8807

Ticket Printer

User's Guide

B14115400A
6/01.02

CUSTOMER FEEDBACK

Your feedback is important to us. If you have a problem with the product or its documentation, or if you have a suggestion on how we can serve you better, please email us at:
quality_feedback@mtwt.mt.com

THANK YOU FOR YOUR PURCHASE!

TRADEMARK INFORMATION

METTLER TOLEDO® is a registered trademark of Mettler-Toledo, Inc., Columbus, OH, USA. EPSON® is a registered trademark of Seiko Epson Corporation.

DECLARATION of CONFORMITY

according to ISO/IEC Guide 22 and EN 45014

Manufacturer :SEIKO EPSON CORPORATION

Address :3-5,Owa 3-chome,Suwa-shi,Nagano-Ken 392
Japan

Representative:EPSON EUROPE B.V.
Address :Prof.J.H.Bavincklaan 5
1183 AT Amstelveen,
The Netherlands

Declares that the Product:
Product Name : Printer
Type Name : M119D

Conform to the following Directives and Norms

Directive 89/336/EEC
EN 55022 (1986 and 1994)class B
EN 50082-1(1992)
IEC 801-2 (1991)
IEC 801-3 (1984)
IEC 801-4 (1991)

Directive 90/384/EEC
EN45501:(1992)

June 1996,

M Hamamoto
President of EPSON Europe B.V.

Safety Standards, Warnings, and Compliance

EMC and Safety Standards

Printer

Product Name: METTLER TOLEDO 8807 (TM-U295)

Model Name: M66SA

The following standards are applied only to the printers that are so labeled. (EMC is tested using the packaged AC adapter and the EPSON PS-170 power supply.)

Europe:	CE Marking Safety: EN60950
North America:	EMI: FCC/ICES-003 Class A Safety: UL 1950/CSA C22.2 No. 950
Japan:	EMI: VCCI Class A
Oceania:	EMC: AS/NZS 3548
Taiwan:	EMI: Class B

AC Adapter

Product Name: PS170

Model Name: M122A

The following standards are applied only to the AC adapters that are so labeled. (The printer and the AC adapter together are applied to the EMC standards.)

Europe:	CE Marking Safety: EN60950
North America:	Safety: UL 1950/CSA C22.2 No. 950
Japan:	Safety: Electrical Appliance and Material Control Law of Japan
Oceania:	Safety: AS 3260

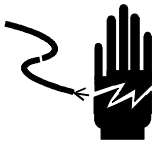
WARNING!

The connection of a non-shielded printer interface cable to this printer will invalidate the EMC standards of this device.

CE Marking

The printer conforms to the following Directives and Norms
Directive 89/336/EEC
EN 55022 Class B
EN 50082-1
IEC 801-2
IEC 801-3
IEC 801-4

Directive 90/384/EEC EN45501



⚠ WARNING

PERMIT ONLY QUALIFIED PERSONNEL TO SERVICE THIS EQUIPMENT. EXERCISE CARE WHEN MAKING CHECKS, TESTS, AND ADJUSTMENTS THAT MUST BE MADE WITH POWER ON. FAILING TO OBSERVE THESE PRECAUTIONS CAN RESULT IN BODILY HARM.

- Read this manual before installing or servicing this equipment. Save this manual for future reference.
- Follow these instructions carefully.
- Do not allow untrained personnel to operate, clean, inspect, maintain, service, or tamper with this equipment.
- Always disconnect this equipment from the power source before cleaning or performing maintenance.

Call METTLER TOLEDO for parts, information, and service.

FCC Compliance Statement

US Installations

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his or her own expense.

