

TECHNICAL DATA

Fluke Networks Industrial Ethernet DSX CableAnalyzer™ Kit







Key features

- Certifies copper cable for TIA category 5 through 6A
- Shows Pass/Fail in 10 seconds, with full measurement details
- Supports RJ45, M12D, and M12X connectors
- Documents results with LinkWare™ PC

Product overview: Fluke Networks Industrial Ethernet DSX CableAnalyzer™ Kit

Studies show that half of Industrial Ethernet problems are caused by cabling. The DSX CableAnalyzer validates cable performance to TIA 1005-A and ISO 11801:3 standards, allowing industrial companies and machine builders to ensure compliance, start up faster, and reduce production down time.

The DSX CableAnalyzer works on cables running EtherNet/IP™, Profnet™, ModBus TCP™, EtherCAT, plus other protocols. It offers touchscreen project management, TIA Level IIIe accuracy, and advanced troubleshooting, all with integrated Wi-Fi and 8-hour battery life.

The kit includes the Versiv mainframe and remote units, a reference module, adapters, commonly used accessories, and a statement of calibration.

Specifications: Fluke Networks Industrial Ethernet DSX CableAnalyzer™ Kit

| Cable types | |
|--|---|
| Shielded and unshielded pair LAN cabling | TIA Category 3, 4, 5, 5e, 6, 6A, 8: 100 Ω ISO/IEC Class C, D, E, E _A , F, F _A and I/II: 100 Ω and 120 Ω |
| Standard link interface adapters | |
| Permanent link adapters | Plug type: shielded RJ45 Optional Plug type: Tera |
| Channel Adapters | Jack type: shielded RJ45 Optional Jack type: Tera, GG45 |
| Test standards | |
| TIA | Category 3, 4, 5, 5e, 6, 6A, 8 per TIA 568-C.2 |
| ISO/IEC | Class C and D, E, E _A , F, F _A and I/II certification per ISO/IEC |
| Maximum frequency | DSX-5000: 1000 MHz |
| General specifications | |
| Speed of Autotest | DSX-5000: Full 2-way Autotest of Category 5e or 6/Class D or E: 9 seconds. Full 2-way Autotest of Category 6A/Class E _A : 10 seconds |

| | |
|--|--|
| Supported test parameters (The selected test standard determines the test parameters and the frequency range of the tests) | Wire Map, Length, Propagation Delay, Delay Skew, DC Loop Resistance, Pair-to-Pair Resistance Unbalance, Pair Resistance Unbalance, Insertion Loss (Attenuation), Return Loss (RL), Common Mode Return Loss (CMRL), Near End Crosstalk (NEXT), Far End Crosstalk (FEXT), Attenuation-to-crosstalk Ratio (ACR-N), ACR-F (ELFEXT), Power Sum ACR-F (ELFEXT), Power Sum NEXT, Power Sum ACR-N, Power Sum Alien NEXT (PS ANEXT), Power Sum Alien Attenuation NEXT Ratio Far End (PS AACR-F), Common Mode to Differential Mode NEXT (CDNEXT), Transverse Conversion Loss (TCL), Equal Level Transverse Conversion Transfer Loss (ELTCTL) |
| Input protection | Protected against continuous telco voltages and 100 mA over-current. Occasional ISDN over-voltages will not cause damage |
| Display | 5.7 in LCD display with a projected capacitance touchscreen |
| Case | High impact plastic with shock absorbing overmold |
| Dimensions | Main Versiv unit with DSX module and battery installed: 2.625 in x 5.25 in x 11.0 in (6.67 cm x 13.33 cm x 27.94 cm) |
| Weight | Main Versiv unit with DSX module and battery installed: 3 lbs, 5oz (1.28 kg) |
| Main unit and remote: | Lithium ion battery pack, 7.2 V |
| Typical battery life: | 8 hours |
| Charge time* | Tester off: 4 hours to charge from 10 % capacity to 90 % capacity. |
| Languages supported | English, French, German, Italian, Japanese, Portuguese, Spanish, Chinese, Korean, Russian, Trad Chinese, Czech, Polish, Swedish, Hungarian |
| Calibration | Service center calibration period is 1 year |
| Integrated Wi-Fi | Meets IEEE 802.11 a/b/g/n; dual band (2.4 GHz and 5 GHz) |

Environmental specifications

| | |
|-----------------------------|--|
| Operating temperature | 32°F to 113°F (0°C to 45°C) |
| Storage temperature | -14°F to +140°F (-10°C to +60°C) |
| Operating relative humidity | 0 % to 90 %, 32°F to 95 °F (0°C to 35°C) 0 % to 70 %, 95°F to 113 °F (35°C to 45°C) |
| Vibration | Random, 2 g, 5 Hz-500 Hz |
| Shock | 1 m drop test with and without module and adapter |
| Safety | CSA 22.2 No. 61010, IEC 61010-1 3 rd Edition |
| Operating altitude | 13,123 ft (4,000 m) 10,500 ft (3,200 m) with ac adapter |
| EMC | EN 61326-1 |

Performance specifications **

| | | |
|----------|--|---|
| DSX-5000 | Category 6A/Class E _A test modes (or lower link categories) | Exceed Level IIIe requirements of TIA 1152 and Level IV of IEC 61935-1. |
| | Class F _A test modes | Exceed Level V requirements as in the draft 4th edition of IEC 61935-1. |

Length of twisted pair cabling¹

| | | |
|-------|-----------------|----------------|
| | Without remote | With remote |
| Range | 800 m (2600 ft) | 150 m (490 ft) |

| | | |
|-------------------------|---|------------------------------|
| Resolution | 0.1 m or 1 ft | 0.1 m or 1 ft |
| Accuracy | $\pm (0.3 \text{ m} + 2 \%)$; 0 m to 150 m $\pm (0.3 \text{ m} + 4 \%)$; 150 m to 800 m | $\pm (0.3 \text{ m} + 2 \%)$ |
| Propagation delay | | |
| | Without Remote | With Remote |
| Range | 4000 ns | 750 ns |
| Resolution | 1 ns | 1 ns |
| Accuracy | $\pm (2 \text{ ns} + 2 \%)$; 0 ns to 750 ns $\pm (2 \text{ ns} + 4 \%)$; 750 ns to 4000 ns | $\pm (2 \text{ ns} + 2 \%)$ |
| Delay skew | | |
| Range | 0 ns to 100 ns | |
| Resolution | 1 ns | |
| Accuracy | $\pm 10 \text{ ns}$ | |
| DC loop resistance test | | |
| Range | 0 Ω to 540 Ω | |
| Resolution | 0.1 Ω | |
| Accuracy | $\pm (1 \text{ } \Omega + 1 \%)$ | |
| Overload recovery time | Less than 10 minutes to rated accuracy following an overvoltage. Referencing is required after repeated or prolonged overvoltage. | |

*Available in certain geographies currently

**Applies to accessories in the original product purchase

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