



Smart Network Cable Tester

SML-T Series

Wire Mapping · Port Flashing · Single-Ended Test



SML-T6



SML-8168F

Two representative appearances shown; confirm the exact model from the product label.

English User Manual

Models: T6 / 8168B / 8168F / 8168D / 8168P

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About This Manual

This manual describes the structure, model differences, specifications, operation, result interpretation, safety, maintenance, troubleshooting, and package contents of five SML-T Series models. Check the label before use.

Read and Retain

Read this manual before first use, especially Chapter 4 and the safety boundaries in Chapter 7. Retain it for reference.

For support, call 0769-85011391 or visit shom.cn.

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Chapter 1

Product Overview

The SML-T Series Smart Network Cable Tester is intended for structured cabling, low-voltage maintenance, network service, and security-system wiring. It tests wire order and common faults in network, telephone, and shielded cables. Every model uses a detachable Main Unit and Remote Unit with combined RJ45/RJ11 ports. Selected models also provide port flashing, a near-end Single-Ended Test, and USB Type-C charging.

NOTE This manual covers five models. Check the product label before operation. Do not attempt a function that is not listed for the identified model.

1.1 Applicable Models

- SML-T6
- SML-8168B
- SML-8168F
- SML-8168D
- SML-8168P

1.2 Shared Capabilities

All models support Main-to-Remote Wire Mapping for 8P, 6P, and 4P cables. They can indicate wire order, open circuits, short circuits, miswires, and shield continuity; the G indicator shows shield continuity. All models have nominal 60 V PoE burnout protection. This protection is not PoE detection and does not permit connection to mains, high-voltage, or unknown-voltage circuits.

1.3 Model Selection

Model	Start and Mode Selection	Power
SML-T6	No switch; starts immediately when connected	One 9 V battery
SML-8168B	No switch; starts immediately when connected	One 9 V battery
SML-8168F	Three positions: FLASH, TEST, OFF	One 9 V battery
SML-8168D	No switch; starts when connected	Built-in 3.7 V / 800 mAh battery
SML-8168P	Three positions: FLASH, TEST, OFF/SINGLE	Built-in 3.7 V / 800 mAh battery

Model	Dimensions	Port Flash	Single-Ended	Mapping
SML-T6	83 × 79 × 22 mm	No	No	Yes
SML-8168B	110 × 90 × 22 mm	No	No	Yes
SML-8168F	110 × 90 × 22 mm	Yes	No	Yes
SML-8168D	110 × 90 × 22 mm	No	Network/phone	Yes
SML-8168P	110 × 90 × 22 mm	Yes	Network/phone	Yes

With an ordinary or standards-compliant PoE switch, use only the function listed above. T6 and 8168B have no detection function for a switch-connected cable. With passive/non-standard PoE, every model provides protection only; test results are unavailable.

Chapter 2

Structure and Controls

2.1 Units and Ports

Part	Models	Description
Main Unit / Transmitter	All	Connects to the cable, sends the test signal, and displays order or status.
Remote Unit / Receiver	All	Used only with the Main Unit for Wire Mapping. Never connect it to a switch.
Combined RJ45/RJ11 Port	All	Accepts network or telephone cable. Wire Mapping uses one unit at each end.
LEDs 1–8 and G	All	LEDs 1–8 show conductors; G shows shield continuity. D/P reuse them for Single-Ended Test.
Three-Position Switch	8168F, 8168P	F: FLASH/TEST/OFF; P: FLASH/TEST/OFF/SINGLE.
USB Type-C Port	8168D, 8168P	Charges the built-in battery from a 5 V / 1 A source.

2.2 Status Indicators

On the 8168F, the red work indicator is on during Port Flashing; there is no yellow charge indicator. On the 8168D/8168P, adjacent yellow and red indicators are independent: yellow is on while charging, and red is on during Single-Ended Test and, on the 8168P, Port Flashing. Both may be on while testing during charging; yellow turns off when full.

2.3 Product Views

NOTE This manual shows two representative appearances: SML-T6 for the 83 × 79 × 22 mm compact body and SML-8168F for the 110 × 90 × 22 mm 8168-series body. SML-8168B/D/P are not photographed separately; confirm the exact model and functions from the label and tables.



SML-T6 compact appearance



8168-series representative
(SML-8168F)



SML-T6 side view



SML-8168F side view



SML-T6 combined ports



SML-8168F combined ports

Figure 2-1 Front, side, and combined-port examples for T6 and the 8168 series

Chapter 3

Specifications

3.1 Common Specifications

Item	Specification
Brand	shomlin / 杉木林
Primary Function	Wire order and fault testing
Cable Types	Twisted-pair, telephone, and shielded network cables (8P / 6P / 4P)
Interface	Combined RJ45/RJ11
Results	Wire order, open, short, miswire, and shield continuity
Display	LEDs 1–8 and G
PoE Protection	Nominal 60 V burnout protection
Operating Environment	–10 °C to +60 °C; 10% to 70% RH
Material	ABS