Canadian Installations

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Information about METTLER TOLEDO Technical Training can be obtained by writing, calling, or faxing:

METTLER TOLEDO
1900 Polaris Parkway
Columbus, Ohio 43240 USA
Phone: (614) 438-4511
Fax: (614) 438-4958
www.mt.com

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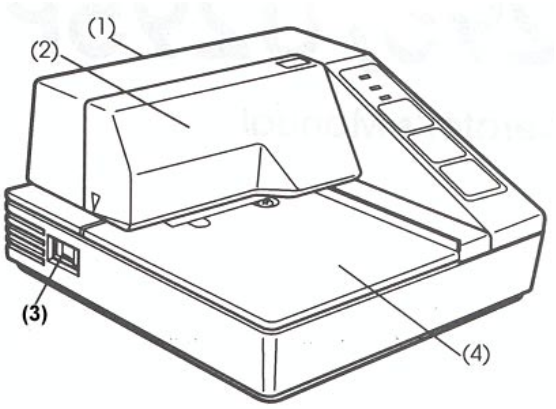
1 Introduction

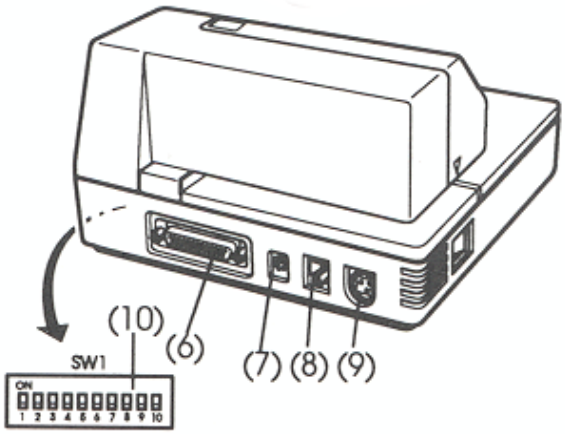
Overview

The METTLER TOLEDO 8807 Ticket Printer is an RS232 dot matrix impact printer, which is used for printing weight or data or slips or tickets.



Printer Parts

(1) Upper case
(2) Printer cover
(3) Document table
(4) Power switch

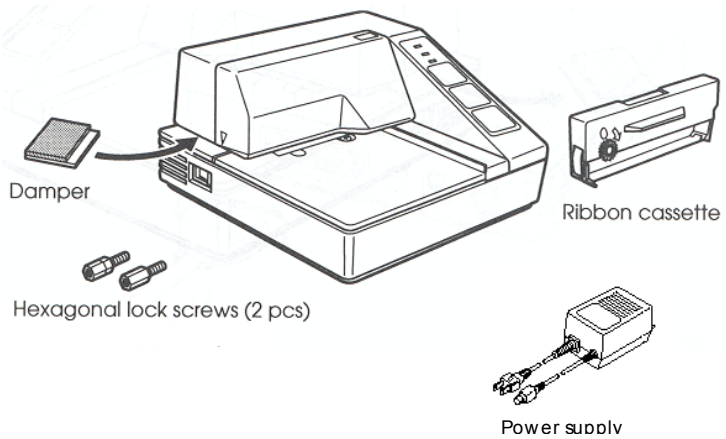


(6) Interface connector
(7) FG
(8) Drawer kick-out connector
(9) Power connector
(10) DIP switches

Setting Up the Printer

Unpacking

Make sure the following parts are present. If any parts are missing or damaged, please contact your authorized METTLER TOLEDO representative.



Installation

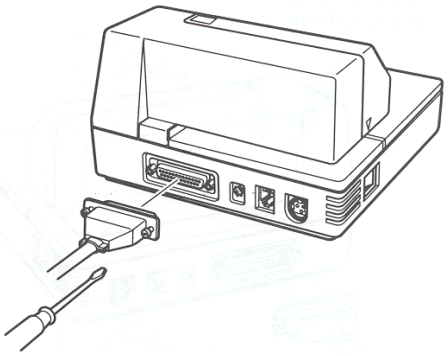
Install the printer on a horizontal surface. Do not expose it to water or use it in wet environments.

Interfacing

The 8807 printer contains an RS232 serial interface. Default settings for the interface are: 9600 baud, 7 data bits, even parity, and x-on / x-off handshaking. Make sure the host device matches these parameters, or adjust the printer settings using the internal DIP switches.

Cable Connection

Make sure that the printer and the host device are turned off. Then plug the cable into the connector on the printer, as shown here.



