

Safe Work Practices



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1.0 SAFETY

ALWAYS USE CLASS II (20kV gloves) WHEN CONNECTING CABLES

2.0 LV TDR To calibrate Vp for a known length of cable

- 2.1 Power OFF
- 2.2 Connect Cables
- 2.3 Power ON
- 2.4 Press LV TDR
- 2.5 Look at the RD value, press up/down until RD=actual length of cable
- 2.6 Vp displayed is the Vp for that type of cable
- 2.7 Power OFF

3.0 LV TDR To determine distance to an open

- 3.1 Power OFF
- 3.2 Connect Cables
- 3.3 Power ON
- 3.4 Mode to HV TDR
- 3.5 Press HV Start
- 3.6 Use up/down to adjust Vp to appropriate value (see table)
- 3.7 Press Stop/Ground
- 3.8 Press LV TDR
- 3.9 Record RD, which is the distance to the open
- 3.10 Power Off

4.0 HV TDR Determines the distance to a fault. Can be used through a transformer'

- 4.1 Power OFF
- 4.2 Connect cables
- 4.3 Power ON
- 4.4 Mode to HV TDR
- 4.5 Voltage knob to 0
- 4.6 Press HV Start
- 4.7 Voltage knob to 8KV
- 4.8 Press Thump
- 4.9 Observe distance
- 4.10 Press Stop
- 4.11 Repeat steps 4.5-4.10 for consistency, increase voltage for accuracy

Faults that are within 30ft of test set are not accurate

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5.0 HV Hi Pot Used to verify a faulted cable

- 5.1 Isolate Cable
- 5.2 Power OFF
- 5.3 Connect Cables
- 5.4 Power On
- 5.5 Voltage knob to 0
- 5.6 Mode to Hi Pot
- 5.7 Press HV Start
- 5.8 Raise Voltage knob until fault or thump
- 5.9 Observe the point of voltage drop
- 5.10 Press Stop

6.0 HV Cycle Pinpoints fault location

- 6.1 Isolate Cable
- 6.2 Power OFF
- 6.3 Connect Cables
- 6.4 Power On
- 6.5 Voltage knob to 0
- 6.6 Mode to Cycle
- 6.7 Press HV Start
- 6.8 Raise Voltage knob to 7 KV or greater, Cables are energized
- 6.9 Unit will cycle thumping
- 6.10 Pinpoint fault with sound equipment
- 6.11 Press Stop/Ground
- 6.12 Power OFF

Menu symbols

- CV= Charge voltage
- BV= battery voltage
- RD= reflection distance, distance to open
- RT= reflection type
- Vp= Velocity of propagation
- SH= short
- RF= resistive fault

- TDR= Time Domain Reflectology

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Batteries:
 When plugged into 120VAC
 Yellow light = charging
 Green light= fully charged

KV CLASS	MILS	CABLE SIZE	TYPE	VP
15	175	#1CU	XLPE	.554
15	175	#2AL	XLPE	.495
15	175	#2CU	XLPE	.514
15	175	#4CU	XLPE	.516
15	175	1/0	XLPE	.522
15	175	1/0	TRXLPE	.510
15	175	2/0	XLPE	.486
15	175	4/0	XLPE	.472
15	175	500MCM	XLPE	.526
15	175	750MCM	XLPE	.536
15	175	1000MCM	TRXLPE	.430
15	175	#2AL	EPR	.544
15	175	1/0	EPR	.508
15	175	4/0	EPR	.572
15	220	1/0AL	TRXLPE	.550
25	260	1/0AL	TRXLPE	.540
25	260	1/0AL (CU RIB)	TRXLPE	.570
35	345	1/0	XLPE	.565
		2/0 MINING		.430
		4/0 MPF		.540
		2/0 MPF		.520
		2/0 GGC ROUND		.500
		#2 GGC ROUND		.540
		#4-4/C W ROUND		.530
		PILOT WIRELESS		.600

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