3.2 Model-Specific Specifications

Model	Dedicated Functions	Power and Charging
SML-T6	Basic Wire Mapping; starts on insertion	One 9 V battery
SML-8168B	Basic Wire Mapping; starts on insertion	One 9 V battery
SML-8168F	Wire Mapping and Port Flashing	One 9 V battery
SML-8168D	Wire Mapping; near-end network/phone Single-Ended Test	3.7 V / 800 mAh; Type-C 5 V / 1 A
SML-8168P	Wire Mapping, Port Flashing, and near-end network/phone Single-Ended Test	3.7 V / 800 mAh; Type-C 5 V / 1 A

3.3 Specification Boundaries

The 8168D/P Single-Ended Test covers a maximum of 10 cm from the inserted plug and does not restrict total cable length. It checks the near-end plug and conductors and does not replace end-to-end Wire Mapping. Nominal charging time is approximately one hour, and testing while charging is permitted.

WARNING The nominal 60 V value is burnout protection, not a normal test voltage or PoE output specification. The tester does not identify the PoE type or output voltage.

Chapter 4

Before Use

4.1 Confirm the Model and Task

1. Read the product label and identify the exact model.
2. Use the Chapter 1 model matrix to confirm that the function is supported.
3. Inspect the Main Unit, Remote Unit, combined ports, indicators, and accessories.
4. Remove dust, foreign matter, or liquid. Stop if a port is deformed.

4.2 Check Power

- SML-T6, SML-8168B, SML-8168F: verify that the 9 V battery is installed correctly.
- SML-8168D, SML-8168P: verify battery power. Charge through USB Type-C from a sound 5 V / 1 A source when required.

4.3 Identify the Switch Type

Before connecting to a switch, confirm from its label, manual, or specification whether it is an ordinary switch, standard PoE switch, or passive/non-standard PoE switch. If uncertain, treat it as passive/non-standard PoE: disconnect the switch and its power. Switch-connected functions use only the Main Unit, never the Remote Unit.

4.4 Select the Mode

- T6/8168B/8168D: no switch; insert the cable to start testing.
- 8168F: TEST = Wire Mapping; FLASH = Port Flashing; OFF = off.
- 8168P: TEST = Wire Mapping; FLASH = Port Flashing; OFF/SINGLE = Single-Ended Test.

CAUTION On SML-8168P, OFF/SINGLE is a mode label. To confirm shutdown, remove the test cable and disconnect charging power.

Chapter 5

Operation

5.1 Twisted-Pair and Shielded Wire Mapping

1. Connect one cable end to the Main Unit and the other to the Remote Unit.
2. T6, 8168B, and 8168D start on insertion. Set 8168F or 8168P to TEST.
3. Observe LEDs 1–8 on both units; also observe G for a shielded cable.
4. Interpret order, opens, miswires, shorts, and shield continuity using Chapter 6.
5. Remove both ends after the test and return a switched model to its non-operating position.

5.2 Telephone Wire Mapping

1. Connect the telephone cable ends to the combined ports on the Main and Remote Units.
2. T6, 8168B, and 8168D start on insertion. Set 8168F or 8168P to TEST.
3. Observe the LEDs for the conductor count and interpret them using Chapter 6.

5.3 SML-8168F Port Flashing

1. Confirm an ordinary or standards-compliant PoE switch.
2. Select FLASH; connect only the Main Unit to the cable for the target switch port.
3. When the red work indicator is on, observe the switch LEDs and identify the flashing port.
4. Remove the cable and select OFF after use.

NOTE SML-8168F has no yellow charge indicator and does not support Single-Ended Test.

5.4 SML-8168P Port Flashing

1. Confirm an ordinary or standards-compliant PoE switch.
2. Select FLASH; connect only the Main Unit to the cable for the target port.
3. When the red work indicator is on, observe the switch. The target port flashes about once every three seconds.
4. Remove the cable and select the next required mode after use.

5.5 SML-8168D / SML-8168P Single-Ended Test

1. The 8168D has no switch. On 8168P, select OFF/SINGLE.
2. Insert one end of a network or telephone cable into the Main Unit. Do not connect the Remote Unit at the far end.
3. If the far end is connected to a switch, only an ordinary or standards-compliant PoE switch is permitted.
4. When the red work indicator is on, observe the shared LEDs 1–8 and G.
5. A lit LED 1–8 means the corresponding near-end conductor is terminated; unlit means not terminated. G is the shield indicator.
6. Coverage is limited to 10 cm from the inserted plug. Use Wire Mapping for complete wire order.

5.6 Charging SML-8168D / SML-8168P

1. Connect the tester to a 5 V / 1 A source with a USB Type-C cable.
2. Yellow indicates charging and turns off when full, after approximately one hour.
3. Testing while charging is allowed. Yellow and red may be on together before full charge.
4. Disconnect the power source before removing the Type-C cable.

WARNING The built-in lithium battery is not user-replaceable. Stop charging and testing immediately if the unit becomes abnormally hot, smells unusual, or has enclosure damage.