NOTE: The 8807 printer comes with inch-type hexagonal lock screws installed. If you plan to use an interface cable that requires millimeter-type lock screws, replace the inch-type screws with the enclosed millimeter-type screws using a hex screwdriver (5 mm). The inch-type screws have one or more lines engraved on the barrel of the screws.

Interface Cable Selection

RS-232 INTERFACE CABLE MATRIX – 8807 TICKET PRINTER				
Device	**Device Connector**	**Required Cable**	**Cable Length**	**Printer Connector**
COUGAR, LYNX, JAGUAR/JAGXTREME, PANTHER, PANTHER/PANTHER PLUS, SPEEDWEIGH/SPEEDWEIGH PLUS, TRIMWEIGH II	Terminal block	Factory number 0900-0309-000 Part number 14656000A	15 ft	DB25 female TxD: Pin 2 RxD: Pin 3 Ground: Pin 7 Shield: Pin 1: DSR: Pin 6 DTR Pin 20
BC, SC, HAWK, WILDCAT	DB9 female TxD: Pin 3 RxD: Pin 2 Ground: Pin 5	Factory number 0900-0255-000 Part number 13191100A	6 ft	
SP, SPIDER, VIPER	DB9 female TxD: Pin 2 RxD: Pin 3 Ground: Pin 5	Factory number 0900-0313-000 Part number 14861700A	15 ft	
8582, 9360, PUMA	DB25 TxD: Pin 2 RxD: Pin 3 Ground: Pin 7	Factory number 0900-0243-000 Part number 13230500A	6 ft	
PR, SR, SG	LocalCAN	Part number 229050	6 ft	
PG, PB, SB	DB9 female TxD: Pin 2 RxD: Pin 3 Ground: Pin 5	Part number 1110-1052	3 ft	
ID Terminals	DIN	Part number 503755	10 ft	
SMx using 21200013 adapter	MiniMettler	Part number 33640	6 ft	

Connecting the Power Supply

The 8807 printer uses an external universal power supply.

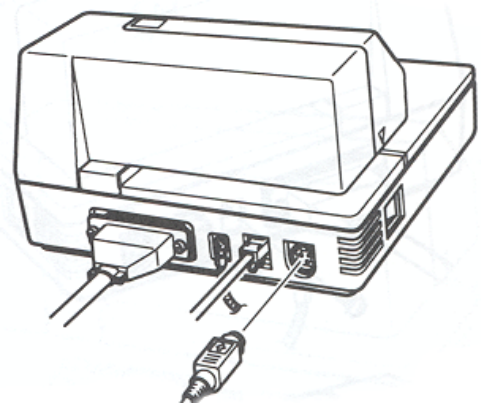
⚠ WARNING

USING AN INCORRECT POWER SUPPLY MAY CAUSE FIRE OR ELECTRICAL SHOCK.

⚠ CAUTION

WHEN CONNECTING OR DISCONNECTING THE POWER SUPPLY FROM THE PRINTER, MAKE SURE THAT THE POWER SUPPLY IS NOT PLUGGED INTO AN ELECTRICAL OUTLET; OTHERWISE YOU MAY DAMAGE THE POWER SUPPLY OR THE PRINTER.

1. Make sure that the printer and power supply are turned off.
2. Plug the power supply's cable into the printer's connector as shown below. Note that the side of the connector faces up.



3. Plug the power supply's cord into an outlet.

Installing the Ribbon Cassette

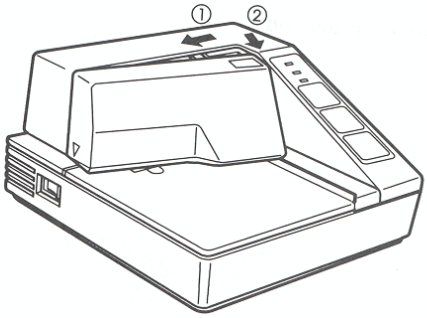
⚠ CAUTION

NEVER TURN THE RIBBON CASSETTE'S FEED KNOB IN THE OPPOSITE DIRECTION OF THE ARROW MARKED ON THE CASSETTE; OTHERWISE THE RIBBON MAY BE DAMAGED. BE SURE THE PRINTER IS NOT RECEIVING DATA WHEN YOU REPLACE A RIBBON CASSETTE; OTHERWISE DATA MAY BE LOST.

