

4-wire Cable Tester

8765
8765NAK

Test Pin
4-Wire (64/128/256/512)

Cable Tester



• 8765NAK

MICROTEST 8765/8765NAK Series Cable Harness Tester features precision four-wire measurement technology for comprehensive electrical testing of low-resistance cable harnesses down to 1mΩ. Supporting continuity resistance, open/short detection, AC/DC Hipot, insulation resistance (IR), and component testing, the system is available in 64, 128, 256, and 512 test-point configurations with up to 1000 VAC and 1500 VDC output.

The built-in 24 VDC simulation function enables effective verification of terminal crimp quality, wire damage, leakage, and assembly defects. Combined with PC connectivity and barcode integration, the 8765/8765NAK Series is an ideal solution for automotive wire harness, industrial connector, and automated production line testing.

Application

Consumer Electronics Cable Assemblies, Automotive Wiring (Cross-Car Wiring), Automotive-Grade Wire Harnesses, Connectors, Flexible Flat Cables (FFC/FPC)



• 8765

Features

- 4-wire measurement Cond. Resistance 1mΩ~52Ω
- 24V DC Output for Harness Continuity, Short & Insulation Test
- AC Hipot Voltage up to 1000 V/ DC up to 1500 V | 8765
- AC Hipot Voltage up to 700 V/ DC up to 1000 V | 8765NAK
- Continuity Resistance, Open/Short, Intermittence Open/Short
- Programmable High Voltage Testing
- Insulation Resistance (IR) Testing
- Test Pin 64 / 128 / 256 (Model. 8765)
- Test Pin 512 (Model. 8765NAK)
- Supports BAR Code Scanning
- Supports List Printer Data Output
- Supports Multi-Product Testing Management



Standard Interfaces

RS-232

USB Host

Remote

Print

Specification

Model	8765FA	8765NA	8765N	8765NAK	8765NK
Measuring Mode	4-wire				
Test Pin	64/128/256			512	
Enhanced Reliability of Automotive Wire Harnesses					
DC 24V Output	Open/Short Test: 1kΩ~100kΩ				
	Insulation Resistance Test: 1MΩ~1.2GΩ				
AC/ DC/ IR Test					
AC Hi pot Test	100~1000V	100~700V	-	100~700V	-
DC Hi pot Test	50~1500V	50~1000V	50~1000V	50~1000V	50~1000V
AC Hipot Leakage Current	0.01mA~5mA				
AC Arcing Detection	1~48				
DC Hipot Leakage Current	0.1uA~1200uA				
DC Arcing Detection	1~48				
Programmable HV Test	● Hipot Test Programming for Cable Harness / Connector Loops				
DC Hipot Insulation Resistance	1MΩ~1.2GΩ				
Hipot Output Accuracy	±5%				
Hipot Measurement Basic Accuracy	±5%				
Rated Output	5Vdc				
Hipot Measurement Time	0.01s~60s				
Wire Specifications	Maximum allowable capacitance 5uF				
Low Voltage Electrical Test					
Continuity Test	Measurement Range		1mΩ~52Ω		
	Current Signal		10mA		
Intermittence Continuity Test	20Ω~2kΩ				
O/S, Intermittence O/S, Quick Intermittence open circuit	1kΩ~100kΩ				
O/S Determinal Judge	●				
Single-Side Test	●				
Component test					
Resistance	Measurement Range		50mΩ~20MΩ		
	Level Signal		0.1~3V		
Capacitance	Measurement Range		10pF~12μF		
	Frequency Signal		AUTO (Optional) 48Hz/ 480Hz/ 4.8kHz/ 48kHz		
	Level Signal		0.1V~1.2V		
Diode	Measurement Range		0.1~6.8V		
Advanced Functions	Programmable continuous test / Pin search/ Auto-diagnosis				
Test Scan Mode	Auto, Manual, External Trigger				
Measurement Signal	Low Voltage Measurement Signal				
Built-in Storage	Number of test file up to 500 sets				
Panel	System/ Rapid/ Edit/ Function				
Indicator	Pass/Fail HV LED red-green indicator lights/ Screen Display/ Sound				

