



## ULB NEUTRAL GROUNDING RESISTORS

### The Model ULB Neutral Grounding Resistors

are used in industrial power systems for resistance grounding of wye-connected generators or transformers. Using resistance grounding instead of conventional solid grounding limits the ground fault current to a low, safe level (typically 25 to 400 Amps) which is sufficient enough to operate protective relays - while preventing large and damaging fault current (typically 10,000 amps or more).

Neutral grounding resistors are rated in line-to-neutral voltage (system voltage divided by 1.732), initial fault current, and maximum time on. ULB neutral grounding resistors are designed to dissipate the required energy without exceeding the temperature limitations as defined by IEEE Standard 32-1972 as follows:

- **SHORT TIME:** A time rating of 10 seconds or 60 seconds maximum. Maximum temperature rise is 760°C. Typical industry rating is 200 or 400 Amps, 10 Seconds.
- **EXTENDED TIME:** A time rating greater than ten minutes, but limited to an average not more than 90 days per year. Maximum temperature rise is 610°C. Typical industry rating is 25 Amps or "Mining Duty".
- **CONTINUOUS:** Capable of withstanding rated current for an indefinite time period. Maximum temperature rise is 385°C. Typical industry rating is 5 to 15 Amps.

ULB Neutral Grounding Resistors are designed and manufactured to the highest quality standards for years of trouble-free service. The resistor coils feature stainless steel edgewound elements wound around high temperature refractory ceramic cores, supported by stainless steel rods. Glazed porcelain insulators are attached to the end of each coil and are fastened to a heavy gauge, corrosion-resistant frame. The resistor elements are joined in series or parallel by stainless steel busbars, which are welded in place to form a continuous electrical path. Enclosures are manufactured from corrosion-resistant galvanized steel (standard) with screened or louvered side covers. Optional enclosure finishes include powder coated steel, aluminum, or stainless steel. A wide variety of other options are available on ULB Neutral Grounding Resistors including entrance bushings, current transformers, elevating stands, and/or disconnect switches.

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## RATINGS and DIMENSIONS

The most common ratings are listed below. Please contact ULB for other ratings. Dimensions listed in the table are in inches. Specifications are subject to change without notice.

**ULB**  
UNIVERSAL LOAD BANKS

### 10 SECOND TIME RATINGS

PART NUMBER	AMPS	A	B	C	APPROX. WEIGHT
<b>1390 VOLTS LINE-TO-NEUTRAL (2400 VOLT SYSTEM)</b>					
TNR1390-100-10	100	38	38	30	280
TNR1390-200-10	200	38	38	30	290
TNR1390-300-10	300	38	38	30	300
TNR1390-400-10	400	38	38	30	310
TNR1390-500-10	500	38	38	30	320
TNR1390-600-10	600	38	38	30	340
TNR1390-800-10	800	38	38	30	350
TNR1390-1000-10	1000	38	38	30	360

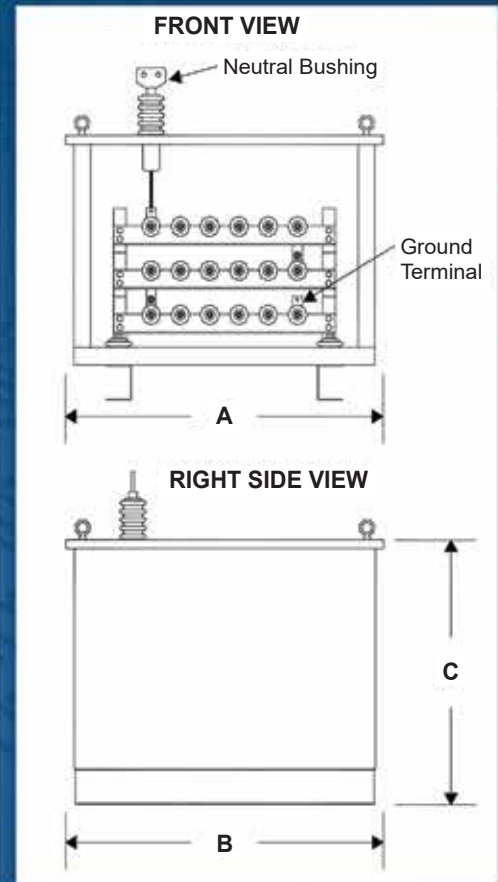
<b>2400 VOLTS LINE-TO-NEUTRAL (4160 VOLT SYSTEM)</b>					
TNR2400-100-10	100	38	38	30	380
TNR2400-200-10	200	38	38	30	390
TNR2400-300-10	300	38	38	30	400
TNR2400-400-10	400	38	38	30	410
TNR2400-500-10	500	38	38	30	420
TNR2400-600-10	600	38	38	30	430
TNR2400-800-10	800	38	38	36	490
TNR2400-1000-10	1000	38	38	36	500

<b>4160 VOLTS LINE-TO-NEUTRAL (7200 VOLT SYSTEM)</b>					
TNR4160-100-10	100	38	38	36	550
TNR4160-200-10	200	38	38	36	560
TNR4160-300-10	300	38	38	36	570
TNR4160-400-10	400	38	38	36	580
TNR4160-500-10	500	38	38	36	590
TNR4160-600-10	600	38	38	36	600
TNR4160-800-10	800	44	54	54	680
TNR4160-1000-10	1000	44	54	54	700

<b>8000 VOLTS LINE-TO-NEUTRAL (13800 VOLT SYSTEM)</b>					
TNR8000-100-10	100	44	54	54	820
TNR8000-200-10	200	44	54	54	830
TNR8000-300-10	300	44	54	54	840
TNR8000-400-10	400	44	54	54	850
TNR8000-500-10	500	44	54	54	870
TNR8000-600-10	600	44	54	54	880
TNR8000-800-10	800	44	54	84	950
TNR8000-1000-10	1000	44	54	84	990

### EXTENDED TIME RATINGS

<b>1390 VOLTS LINE-TO-NEUTRAL (2400 VOLT SYSTEM)</b>					
TNR1390-15-E	15	38	38	30	320
TNR1390-25-E	25	38	38	30	370
TNR1390-50-E	50	38	38	36	420
<b>2400 VOLTS LINE-TO-NEUTRAL (4160 VOLT SYSTEM)</b>					
TNR2400-15-E	15	38	38	36	450
TNR2400-25-E	25	38	38	36	550
TNR2400-50-E	50	44	54	54	850
<b>4160 VOLTS LINE-TO-NEUTRAL (7200 VOLT SYSTEM)</b>					
TNR4160-15-E	15	44	54	54	900
TNR4160-25-E	25	44	54	54	950
TNR4160-50-E	50	84	54	54	1400



Established in 1969, Testek-ULB has been a manufacturer of custom test equipment for the aerospace, airline, aircraft MRO, military, industrial, agricultural, and automotive industries. As the world leader in load banks for the aerospace industry, we now offer a complete line of load banks and neutral grounding resistors for the industrial market.

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