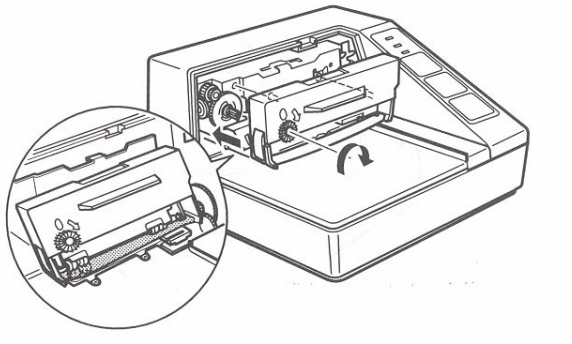
Be sure to use a ribbon cassette that meets the printer's specifications. The EPSON ERC-27 is recommended.

Note: For instructions on replacing a used ribbon, refer to page 1-7.

1. Open the printer cover by slightly pressing the ridges on the top left and pulling the cover forward, as shown in the illustration below.

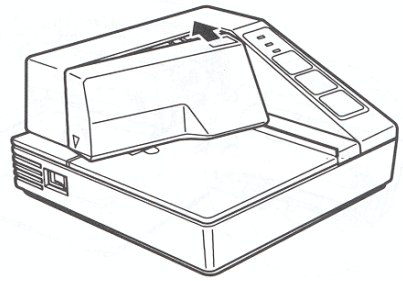


2. Check to see that the ribbon in the cassette is not creased or twisted. Then turn the feed knob in the direction of the arrow on the ribbon cassette to take up any slack in the ribbon.
3. Carefully insert the ribbon cassette in the printer as shown in the illustration below. Notice exactly where the ribbon must go.



4. Then push firmly on the right side and then the lift side of the ribbon cartridge until each side clicks into place.

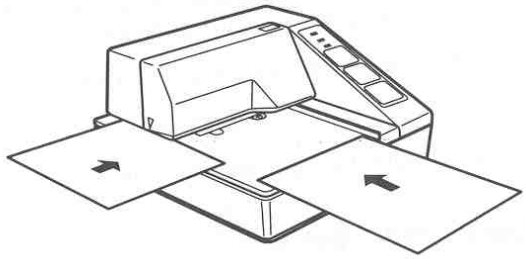
5. To put the cover back on the printer, align the left and insert the tab on the top. Then press the bottom until it clicks into place, as shown below.



Inserting Paper

To insert paper, follow these steps:

1. Make sure that a ribbon cassette is installed in the printer.
2. Turn on the printer. The POWER light comes on.
3. Insert the paper from either the front or the side, as shown in the illustration below. Insert the paper into the printer until it is stopped by the form stopper. The markings on the side of the printer can also be used to judge how far to insert the paper.



5. Check the PAPER OUT light. When you insert the paper correctly, the PAPER OUT light goes out. If the PAPER OUT light is still on, remove the paper and re-insert it.

Running the Self-Test

Any time that you want to check the performance of your printer, you can run the self-test described below. This shows whether your printer is working correctly. It is independent of any other equipment or software.

The self-test checks the control circuits, printer mechanisms, print quality, RAM, ROM version, and DIP switch settings.

To perform the self-test, follow these steps:

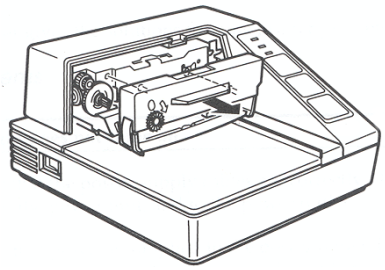
1. Insert a sheet of paper following the instructions on page 1-6 (Inserting Paper).
2. Turn off the printer.
3. While holding down the RELEASE button, turn the printer back on.
4. Remove your finger from the RELEASE button. The printer prints the current printer settings.