General

Power Supply	Fixed Voltage : 115/230 Vac $\pm 10\%$, Frequency : 60/50Hz
Power consumption	64PIN : 70VA, 128PIN : 70VA, 256PIN : 100VA, 512 PIN : 250VA
Interface	RS-232, USB Host, Print, Remote
Operation	Manual, Auto, Remote Control
Display	320*240 dot-matrix display
Environment	Temperature : 15°C-35°C Humidity : RH $\leq 70\%$
Dimension(W*H*D)	64 PIN : 435x145x406mm, 128 PIN : 435x145x406mm, 256 PIN : 435x190x406mm, 512 PIN : 435x270x360 mm
Weight	64 PIN : 8.44kg, 128 PIN : 9.3kg, 256 PIN : 14kg, 512 PIN : 18kg

High-Voltage Protection Mode | Eliminates Wiring Parallel Effects with Synchronized Component Protection

Preferred Solution for Automated Wire Harness Production Testing – 8765/8765NAK Cable Tester

Addresses parasitic capacitance and parallel wiring effects caused by long fixture extension cables, adapter leads, and multi-station test configurations in automated wire harness production lines, ensuring stable and accurate withstand voltage and insulation measurements.

The 8765/8765NAK Wire Harness Tester supports programmable high-voltage loop control, making it ideal for large-scale wire harnesses and multi-station automated test platforms. It effectively suppresses parasitic parallel capacitance effects and equivalent leakage current interference introduced by long cable routing, significantly improving measurement stability and accuracy while minimizing false judgments during high-voltage and insulation testing.

In addition, the controlled high-voltage output protects embedded components such as TVS, MOV, and ESD devices within the harness, preventing damage during high-voltage testing and maintaining overall harness reliability.

HIPOT			File:DEMO
Item	DC	Hipot	
[1] Voltage	1000V	1000V	AC ZERO
[2] Frequency	Insu.	50Hz	DC ZERO
[3] Test rate	NORM	NORM	NUFN
[4] Spec.	100.0MΩ	0.50mA	CLR ZERO
[5] Offset	0.0MΩ	0.00mA	NEXT PAGE
[6] All Ground	OFF	OFF	
[7] Binary	ON	ON	
[8] Time	0.01Sec	0.01Sec	
[9] All nets	OFF	OFF	
[10] Time	0.01Sec	0.01Sec	
[11] GND pin	A01	A01	

O/S NET		File:DEMO
Net Pin#	Page: 1/3 { 32Nets }	
001 A01-B01		LEARN
002 A02-B02		NET EDIT
003 A03-B03		
004 A04-B04		
005 A05-B05		
006 A06-B06		
007 A07-B07		
008 A08-B08		
009 A09-B09		
010 A10-B10		
011 A11-B11		
012 A12-B12		

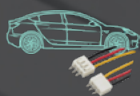
NET OPEN		
NET001:	YES	t
NET002:	NO	U
NET003:	NO	Z
NET004:	NO	N
NET005:	NO	NA
NET006:	NO	NA
NET007:	NO	NUFN
NET008:	NO	
NET009:	NO	
NET010:	NO	ec
NET011:	NO	
NET012:	NO	cc

High-Voltage Circuit Test Editing Function

Application



USB Type-C



Automotive



Consumer



DisplayPort



PoE/Ethernet



Medical

Vehicle Harness Test Solution | DC 24V Output for Simulation of Real-World Operating Conditions

Continuity and Insulation Resistance Testing under Dynamic Automotive Harness Conditions

HIPOT			File:1
Item	DC	Hipot	
[1] Voltage	200V	200V	AC ZERO
[2] Frequency	Insu.	50Hz	DC ZERO
[3] Test rate	NORM	NORM	NUFN
[4] Spec.	0.1MΩ	0.50mA	CLR ZERO
[5] Offset	0.0MΩ	0.00mA	NEXT PAGE
[6] All Ground	OFF	OFF	
[7] Binary	ON	ON	
[8] Time	0.01Sec	0.01Sec	
[9] All nets	OFF	OFF	
[10] Time	0.01Sec	0.01Sec	
[11] GND pin	A01	A01	

