

LBK10 LINEBACKER® SURGE PROTECTOR



Prevent the loss of your equipment investment with the Linebacker® LBK10 Surge Protector. By using state of the art TPMOV technology coupled with the ability to remove your equipment from damaging surges, the LBK10 provides the ultimate solution for your surge protection needs.

With its unique microcontroller, the LBK10's green LED provides a status report for the surge protector's installation. Upon power up, the LBK10 analyzes the voltage and ground conditions and the green LED will indicate their status. If the LBK10 detects an overvoltage, undervoltage, lost neutral or ground, it will not allow power to the surge protector or equipment until the condition is rectified.

Features / Benefits

- TPMOV technology
- NO/NC relay to disconnect equipment and/or activate indicator
- Easy installation at condensing unit
- Green LED indicates surge protection status (See Table 1.)
- Weatherproof housing
- 3 year product warranty
- 3 year connected equipment guarantee



TABLE 1. LED INDICATOR GUIDE

LED CONDITION	DESCRIPTION	CAUSE	CORRECTION
On Steady	Equipment is protected	Unit is ok	No correction needed
Off	Equipment is NOT protected	Unit has no power.	Ensure proper power is restored to unit
		Unit has taken a surge	Replace unit
Continuous Flash	Initialization period	Upon power up unit takes 3 min. to initialize and verify proper voltages and neutral/ground present	Wait until unit has initialized
One Flash followed by a pause	Over voltage	One or both phases are above the voltage tolerance.	Correct the over voltage condition
Two Flashes followed by a pause	Under voltage	One or both phases are below the voltage tolerance.	Correct the under voltage condition
Three Flashes followed by a pause	Loss of Neutral / Ground	Check to verify that the unit is connected to a ground source that is 25 ohms or less to ground. Verify that the neutral ground is good coming into the main electrical panel.	Correct the loss of neutral/ground condition to the unit



UL 1449 4th Edition

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FUNCTIONAL DESCRIPTION

When properly installed, this device features internal protection that will disconnect the intended protected equipment from power when the surge protective circuitry is compromised. Use the “Operational Output” to enable activation of the contactor coil circuit and disable power to the equipment when the protector fails. Use the “Alarm Output” connection to activate an external alarm or indicator. External alarm and indicator components are not supplied with this product. The LBK10 also incorporates unique circuitry that detects and indicates when there is an over voltage or under voltage condition. Moreover, this device will detect and indicate when there is a loss of neutral or ground to the surge protector. A good ground is imperative for the proper function of the surge protector.

THE IMPORTANCE OF GROUND

A surge protector works by shunting the voltage surge to ground. A good ground is imperative. The National Electric Code’s (NEC) maximum resistance at ground is 25 ohms. Have a procedure in place to check the ground system of the installation location.

APPLICATIONS FOR SURGE PROTECTION:

- Air conditioning compressors
- Heat pump compressors
- Refrigeration compressors
- Air handlers
- Furnaces
- Pumps
- Motors

SPECIFICATIONS

TYPE 2 SPD

Voltage	120/208/240 VAC
Frequency	60 Hz
Nominal Discharge Current (IN)	10 kA
Short Circuit Current Rating (SCCR)	10 kA
Max. Continuous Operating Voltage (MCOV)	L-N 150V; L-L 300 V
Voltage Protection Rating (VPR)	L-N/G 600V; L-L 1000V
Enclosure Type	1

Relay Specifications

NO/NC Relay

Contact Rating: 2A, 24VAC, AC/DC

CONDENSER INSTALLATION

For air conditioner installations, the LBK10 is intended to be connected at the condenser. Simply install inside the control panel or through a knockout. (See installation instructions for details.)