5. Eject the paper.
6. Press the RELEASE button to eject the paper completely. Insert new paper to begin the second part of the test.
7. After the printer prints a pattern, it prints the following message:
8. ***completed***
9. The printer ejects the paper; then enters the normal mode.

Replacing a Used Ribbon

When your printing is not dark enough, it is time to replace the ribbon.

1. First, follow steps 1 through 4 from the Installing the Ribbon section.
2. Then remove the used ribbon by grasping the handle and pulling straight out, as shown by the arrow in the illustration below.



Setting the DIP Switches

⚠ CAUTION

TURN OFF THE PRINTER BEFORE REMOVING THE DIP SWITCH COVER TO PREVENT AN ELECTRICAL SHORT, WHICH CAN DAMAGE THE PRINTER.

You can change several interface settings by changing the DIP switch settings. If you need to change any of these settings, follow the steps below:

1. Make sure that the printer is turned off.
2. Turn the printer over and locate the DIP switches, as shown below.
3. Notice that ON is marked on the set of switches. Use tweezers or another narrow tool to move the switches.

Use the table that follows to set the DIP switches.

Serial interface DIP-Switch Functions

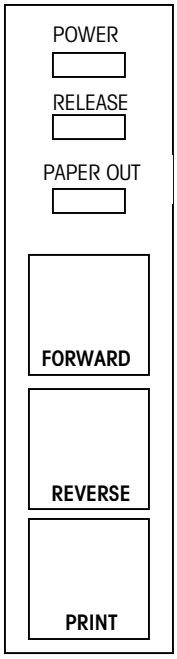
Default settings in **bold**

Function	Character set selection			Word length & Parity	Inverted print	Print key select	Baud Rate		Must be set to OFF
Switch	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	SW9 SW10
USA	**ON**	**ON**	**ON**						
France	OFF	ON	ON						
Germany	ON	OFF	ON						
UK	OFF	OFF	ON						
Denmark	ON	ON	OFF						
Sweden	OFF	ON	OFF						
Italy	ON	OFF	OFF						
Spain	OFF	OFF	OFF						
7 data bits Even parity				**ON**					
8 data bits No parity				OFF					
Normal print Forward paper feed					**OFF**				
Inverted print Reverse paper feed					ON				
Send ASCII "P" when print key is pressed						**ON**			
Send ASCII "S" Cr Lf when print key is pressed						OFF			
9600 baud							**OFF**	**OFF**	
2400 baud							ON	OFF	
1200 baud							OFF	ON	
300 baud							ON	ON	

2 Using the Printer

Operations

You can feed paper with the button on the control (operation panel) which is shown below. The indicator lights monitor the printer's status.



Power Switch

The power switch on the printer turns the printer on and off.

Keypad

FORWARD: This key will feed paper forward (towards the rear) into the printer as long as it is held. This function ignores the paper sensors.

REVERSE: This key will feed paper to the reverse (towards the front) out of the printer as long as it is held. This function ignores the paper sensors.

PRINT: This key will cause the printer to transmit an ASCII "P: or "S" <CR> <LF> character to the scale of printer. Most METTLER TOLEDO products will accept an ASCII "P" character as a remote print request. High Precision products will respond to an ASCII "S" ,<CR> <LF> as a print request.

LED Displays

POWER: (Green) On when the printer has power.

RELEASE: (Green) On when the paper clamp is released and the printer is ready for the operator to insert or remove paper. This LED goes out during printing or feeding. This LED will flash to indicate an error.

PAPER OUT: (Red) On when there is not paper in the printer. The 8807 printer has two paper sensors along the right edge of the paper path. Printing is inhibited if the 8807 printer does not detect paper.

3 Troubleshooting

Control Panel Lights

The lights on the control panel do not come on.

- Make sure that the power supply cables are correctly plugged into the printer, the power unit, and to the power outlet.
- Make sure that power is supplied to the power outlet. If a switch or timer controls the outlet, use another outlet.

Power Problems

The POWER light does not come on.