TEST MODE		File:1	PROG
[1] Q.INTER. O/S TIME	0.0 Sec		
[2] Q.INTER. O/S Scan	04		
[3] Q.INTER.Delay	3		
[4] 24V PS Scan	YES		
[5] 24V US Judg.Val	0.10MΩ		

DC 24V Output	Open/Short Test : 1kΩ~100kΩ
	Insulation Resistance Test: 1MΩ~1.2GΩ

Enables realistic emulation of automotive wire harness operating conditions within vehicle electrical systems for short/open circuit and insulation resistance testing.

The 24V open/short detection improves sensitivity to latent failure modes such as terminal oxidation, poor crimping, micro-short conditions, and unstable contact behavior.

By applying 24V-based insulation resistance measurement, the system effectively identifies potential leakage paths caused by moisture ingress or insulation degradation, reducing high-impedance anomalies and intermittent faults.

This ensures reliable leakage inspection of automotive wire harnesses under actual operating conditions.

Functions

4-Wire measurement, achieving precise measurement of conductor impedance down to 1mΩ.

The 8765/ 8765NAK series utilizes a 4-Wire measurement technique, directly connected to both ends of the test harness for measurement, avoiding errors introduced by overall wiring, achieving precise measurement of conductor impedance down to 1mΩ.

Example: Test Pin 128

A Port (1~32PIN)

B Port (1~32PIN)

All-in-One Cable Electrical Quality Testing

8765/ 8765NAK series precisely measures insulation, continuity, and resistance performance to ensure each cable assembly meets standards and maintains strict quality control.

Support for Open/Short Circuit Testing

When the open/short circuit test function is enabled, the instrument automatically learns the loop of the harness. It detects points at both ends of the cable circuit or between circuits that should not be connected together, identifying faults caused by unintended short circuits.

Short Test

Open Test

Model	Open/Short Test
8765FA/ 8765NA/ 8765N	1kΩ~100kΩ
8765NAK/ 8765NK	1kΩ~100kΩ

O/S NET

TEST:1 PASS:1 FAIL:0

O/S TEST PASS

Support for Continuity Testing

With the continuity test function enabled, the instrument checks all connected pins of the cable for proper continuity, judging by the resistance values.

Conductance

Intermittence Conductance

Model	Continuity Test	Intermittence Continuity Test
8765FA/ 8765NA/ 8765N	1mΩ~52Ω	20Ω~2kΩ
8765NAK/ 8765NK	1mΩ~52Ω	20Ω~2kΩ

COND.

[1] MAX. CONDUCTANCE 3.0000

[2] MIN. CONDUCTANCE 0.0000

[3] COND. OFFSET +0.000

[4] CONDUCTANCE MODE SERIES

[5] INTERMITTENCE LIMIT 50.00

[6] INTERMITTENCE TIME 1 Sec

Zero Stat: NO

NET CONSTEP: 1PAGE: 1/3

Name T P+ P StdVal Tol

COND T A01 A02 1.0000 10.0

COND T A03 A04 1.0000 10.0

COND T A05 A06 1.0000 10.0

COND T A07 A08 1.0000 10.0

COND T A09 A10 1.0000 10.0

COND T A11 A12 1.0000 10.0

COND T A13 A14 1.0000 10.0

COND T A15 A16 1.0000 10.0

COND T A17 A18 1.0000 10.0

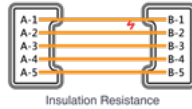
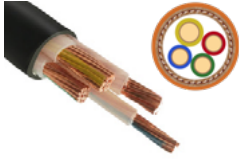
COND T A19 A20 1.0000 10.0

COND T A21 A22 1.0000 10.0

COND T A23 A24 1.0000 10.0

Support for AC/DC Hipot and insulation testing

MICROTEST Cable Tester supports AC/DC Hipot and insulation testing. It applies a stable high voltage to test the dielectric strength and insulation performance of cables. The tester can also enable arc detection to assess whether cable connectors arc under high voltage conditions, ensuring compliance with safety standards for cable quality.

