AUTHORIZED REPRESENTATIVE

NFPA 70E ARTICLE 120.6 VOLTAGE VERIFICATION — VERIFY THROUGH A CLOSED DOOR, BEFORE ANYONE OPENS IT

Three devices that put voltage verification on the outside of the enclosure. Each mounts in a standard 30 mm knockout, runs on 14 AWG leads up to a 100 A busbar, and is CAT III / CAT IV rated for transients to 8 kV — so a worker confirms the state of the equipment before the door is ever opened. The difference between them is how far you need to go: continuous visual indication, indication plus a meter reading, or a full push-button absence-of-voltage test that lowers the required PPE category.

SHARED ACROSS ALL THREE

- Standard 30 mm knockout punch, epoxy-potted housing — retrofit install, sealed against moisture and contaminants
- 14 AWG leads, 8 ft, 90 °C @ 1000 V, UL 1032
- High-intensity redundant LEDs, readable in daylight or low light
- UL, CSA, IEC and BIS certified (pending)

THE LINE

All three support single-phase and three-phase systems



Absence of Voltage Tester (AVT)

NFPA 70E 120.6 (3), (4) & (7)

Push-to-test verification of both presence and absence of voltage. Eliminates manual tester dependency and lowers the required PPE category.

- Battery-powered, ~750 tests on a 4.0 V industrial Li-ion cell
- Dual-source leads for functional safety redundancy
- RED = voltage present · GREEN = absence confirmed · AMBER = hardware fault
- Small RED LEDs flag disconnected leads for faster troubleshooting
- Separate isolation module; indicator mounts flat or on DIN rail



Voltage Presence Indicator + Test Ports

NFPA 70E 120.6 (3), (4) & (7)

Live LED indication plus touch-safe, high-impedance test ports, so a portable meter takes a reading without exposing anyone to live circuit parts.

- Supports compliant Live-Dead-Live verification
- Test current limited to <3.5 mA — cuts shock and arc flash exposure
- Hinged dust cap shields the ports without blocking LED visibility
- Backfeed voltage and voltage unbalance indication
- Self-powered; no battery to manage



Voltage Presence Indicator (VPI)

NFPA 70E 120.6 (3) & (4)

Continuous, self-powered visual indication of voltage presence in control panels and power distribution boards. The lowest-cost way to see panel state from outside.

- Supports mechanical LOTO; detects voltage unbalance >15%
- Alerts to backfeed voltage on neutral and ground lines
- Catches phase unbalance early, before it becomes a shutdown
- Smallest module of the three — 48.28 mm Ø
- Self-powered; continuous monitoring

PICKING BETWEEN THEM

	AVT	VPI + Test Ports	VPI
What it does	Tests for absence of voltage on demand	Indicates presence and allows a meter reading	Indicates presence, continuously
NFPA 70E 120.6	(3), (4) and (7)	(3), (4) and (7)	(3) and (4)
Live-Dead-Live	Not required — the test is the verification	Yes, through the test ports	No
Power	4.0 V Li-ion battery (~750 tests)	Self-powered	Self-powered
Lowers PPE category	Yes	No	No
Module size (HØ × D)	53.50 × 97.85 mm + isolation module	85.51 × 107.46 mm	48.28 × 95.71 mm

REPRESENTED IN UTAH & COLORADO BY ARMOREP

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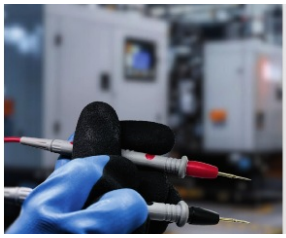
TECHNICAL SPECIFICATIONS

Specification	AVT	VPI + Test Ports	VPI
Electrical system	Single- and three-phase AC	Single- and three-phase AC/DC	Single- and three-phase AC/DC
Voltage range	Up to 1000 VAC, 50/60/400 Hz	Test ports 0–1000 VAC / 0–1500 VDC; indicator 20–1000 VAC / 40–1500 VDC	20–1000 VAC, 50/60/400 Hz; 40–1500 VDC
Maximum voltage	1000 VAC	1000 VAC and 1500 VDC	1000 VAC and 1500 VDC
Detection thresholds	Absence of voltage below 3 VAC	20 VAC and 40 VDC	20 VAC and 40 VDC
Overvoltage category	CAT III (1000 V), CAT IV (600 V)	CAT III @ 1000 VAC, CAT IV @ 600 VAC	CAT III @ 1000 VAC, CAT IV @ 600 VAC
Output accuracy	—	-7% of applied voltage, measured with a 10 MΩ input impedance voltmeter across any two test ports	—
Internal resistance	—	(4) 100 kΩ × 2, 1 W 1% resistors in series, encapsulated between each input wire and its test port	—
Single fault current	—	<3.5 mA at 1000 VAC or 1500 VDC with a momentary short between any two test ports	—
Operating temp.	-25 °C to 55 °C	-40 °C to +55 °C	-40 °C to +55 °C
Storage temp.	-45 °C to 80 °C	-45 °C to +85 °C	-45 °C to +85 °C
Humidity	5–90% non-condensing; 80% at 40 °C, decreasing linearly to 50% at 60 °C	—	—
Altitude	Up to 2000 m (6600 ft)	Up to 2000 m (6600 ft)	Up to 2000 m (6600 ft)
Pollution degree	2	2	2
Terminations	8 wire leads, 2 per line: 8 ft, 14 AWG, 90 °C @ 1000 V, UL 1032, PVC with nylon jacket	4-wire leads: 8 ft, 14 AWG, 90 °C @ 1000 V, UL 1032, PVC with nylon jacket	4-wire leads: 8 ft, 14 AWG, 90 °C @ 1000 V, UL 1032, PVC with nylon jacket
Indicators	3 large RED (L1/L2/L3 presence), 4 small RED (disconnected leads incl. GND), 1 AMBER (unsafe / hardware fault), 1 GREEN (safe)	8 bright redundant LEDs	8 bright redundant LEDs
Housing / protection	Indicator: flat-surface or DIN rail in Type (UL, NEMA, CSA) 1, 12, 13, 4, 4X, IP66, IP67 or IP69 enclosure. Isolation module: IP20	UL-approved material, totally encapsulated including LEDs	UL-approved material, totally encapsulated including LEDs
Dimensions	Indicator 53.50 × 97.85 mm (HØ × D), 30 mm Ø hole; isolation module 127.33 × 107.38 × 38 mm	85.51 × 107.46 mm (HØ × D), 30 mm Ø hole	48.28 × 95.71 mm (HØ × D), 30 mm Ø hole
Battery	Industrial 4.0 V lithium-ion, approx. 750 tests	None — self-powered	None — self-powered

IN SERVICE



AVT — PUSH-TO-TEST, DOOR CLOSED



VPI+TP — METER READING THROUGH TOUCH-SAFE PORTS



VPI+TP — PANEL MOUNT WITH DUST CAP



VPI — PANEL MOUNT WITH LEGEND LABEL



AVT ISOLATION MODULE

WHERE IT GETS SPECIFIED

- **Water & wastewater** — MCC lineups, lift station and blower panels
- **Mining & mineral processing** — crusher, conveyor and mill drive panels
- **Power generation** — switchgear and distribution boards
- **Data centers** — PDUs and electrical rooms with tight LOTO windows
- **Heavy industrial & cement** — plant-wide LOTO programs
- **Hospitals & facilities** — where an outage window is expensive

Certifications pending. Specifications and data are subject to change with or without notice.

NUKLEUS — electrical safety devices
nukleustek.com
Datasheet revisions AVT / VPITP / VPI-DS 0226

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