



DITEK Corporation  
ONE DITEK CENTER  
1720 Starkey Road  
Largo, FL 33771

# INSTALL INSTRUCTIONS

## DTK-KG2 KoolGuard

This is a high performance device designed to provide under-voltage and over-voltage protection for sensitive electronic circuits and mechanical equipment. Maximum protection will only be achieved if the device is properly installed. Please read and follow the installation instructions carefully.

**NOTICE:** This device should be installed by a licensed contractor per the applicable requirements of the NEC and by using the following instructions.

### APPLICATION

This device is designed to be installed in series with a 120/240VAC, 40A max split phase circuit. Intended line voltages are as follows:

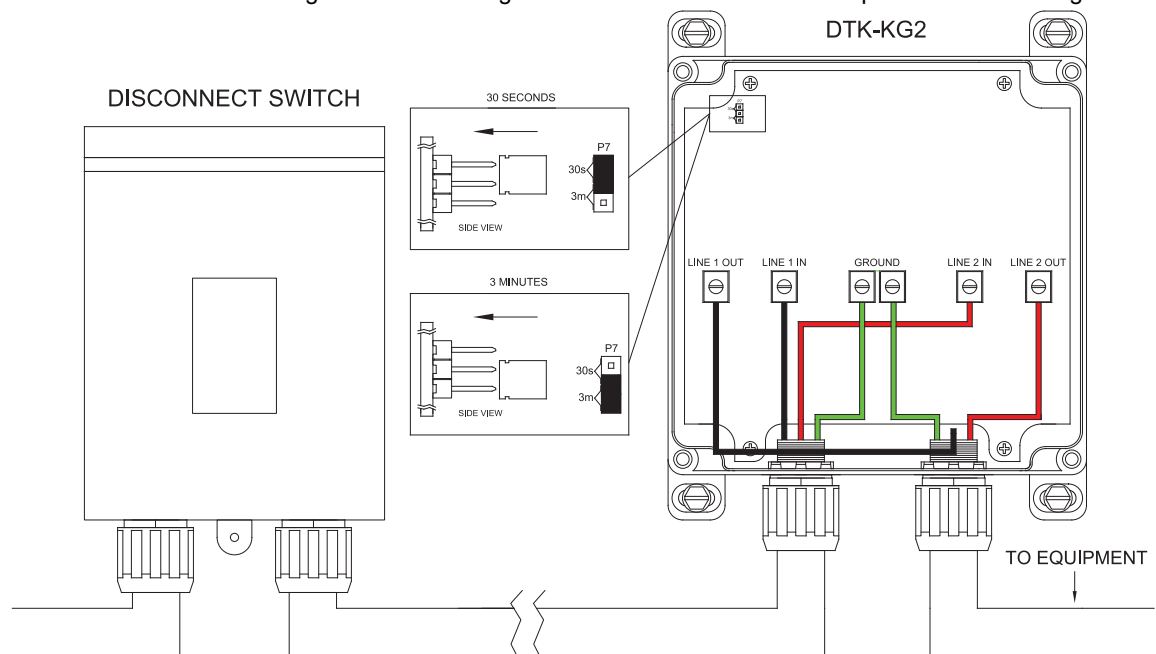
LINE 1 to LINE 2: **208-240VAC**    LINE 1 to GROUND: **120VAC**    LINE 2 to GROUND: **120VAC**

The mechanical lugs are rated for a wire size range of 14 - 6 AWG Stranded Cu. Rated torque 25 IN. LBS. The enclosure carries a UL Type 4X rating and is intended to be installed either indoors or outdoors. Make sure to use appropriate conduit fittings if installing in an outdoor environment.

### INSTRUCTIONS:

**Caution:** Measure all voltages to ensure applied voltage does not exceed the voltage rating of the unit. Improper installation voids the warranty.

1. Turn off the power to the equipment at the circuit breaker and the disconnect switch before beginning installation.
2. Position the DTK-KG2 between the load side of the circuit breaker or disconnect switch and the equipment.
3. The unit is shipped from the factory with (2) pre-drilled 1/2" NPT holes that will accept non-metallic flexible conduit male fittings. If desired, the holes can be enlarged to 3/4" NPT using a step drill bit.  
**Important Note: The conduit holes should always be oriented facing down.**
4. Securely mount the unit using all (4) mounting tabs and the appropriate fasteners compatible with the surface type. Example: Masonry fasteners, concrete anchors or wood screws.
5. Remove the unit cover by loosening the (4) screws located in the corners.
6. Route the conduit from the disconnect switch into one of the pre-drilled holes on the device enclosure.
7. Terminate the (2) phase wires to "LINE 1 IN" and "LINE 2 IN". Terminate the ground conductor to "GROUND".
8. Route the conduit from the equipment into the unused pre-drilled hole on the device enclosure.
9. Terminate the (2) phase wires to "LINE 1 OUT" and "LINE 2 OUT". Terminate the ground conductor to "GROUND".
10. Replace the lid and securely fasten the (4) screws in each corner.
11. Restore power by turning on the disconnect switch or circuit breaker feeding the equipment. The DTK-KG2 will enter a startup sequence and will not allow power through to the equipment for approximately 3 minutes.
12. The DTK-KG2 is designed with (2) sets of GREEN and RED LED indicators. The LEDs will blink in various combinations depending on the condition that the device has detected. The LED color chart referenced on page 2 is intended to serve as a guide for determining the LED combination that corresponds to each voltage condition.



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DITEK Technical Support Available  
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## DTK-KG2 KoolGuard LED Indicator Guide

**Normal Voltage Operating Range:** 104VAC to 130VAC L1 to Ground and L2 to Ground

**Under-voltage Condition:** Less than 104VAC L1 to Ground or L2 to Ground

**Over-voltage Condition:** Greater than 130VAC L1 to Ground or L2 to Ground

Line 1			Line 2			Condition	Switched
						Normal	On
		S				L1 Under	Off
		F				L1 Over	Off
			S			L2 Under	Off
			F			L2 Over	Off
		S	S			L1 Under/L2 Under	Off
		F	F			L1 Over/L2 Over	Off
		S	F			L1 Under/L2 Over	Off
		F	S			L1 Over/L2 Under	Off
S		S			S	Recovering from L1 Under	Delayed
S		F			S	Recovering from L1 Over	Delayed
S			S		S	Recovering from L2 Under	Delayed
S			F		S	Recovering from L2 Over	Delayed
		A	A			Service Required	On

**S = Slow Blink      F = Fast Blink      A = Alternating Blink**

Short cycle delay duration is 3 minutes (default) when an under-voltage or over-voltage condition is detected. This delay setting can be changed to 30 seconds via jumper "P7". See diagram on first page for details. This jumper position can only be changed when the unit is safely de-energized. If the voltage has not returned to normal range, or the condition reoccurs within the delay window, the timer will re-engage for an additional 3 minutes or 30 seconds depending on the selected setting. If this scenario repeatedly occurs, it is recommended to contact an electrician or the local electric utility.

“Service Required” indicates the surge protection components have expired and the unit should be replaced.

INSTALLATION