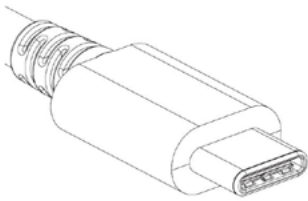


HIPOT			File: BURN-1
Item	DC	Hipot	
[1] Voltage	1000V	700V	
[2] Frequency	Insu.	60Hz	
[3] Time	0.10Sec	0.10Sec	
[4] Spec.	1000.0MR	0.50mA	
[5] Offset		0.00mA	
[6] All-Ground	OFF	OFF	
[7] Binary	ON	ON	
[8] All nets	OFF	OFF	
[9] GND pin	A01	A01	
[10] Test rate	FAST	SUPER	
[11] Max. pin	12B	12B	

Model	8765NAK	8765NK	8765FA	8765NA	8765N
AC Voltage/Leakage current	100V~700V/ 5mA	-	100V~1000V/ 5mA	100V~700V/ 5mA	-
DC Voltage/Leakage current	50V~1000V/ 1200μA	50V~1000V/ 1200μA	50V~1500V/ 1200μA	50V~1000V/ 1200μA	50V~1000V/ 1200μA
Insulation Voltage/Range	50V~1000V/ 1.2GΩ	50V~1000V/ 1.2GΩ	50V~1500V/ 1.2GΩ	50V~1000V/ 1.2GΩ	50V~1000V/ 1.2GΩ

Supports Capacitor, Resistor, and Diode Tests

Many wiring harnesses incorporate protection mechanisms by adding protective components. For example, USB Type-C fast-charge cables often install transient voltage suppressor (TVS) diodes between the plug/socket pins and ground to guard against transient or reverse voltages. In industrial control systems, harnesses frequently face electromagnetic interference and overvoltage risks, so protection devices are used to strengthen their immunity to interference.



EDIT					STEP: 1PAGE: 1/1	MEAS STEP
Name	T	P	P	StdVal	Tol%	MEAS ALL
1	R	A01	B01	1.000K	10.0	NAME OFFS CLR. OFFS
2	C	A01	B01	1.000n	10.0	
3	D	A01	B01	0.700V	10.0	
4	U	A01	B01	1.000V	10.0	
5	T	A01	B01	1.000R	10.0	

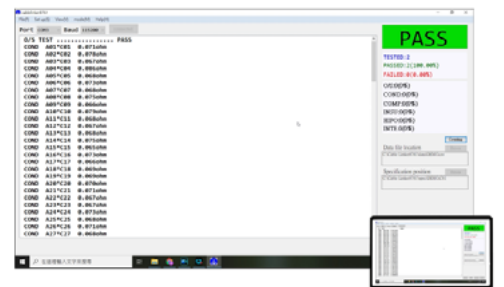
EDIT						STEP: 1PAGE: 1/1		MEAS STEP			
Name:		T	P	P	StdVal	Tol%		MEAS ALL			
1		D	A01	B01	0.700V	10.0		SET PARA			
SET PARAMETER D100E TEST MOD: CURRENT SET DIODE CURR: 1.0 mA										RANGE	

MICROTEST Cable Tester supports capacitance, resistance, and diode testing.

Model	Capacitance Test	Resistance Test	Diode Test
8765FA/ 8765NA/ 8765N	10pF~12μF	50mΩ~20MΩ	0.1~6.8V
8765NAK/ 8765NK	10pF~12μF	50mΩ~20MΩ	0.1~6.8V

PC Link & Barcode printing

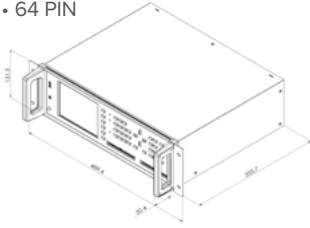
Supports computer connectivity software and barcode testing equipment, meeting comprehensive product traceability and data storage needs on production lines.



