

EZ-Restore OVERDRIVE Series

URD Troubleshooting/Sectionalizing Tool



- **Absolute lightest unit on the market at < 48.5 lbs (22 kg)**
- **Only unit on the market with:**
 - **Back-feed alert**
 - **Safe-grounding interlock**
 - **USB interface**
 - **High-brite TFT color LCD**
- **Only unit on the market that complies to IEC/EN61010 safety standard**
- **12 kV/A 1,100 J output**
- **Maximum circuit length 25,000 ft (7,620 m)**
- **Battery/AC/ext. DC powered**
- **Rugged wheeled Pelicase enclosure**
- **IP53 open/IP54 closed lid**

DESCRIPTION

The EZ-Restore OVERDRIVE is a lightweight, one person operational, time-saving tool for troubleshooting/sectionalizing URD loops. Based on the ARM® technology, the OVERDRIVE allows identifying a faulted cable segment in between two single phase Y grounded distribution transformers without isolating cable segments by standing them off or pulling bayonet fuses, or the use of fault indicators. The ARM® method has proven to be on average 45 minutes faster to restore power compared to other sectionalizing methods. The

EZ-OVERDRIVE has become the tool of choice when the reduction in outage minutes (SAIDI index) becomes the objective.

The EZ-OVERDRIVE is the only unit on the market to offer BACK-FEED Alert, overcoming the potential safety risk of incorrectly installed home based stand-by generators.

Due to its light weight, small dimensions, ruggedness and battery/AC operation, the EZ-OVERDRIVE can be located permanently on a "trouble truck", making it available at all times to the troubleshooting crew on duty without any delay.

The graphic user interface typically does not require any user adjustments and is operated via a single rotary control knob.

The EZ-OVERDRIVE series offers:

- Back Feed Alert
- 1,100J at 12 kV output
- Optional 12 kV DC Hipot (fault verification)
- Automatic cable end identification & localization, including determination if "open" or "short"
- Automatic transformer identification and localization

- Automatic fault identification and localization
- Automatic identification of faulted cable segment
- Live trace to allow faulted segment verification by pulling elbows
- USB interface for up- and downloading data/programs

APPLICATIONS

The EZ-Restore OVERDRIVE is specifically designed as a tool to quickly identify a faulted cable segment in a URD loop type circuit with single phase Y grounded transformers. This type of circuit design is very common in subdivisions all over North America.

Compared to all other commonly used methods to perform this task, the EZ-OVERDRIVE takes advantage of the combination of the TDR and the ARM® method. This process allows to identify the faulted cable segment without:

1. Leapfrogging from transformer to transformer in order to test isolated cable segments.
2. Going to each transformer and pulling bayonet fuses (removes the grounding point).
3. Going to each transformer and checking fault indicators.
4. Closing in on the circuit using a fuse and checking fault indicator(s).

The advantage of using the EZ-OVERDRIVE with its patented sectionalizing technology (US 6, 683,459 B2) is that the faulted cable segment can be identified by connecting the unit, e.g. at the NO point in the faulted (half) loop, and let it analyze the circuit all the way to the open fuse at the riser poll. No transformers need to be opened and no fuses need to be pulled. In addition to the time savings, this method has proven to cause no damage to the faulted circuit any further in contrast to "closing in" on the circuit (see 4. above).

When the faulted cable segment has been identified, typically one of the following two methods is applied to verify/confirm the identified segment before performing any switching and closing the NO point in the loop in order to restore power:

1. Pulling the first elbow past the fault, followed by pulling the elbow in front of the fault. This action will produce 2 “open” signals on the (live) TDR screen, which show the fault between them, confirming the identified cable segment to be faulted.
2. Move EZ-OVERDRIVE to the transformer on one side of the faulted segment and pull the elbow. Then pull the elbow on the transformer on the other side of the faulted segment. This will isolate the identified segment. To confirm it, the EZ-OVERDRIVE is connected to the isolated segment and switched to Hipot mode (optional). The unit will increase the voltage up to max. of 12 kV. But, due to the fault in the segment, the cable will break down typically between 3 and 8 kV, confirming the identified segment as being faulted.

FEATURES

The EZ-OVERDRIVE troubleshooting tool has been designed with the following features:

- The lightest and smallest unit on the market
- Only unit equipped with Back Feed Alert
- Automatic sectionalizing process
- Battery/AC/Ext. DC operated
- Rugged wheeled Pelicase enclosure
- Only unit equipped with safe grounding interlock
- 1,100 J energy @ 12 kV
- Optional hipot feature 0-12 kV
- USB data interface
- 5.7” high-brite TFT LCD
- Only unit complying with IEC/EN 61010
- Outdoor qualified to IP53 open lid

SPECIFICATIONS

High Voltage Generator

Hipot Output voltage 0-12kV DC
 Hipot Output constant current 5mA
 Energy in Sectionalizing mode 1,100J @12kV

Interface

USB for upload and download

IP Rating

IP53 open lid, IP54 closed lid

Time Domain Reflectometer

TDR Range 25,000 ft (8 km)
 TDR sampling rate 100 MHz
 TDR resolution 2.5 ft @ 250 ft/μsec ; 0.8m @ 80 m/μsec
 TDR display 5.7 in. (14.48 cm), color TFT High Brite
 TDR memory 1000 traces, automatically saved

Safety Features

Emergency OFF Mushroom button
 Key Switch HV Interlock (optional)
 Back-Feed Alert
 Safe Grounding Interlock (F-OHM)
 Auto Time-out

Test leads / Terminations

12 ft (3.5 m) HV Cable with 14mm Male MC / Hotline clamp
 12 ft (3.5 m) Safety Ground Cable with Hotline Clamp
 6 ft (1.8 m) AC line cord

Power Supply

Internal battery 12V/ 7.2AH
 External 120 VAC
 External 12 VDC

Environmental Operation

-40°F to +122°F (-40°C to +50°C)

Weight

48.5 lbs (22 kg)

Dimensions

19.7 in. x 12 in. x 18 in. (500 mm x 300 mm x 450 mm)
 38 in. H x 21 in. W x 20 in. D (965 mm H x 536 mm W x 503 mm D)

ORDERING INFORMATION			
Item	Cat. No.	Item	Cat. No.
EZ-Restore OVERDRIVE 12 kV, V2, 12 ft, Back-feed alert	EZR12-V2-B	Optional Accessories	
EZ-Restore OVERDRIVE 12 kV, V2, 12 ft, Back-feed alert, Hipot	EZR12-V2-BH	15 kV elbow adapter with 14 mm Female MC	865000100100000
Included Accessories		25 kV elbow adapter with 14 mm Female MC	865000200100000
AC power cord, 120V	1005-290	35 kV elbow adapter with 14 mm Female MC	865000300100000
Instruction manual	AVTMEZR	DigiphonePlus fault pinpointer	871500500100000
		DC Power cigarette lighter cord	1005-289

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