- Make sure that the power supply cables are correctly plugged into the printer, the power unit, and to the power outlet.
- Make sure that power is supplied to the power outlet. If the outlet is controlled by a switch or timer, use another outlet.

Printing Problems

The PAPER OUT light is on and nothing is printed.

- If the PAPER OUT light is on, the paper is not inserted or is not inserted correctly.

The RELEASE light is flashing and nothing is printed.

- This indicates an error condition. Turn off the printer. Make sure that no paper is jammed in the printer. Turn the printer back on. If the RELEASE light is still flashing, contact a qualified service person.

NOTES

4 Reference Information

Advanced Commands

COMMANDS AND ESCAPE SEQUENCES				
	Decimal	**Description**	**Value of n**	
SI	15	Switches back from printing in double wide mode to the normal mode		
SO	14	Starts printing in double wide mode. Double wide mode is exited when a <SI>, <CR> or <LF> character is received.		
LF	10	Prints the data in the buffer and feeds one line		
CR	13	Prints the data in the buffer (no line feed)		
ESC SP n	27 32 n	Sets character spacing for the right side of the character to (n x 0.159 mm) (range 0 < n < 255)	Default is 0	
ESC a n	27 97 n	Select justification (Must be input at the beginning of a line)	LEFT = 0 CENTER = 1 RIGHT = 2	
ESC ! n	27 33 n	Selects special print mode where (range 0 < n < 255)		
Example of commands for special print modes Double height: ESC ! Cntrl P (decimal 16) Double width: ESC ! Space (decimal 32) Double height/width: ESC ! 0 (decimal 48)			16	Double height
			32	Double width
			48	Double height and double width
ESC % n	27 33 69	De-select special print mode above	Revert to default font	
ESC – n	27 45 n	Enable underline mode on or off	OFF: when n = 0 ON: when n = 1	
ESC { n	27 123 n	Enable inverted print mode	OFF: when n = 0 ON: when n = 1	
ESC 3 n	27 51 n	Set line spacing (range 0 < n < 255)	Default is 24 (1/6 inch)	

COMMANDS AND ESCAPE SEQUENCES				
	Decimal	**Description**	**Value of n**	
ESC R n	27 82 n	Select international character set	0	USA
			1	France
			2	Germany
			3	UK
			4	Denmark
			5	Sweden
			6	Italy
			7	Spain
			8	Japan
			9	Norway
			13	Korea

Printing Specifications

Printing Method:	Impact dot matrix
Head Wire Configuration:	7-pin shuttle type
Printing Direction:	Unidirectional
Lines per Second	5 x 7 font: 1.9 to 2.3 7 x7 font: 1.9 to 2.3
Characters per Line	5 x 7 font: 35 7 x7 font: 42
Characters per Inch	5 x 7 font: ANK: 0.63 Graphics: 0.315 7 x7 font: ANK .63 Graphics: 0.315
Paper feed speed	Approximately 12.5 lines (52.5 mm {2.10″}/second) – when the **ESC d** and **FF** commands are used.

Character Specifications

Number of Characters	Alphanumeric characters: 95 Extended graphics: 128 x 3 International characters: 32
Character Structure:	5 x 7 with 1-dot spacing (normal dot) 7 x 7 with 3-dot spacing (half dot)
Character Size:	5 x 7 font: ANK: 1.6 mm {.063″} x 2.9 mm {.114″} Graphics: 1.9 mm {.075″} x 2.9 mm {.114″} 7 x 7 font: ANK: 1.3 mm {.051″} x 2.9 mm {.114″} Graphics: 1.6 mm {.063″} x 2.9 mm {.114″}

Paper Specifications

Paper Type
Normal (high quality), pressure-sensitive, and carbon copy papers

Total Thickness
Single-ply paper: 0.09 to 0.25 mm {.0035″ to .0098″}
Copy paper: 0.09 to 0.35 mm {.0035″ to .0138}

Paper Size
80 mm (W) x 69 mm (L) to 182 mm (W) x 257 mm (L)
{3.15″ x 2.72″ to 7.17″ x 10.12″} up to the European B5 size.