Chapter 6

Result Interpretation and Switch Boundaries

6.1 Network Cable Wire Mapping

Indication	Interpretation
LEDs 1–8 light in order for an 8-core cable	Normal wire order.
LEDs 1–8 and G light in order	Normal order and continuous shield.
LEDs 1, 2, 3, and 6 light in order	Normal four-core cable.
An expected LED does not light	Possible open circuit or poor contact.
Main LEDs 1–8 are sequential; Remote order differs	Miswire or crossed order.
Main shorted-pair LEDs sequence; matching Remote LEDs light together	Short circuit in that pair.
G does not light on a shielded cable	Shield continuity may be open.

6.2 Telephone Cable Wire Mapping

Indication	Interpretation
Two-core LEDs 4 and 5 light	Normal.
No indication at either end of a two-core cable	Possible open circuit.
Main LEDs 4 and 5 light; Remote stays off	Possible two-core short circuit.
Four-core LEDs 3, 4, 5, and 6 light in order	Normal.
Six-core LEDs 2–7 light in order	Normal.
An expected four- or six-core LED is off	Possible open circuit in that conductor.
Main shorted-pair LEDs sequence; matching Remote LEDs light together	Short circuit in that pair.

6.3 Switch and PoE Boundaries

Type	48 V Output Condition	Permitted Use
Ordinary Switch	No PoE output capability	Model-supported Port Flashing or Single-Ended Test; Main Unit only.
Standards-Compliant PoE	Outputs only after a powered device is detected	Model-supported Port Flashing or Single-Ended Test; Main Unit only.
Passive/Non-Standard PoE	Outputs whether or not a powered device is present	Protection only; testing is unavailable and results are invalid.

The tester does not identify the switch category, PoE type, or output. If the category is uncertain, treat it as passive/non-standard PoE. For a cable that was connected to passive PoE, disconnect the switch and its power before testing.

DANGER Burnout protection does not permit testing energized high-voltage circuits. Never connect mains, high-voltage, or unknown-voltage wiring.

Chapter 7

Safety and Maintenance

7.1 Safety Instructions

1. Connect only the Main Unit to a switch and confirm both the switch type and supported model function.
2. Passive/non-standard PoE provides nominal 60 V protection only; testing is unavailable.
3. Never connect mains, high-voltage, or unknown-voltage wiring.
4. When testing while charging D/P, use a sound Type-C cable and 5 V / 1 A source only.
5. Inspect ports and plugs before insertion. Do not force a damaged or incompatible plug.
6. Disconnect everything if the unit is wet, damaged, abnormally hot, or smells unusual.
7. Do not apply instructions or accessories for a 9 V model to a Type-C model, or vice versa.

7.2 Cleaning and Care

- Clean the combined ports regularly to prevent dust or oxidation from affecting contact.
- Wipe the enclosure with a dry soft cloth. Do not use corrosive cleaner or rinse the unit.
- Inspect the battery in a stored 9 V model; stop use if leakage is found.
- Do not disassemble, puncture, crush, or replace the built-in D/P battery.
- Avoid heat, high humidity, strong impact, heavy loads, and liquids.

7.3 Storage

Remove all test and charge cables. Place switched models in a non-operating position and store the Main and Remote Units together in a dry, ventilated location away from corrosive substances and out of reach of children.

Chapter 8

Troubleshooting

Symptom	Possible Cause	Action
An expected Wire Mapping LED is off	Open, poor contact, or loose plug	Inspect the conductor, plug, and combined port; test again.
Remote order is wrong on an 8-core cable	Miswire or crossed order	Re-terminate in the correct order.
Main pair sequences; Remote pair lights together	Short circuit	Inspect the cable and plug termination.
G is off on a shielded cable	Shield is not continuous	Inspect the shielded plug, termination, and shield path.
No LEDs on either end of a two-core phone cable	Open circuit or no tester power	Confirm power and other indications, then inspect the cable.
8168F port does not flash	Wrong position or connection	Select FLASH; use the Main Unit only and a permitted switch.
8168P port does not flash	Wrong position/connection or insufficient observation time	Select FLASH, reconnect, and observe the about three-second interval.
A D/P Single-Ended LED is off	Corresponding near-end conductor is not terminated	Inspect and re-terminate that conductor.
D/P Single-Ended Test has no result	Loose plug, Remote attached, or target beyond 10 cm	Seat the Main plug, remove the Remote, or use Wire Mapping for the full cable.
Yellow charge LED is off	Full charge, source fault, or cable fault	Check full-charge state, then the 5 V / 1 A source and Type-C cable.
Unit becomes hot or smells unusual	Battery, port, or internal fault	Stop testing and charging, disconnect everything, and contact support.

If the same problem remains with known-good cables and power, stop using the tester and contact support. Do not open the Main Unit or Remote Unit.

Chapter 9

Package and Version Information

9.1 9 V Battery Models

Applies to SML-T6, SML-8168B, and SML-8168F.

Item	Quantity
Main Unit / Transmitter	1
Remote Unit / Receiver	1
9 V Battery	1
Color Box	1 set

9.2 USB Type-C Models

Applies to SML-8168D and SML-8168P.

Item	Quantity
Main Unit / Transmitter	1
Remote Unit / Receiver	1
USB Type-C Charging Cable	1
Color Box	1 set

Check the actual package after opening. Retain the package and contact the seller or support if an item is missing or damaged.



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