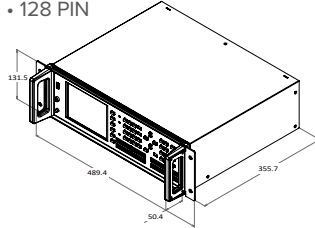
Automatic Chassis Dimension-8765/ 8765NAK series

• Dimension (mm)

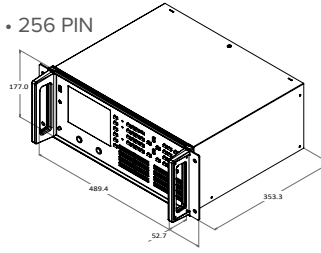
• 64 PIN



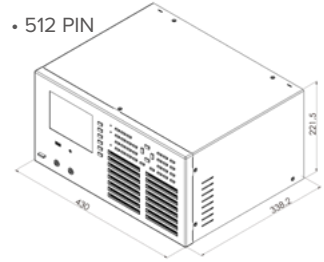
• 128 PIN



• 256 PIN

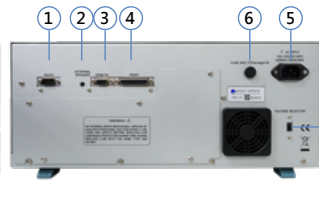
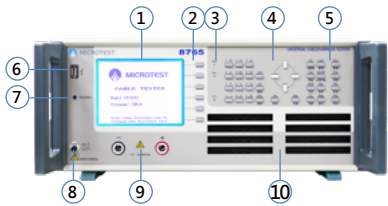


• 512 PIN



Appearance

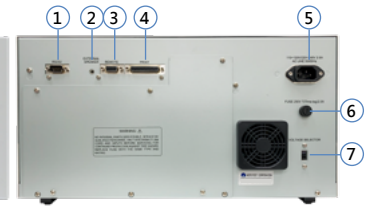
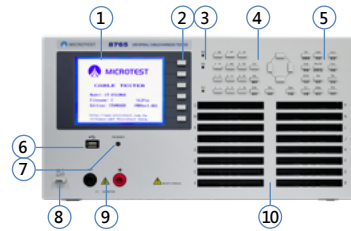
• 8765



1. LCD display
2. Soft Key
3. PASS & FAIL & HIPOT LED
4. Control button group
5. System & Test shortcut button
6. USB
7. Pin Search
8. Power switch
9. High voltage correction output connector
10. 64Pin has 2 slots, 128Pin has 4 slots, 256Pin has 8 slots

1. RS232
2. Audio output
3. Remote
4. Printer
5. AC power input
6. Fuse holder
7. 115/230V switch

• 8765NAK



1. LCD display
2. Soft Key
3. PASS & FAIL & HIPOT LED
4. Control button group
5. System & Test shortcut button
6. USB
7. Pin Search
8. Power switch
9. High voltage correction output connector
10. 512Pin has 16 slots

