ZX3 Specifications

ZX3 Specifications: (R=Fault Resistance, Cs=System Capcitance)

Base Unit Electrical:

- Line Input Voltage (Vll) range: 24VDC to 600VDC.
- With Vll = 135V the ZX3 Base Unit will draw less than 15mA.
- Current draw is <= 30mA over the entire input voltage range.
- Operating Temperature Range is -10°C to 48°C
- Storage Temperature Range is -30°C to 60°C
- Shock & Vibration – NA – handheld test instrument
- Size & The ZX3ight - 9” (L) x 4.75” (W) x 2.25” (H), 2.1 lbs
- Reliability - MTBF = 2000 Hrs
Base Unit Detection Mode:

- Fault Detection Range (No Cs): 0 to 300K Ohm

(Note: values above 100K are displayed with reduced accuracy < 90% accuracy)

- Fault Detection Range (With Cs): RC limit is 5 seconds

(Note: 90% accuracy for R values <= 100K ohms - example R=100K x Cs=50uF).

- Fault Detection with R > 300K: Rgp & Rgn displayed as “open”.
- Low Value Fault Detection Accuracy: R values <= 2K ohms are displayed with as much as 50% error.
- Detection Speed: 70 +- 2 seconds.

(Note: This allows a 90% accurate reading with a 100K fault and a system capacitance Cs of 50uF)

Base Unit Battery Fault Detection:

- Fault Detection: 0 to 10K Ohm

(Note: With Vll = 135 the ZX3 Base Unit can detect up to a 10K fault from inside the battery bank to ground)

Tracer Unit Electrical:

- Charger input Voltage: 12VDC to 13VDC

(This voltage supplied by the AC adapter supplied with the Tracer unit)

- Internal Battery Life: 8Hrs following 100% charge
• **Internal Battery Charge Time**: 3Hrs using 12V AC Adapter Supplied with unit.
• **Operating Temperature Range** is -10°C to 48°C
• **Storage Temperature Range** is -30°C to 60°C
• **Shock & Vibration** – NA – handheld test instrument
• **Size** & The ZX3ight - 9” (L) x 4.75” (W) x 2.25” (H), 1.6 lbs
• **Reliability** - MTBF = 2000 Hrs

**Tracer Unit Fast Locate Mode: What fault resistance can the ZX3 locate?**

• Fault Location (No Cs): $R \leq 125K$ Ohm
• Fault Location (With Cs): $RC_s \leq 125$ milliseconds (ie $125K \times 1uF$)

(Note: Fast Locate requires a minimum of 1.0mA of ground current)

**Tracer Unit Precise Locate Mode: What fault resistance can the ZX3 locate?**

• Fault Location (No Cs): $R \leq 54K$ Ohm

(Note: With $V_{ll}=135V$ and 2.5mA injection current)

• Fault Location (With Cs): $RC_s \leq 3.5$ seconds using 4000mSec injection mode.

(Note: example: $54K \times 64.8uF = 3.5sec$ max $RC_s$, $R \leq 135/2.5mA = 54K$)

(Note: Precise Locate requires a minimum of 2.5mA of ground current)
Tracer Unit Intermittent Mode: 75mA mode

- Intermittent Current Detection (No Cs): R and Vll such that the faulted branch sees >= 2mA for greater than 50uSec. Currents that exceed 75mA will be reported as 75mA.

(Note: With Vll=135, and internal bridge resistors Rp=Rn=51K, the fault Rgp that produces 2mA is less than 8K)

- Intermittent Current Detection (With Cs): R, Vll, and Cs such that the faulted branch sees > = 2mA for greater than 50uSec.

(Note: With Cs this can vary widely. With Vll=135, Rp=Rn=51K, Cs = 2uF, the fault that produces 2mA is less than 25K)

Tracer Unit Intermittent Mode: How large a fault can the ZX3 detect? – 10A mode

- Intermittent Current Detection (No Cs): R and Vll such that the faulted branch sees >= 10mA for greater than 50uSec. Currents that exceed 10A will be reported as 10A.

(Note: With Vll=135, and internal bridge resistors Rp=Rn=51K, 10mA can’t be produced. The 10A mode requires capacitance)

- Intermittent Current Detection (With Cs): R, Vll, and Cs such that the faulted branch sees >= 10mA for greater than 50uSec.

(Note: With Cs this can vary widely. With Vll=135, Rp=Rn=51K, Cs = 2uF, the fault that produces 10mA is less than 5K)

For pricing, bulk price reductions, additional information, contact Allied Edison LLC at 800-307-0315, 307-773-7962, alliededison@gmail.com