod 0

Plastic tape wrapped caps NOT acceptable

Grey T1 with Green

					WIND CLASS				
	7	(	5-6			3		1-2	
	:.3mph 9.95m/s	18.8mph 8.4m/s - 22.3mph 9.95m/s		ph 7.75m/s	16.2mph 7.25m/s - 17.3mph 7.75m/s		15.0mph 6.7m/s		mph 4 m/s - 13.4mph 6m/s
	0	MOD 0			MOD 1		Mod 2		MOD 3
	Phase 1	Blue	Red	Phase 1	Red	Phase 1	Red		Red Phase 1
	Phase 2	Grey	Black	Phase 2	Black Grey	Phase 2	Black Grey		Black Phase 2
	Phase 3	Orange	White	Phase 3	White Orange	Phase 3	Vhite		White Phase 3
					Blue Blue T1		Blue Blue T1		Blue Blue T1
							nge Orange T1		range Orange T1
									Grey Grey T1
1	Orange T1 Blue T1	Grey T1	Green	Orange T1	Green Grey T1		reen Grey T1		Green (capped off)
			T1 Leads are identified as the ones that have NO continuity with Green						
		Test for any connection (Ohm reading) between a coloured lead and Green							NOTE:
			Green is Common. It is NOT GROUND and should NEVER be grounded						



The MOD 2 wiring shown here is correct but not capped or shrink wrapped properly. The large black cap with brass screw connector inside it is an acceptable connector but the connector should be shrink wrapped as well.