1. RS232
2. Audio output
3. Remote
4. Printer
5. AC power input
6. Fuse holder
7. 115/230V switch

Ordering Information

4-Wire Cable Harness Tester	Standard	Optional
8765 Series 8765FA (Test Pin 64) 8765FA (Test Pin 128) 8765FA (Test Pin 256) 8765NA (Test Pin 64) 8765NA (Test Pin 128) 8765NA (Test Pin 256) 8765N (Test Pin 64) 8765N (Test Pin 128) 8765N (Test Pin 256)	8765 Series - FX-000C16 Adapter board (2-wire 64pin to 2-wire 64pin) - TL-CB0005 Cable-64pin to 64pin (40cm) - TL-CB0006 Probe (150cm) - Power cord	- FX-CB0001 Wi-Fi Fixture - F874001 Multiple DUT Testing Expand Box (14 DUTs) - F874002 Multiple DUT Testing Expand Box (14 DUTs/ Signal Light Display) - F874004 Networking Fixture - F874005 Remote Signal Light Box - FX-000C15 Adapter board (4-wire 128pin to 2-wire 64pin) - FX-000C17 Adapter board (4-wire 64pin to 2-wire 32pin) - FX-000C18 Intermience O/S Fixture
8765NAK Series 8765NAK (Test Pin 512) 8765NK (Test Pin 512)	8765NAK Series - FX-000C16 Adapter board (2-wire 64pin to 2-wire 64pin) - TL-CB0005 Cable-64pin to 64pin (40cm) - TL-CB0006 Probe (150cm) - Power cord	- FX-000C25 Remote Expansion box (Multiple DUT test, Signal Light Display) - FX-000C27 Current Expand Box- 5A Voltage Drop Test Applicable to PCB - AK-8600F1 Flexible Flat Cable-64pin to 64pin (30cm) - AK-8600F2 Cable-64pin to 64pin (40cm) - TL-CB0001 Cable-64pin to 64pin (100cm) - TL-CB0002 Cable-64pin to 64pin (200cm) - TL-CB0005 Cable-64pin to 64pin (40cm) - FB-8600M1 Universal Fixture Board - F760001 D-Sub foot switch (15 PIN) - TL-000011 USB TO RS-232 Cable - TL-000003 RS-232 Cable (180cm) - KB-8750K1 Calibration Kits-4 Wire Model.8761/ 8761 - TM-U220PB-T EPSON Printer-TM-U220PB (Traditional Chinese/English) - TM-U220PB-S EPSON Printer-TM-U220PB (Simplified Chinese/English) - OP-876501 24V DC Output for Harness Continuity, Short & IR Test - PC Link software

Fixture & Accessories

TL-CB0006

Probe



Applicable models	8740/8761/8761NAC/8761NAK/ 8740NAK/ 8765/8765NAK
Accessory Description	150cm

TL-CB0003

Probe



Applicable models	8730	8761NAK/8751NAK/8740NAK/8765/ 8765NAK
Accessory Description	105cm	40cm 64pin TO 64pin

TL-CB0005

Cable



TL-CB0004

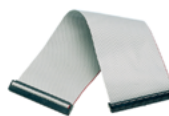
Cable-26pin to 26pin



Applicable models	8761NAC/ 8751NAC
Accessory Description	Supports USB Type-C Test Fixture 8740-F2 40cm

AK-8600F1

Cable



Applicable models	8740/8751/8761/8751NAK/8761NAK/ 8740NAK/8765/8765NAK	8740/8751/8761/8751NAK/8761NAK/ 8740NAK/8765/8765NAK
Accessory Description	30cm 64pin TO 64pin	100cm 64pin TO 64pin

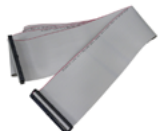
TL-CB0001

Cable



TL-CB0002

Cable



Applicable models	8740/8751/8761/8751NAK/8761NAK/8740NAK/ 8751NAC/8761NAC/8765/8765NAK	8751/8761/8751NAC/8761NAC/ 8751NAK/8761NAK/8765/8765NAK	8740/8751/8761/8751NAK/8761NAK/ 8740NAK/8751NAC/8761NAC/8765/8765NAK
Accessory Description	200cm 64pin TO 64pin	4-wire 128pin TO 2-wire 64pin	2-wire 64pin TO 2-wire 64pin

FX-000C15

Adapter board



FX-000C16

Adapter board



FX-000C17

Adapter board



FX-000C21

USB Type-A test fixture



FX-000C22

USB Type-C test fixture



Applicable models	8751/8761/8751NAC/8761NAC/ 8751NAK/8761NAK/8765/8765NAK	8761NAC/ 8751NAC	8761NAC/ 8751NAC
Accessory Description	4-wire 64pin TO 2-wire 32pin	USB Type-A test fixture	USB Type-C test fixture