Copy Capability and Paper Thickness
No copies (Single ply) – 0.09 to 0.25 mm {.0035″ to .0098″} (135 kg paper or equivalent)

Combination of normal paper and pressure-sensitive paper – 3 sheets maximum (1 original and 2 copies) 0.09 to 0.35 mm {.0035″ to .0138″}

Backing paper: 0.07 to 0.20 mm {.0028″ to .0079″}
Copy and original paper: 0.04 to 0.07 mm {.0016″ to .0028″}

Carbon copy paper: Approximately 0.035 mm {.0014″}

Copy Capability and Ambient Temperature for Printing
Copying capability is influenced by the ambient temperature. Printing must be performed under the conditions described in the table that follows.

Number of Copies	Ambient Temperature
Original + 1 to 2 copies	5° to 40°C ({41° to 104°F)

Notes on Slip Paper

Slip paper should be flat, without curls, wrinkles, or camber, especially at the paper edges. Otherwise, the paper may become ink stained.

When using multi-ply carbon copy paper, the paper should be flat and the glue area should be as small as possible.

Glue area should be located at the to or left edge of the slip paper.

Since TOF and BOF sensors are optical sensors, paper that has holes at the sensor positions or translucent paper should not be used normally. When using these papers, be sure to disable the paper sensors by **ESC c 4**.

When using slip paper of 80mm {3.15″} long or less, load the paper so that it is fed straight.

Use thinner paper (N30 or equivalent) between the top and bottom sheets of multi-ply paper. If thick paper is used, the copy capability is lowered.

Notes:

- The mechanical form stopper is adjustable in the range 26.5 to 36.5 mm {1.04″ to 1.44″}
- The OF and BOF sensors are fixed and cannot be adjusted.
- After slip paper is set at the mechanical form stopper, the top margin can be shorted up to 21.2 mm {.83″} by feeding the paper backwards (ejection feeding).
- When ejection feeding is not performed after printing, printing can be performed u to the position at which the paper edge is no longer held by the paper feed roller (13.8 mm {.54″} from the paper edge).
- When ejection feeding is performed after printing, the paper can be fed forward u to 11.8 mm {.46″} (28 dots) after the bottom edge is detected.

Electrical Specifications

Specifications		
Supply Voltage:	+24 VDC ±10%	Output voltage: +24 VDC, 2A
Current Consumption:	Operating	Mean – approximately 600 mA at 24 VDC (ful-column printing and data transmission of ANK characters) Peak – approximately 5.5 A at 24 VDC (Full column printing and data transmission of ANK characters) Standby: approximately 100mA (at 24 VDC, 25°C {77°F}

Reliability

Life: Mechanism: 3 million lines

Print head: 100 million characters (using an average of 2 dots/wire per character)

End of Life is defined as the point at which the printer reaches the beginning of the Wearout Period.

MTBF: 180,000 hours

Failure is defined as Random Failure occurring at the time of the Random Failure Period.

MCBF: 7,000,000 lines

This is an average failure interval based on failures relating to wearout and random failures up to the life of 3 million lines.

Environmental Conditions

Temperature

5 to 40° C (41 to 104° F)

–10 to 50° C (14 to 122° F)
(except for paper and ribbon)

Humidity

10 to 90% RH (except for paper and ribbon)

Replacement Parts

- Repair of the 8807 Printer is limited to replacement of major assemblies. Listed below are the available parts for the 8807.
- Contact METTLER TOLEDO or an authorized METTLER TOLEDO Distributor for parts and service.

Description	Part Number
Power supply (universal)(PS170)	083503020
Printer mechanism complete	083497020
Print head	083498020
Keypad switch with overlay	(*)14115200A
Main PCB	083499020
Ribbon cartridge	Epson part # ERC-27B (black)

NOTES

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1900 Polaris Parkway
Columbus, Ohio 43240

Phone (US and Canada)	(800) 786-0038
	(614) 438-4511
(All Others)	(614) 438-4888
Internet:	www.mt.com

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