FX-000C27

Current Expand Box



F874004

Networking Fixture



8740-F2

USB Type-C test fixture



Applicable models	8740/8751/8761/8751NAK/8761NAK/ 8740NAK/8751NAC/8761NAC/8765/8765NAK	8740/8751/8761/8751NAK/8761NAK/ 8740NAK/8751NAC/8761NAC/8765/8765NAK	8761NAC/8751NAC
Accessory Description	5A Voltage Drop Test Applicable to Wire Harness	Turn RS232 connector to ethernet 10/ 100 Mbps	USB Type-C test fixture

FX-000C18

Intermience O/S Fixture



Applicable models	8740/8751/8761/8751NAK/8761NAK/ 8740NAK/8751NAC/8761NAC/8765/8765NAK
Accessory Description	Electronic Short/ Open Circuit Simulator (μ s-ms range), with BNC output for oscilloscope connection; electronic switch withstand voltage up to 5V

F874001

Multiple DUT Testing Expand Box

**F874002**

Multiple DUT Testing Expand Box

**F874005**

Remote Signal Light Box



Applicable models	8740/8751/8761/8751NAK/8761NAK/ 8740NAK/8751NAC/8761NAC/8765/8765NAK	8740/8751/8761/8751NAK/8761NAK/ 8740NAK/8751NAC/8761NAC/8765/8765NAK	8740/8751/8761/8751NAK/8761NAK/ 8740NAK/8751NAC/8761NAC/8765/8765NAK
Accessory Description	Expand up to 14 DUTs	Expand up to 14 DUTs/ Signal Light Display	Remote Signal Light Display

FB-8600M1

Universal Fixture Board

**F760001**

D-Sub foot switch (15 PIN)

**TL-000012**

D-Sub Cable



Applicable models	8740/8751/8761/8751NAK/8761NAK/ 8740NAK/8751NAC/8761NAC/8765/8765NAK	8740/8751/8761/8751NAK/8761NAK/ 8740NAK/8751NAC/8761NAC/8765/8765NAK	8740/ 8751NAC/ 8761NAC/ 8740NAK
Accessory Description	Terminal test	Using in production line	150cm 15M TO 15M

TL-000011

USB to RS-232 cable

**TL-000003**

RS-232 cable (180cm)

**KB-8750K1**

Calibration Kits-4 wire



Applicable models	8740/8751/8761/8751NAK/8761NAK/ 8740NAK/8751NAC/8761NAC/8765/8765NAK	8740/8751/8761/8751NAK/8761NAK/ 8740NAK/8751NAC/8761NAC/8765/8765NAK	8751/ 8761/ 8765
Accessory Description	Using in production line	Using in production line	9 pcs

KB-8730K1

Calibration Kits-2 wire

**TM-U220PB-T**EPSON printer (Traditional Chinese/
English)**TM-U220PB-S**EPSON printer (Simplified Chinese/
English)

Applicable models	8740	8740/8751/8761/8751NAK/8761NAK/ 8740NAK/8751NAC/8761NAC/8765/8765NAK	8740/8751/8761/8751NAK/8761NAK/ 8740NAK/8751NAC/8761NAC/8765/8765NAK
Accessory Description	6 pcs	Connect print port, for print testing data	Connect print port, for print testing data

FX-000C25

Remote Expand Box

**AK-8600F2**

Cable

**8730-J2**

Adapter board



Applicable models	8740/8751/8761/8751NAK/8761NAK/ 8740NAK/8751NAC/8761NAC/8765/8765NAK	8740/ 8751/ 8761/ 8751NAC/ 8761NAC/8765/8765NAK	8740
Accessory Description	Multiple DUT Test, Remote Signal Light Display	40cm 64pin TO 64pin	64pin

FX-CB0001

Wi-Fi Fixture

FX-000C28C

2-in-1 Current Expand Box

Applicable models	8740/8751/8761/8751NAK/8761NAK/ 8740NAK/8751NAC/8761NAC/8765/8765NAK	8761NAC/ 8751NAC
Accessory Description	Wi-Fi Fixture	5A Voltage Drop Test, E-Marker IC test Top pin header for external test leads