

FCL Components Thermal Printer FTP-x3GMCL483 series

FCL Components 3" high speed thermal printer mechanism with cutter

Overview

The compact, ultra low profile design FTP-X3MCL483 series was designed to provide maximum performance and flexibility from the same footprint.

The series is suitable for a variety of applications, such as POS/ECR, kiosk terminals, ticket machines, label printers, banking machines, measuring devices, medical equipment, etc.



FTP-63GMCL483

Features

- High-speed printing
FTP-63GMCL: Max. 350mm/s, FTP-83GMCL: Max. 200mm/s
- Optional resolutions: FTP-63GMCL: 203dpi, FTP-83GMCL: 300dpi
- Small footprint
- FCL Components platen release operation makes loading paper an easy process for the end user
- Cutter
Can perform full or partial cuts. Maximum cutter life of 2 million
- Automatic paper feed supported
- 3 black mark sensor position options (left, right and center)
- Can support multiple paper widths 58mm (paper is available with guide), 80mm, 82.5mm, and 86mm. Guide must be prepared by the customer
- FFC connection method allows for flexible cable lengths
- RoHS compliant

■ Part numbers

Item	Part Numbers	
Printer mechanism	FTP-63GMCL483 (203dpi, with cutter and 1 black mark sensor on left)	
	FTP-63GMCL483#03 (203dpi, with cutter, and 3 black mark sensors on left, right and center)	
	FTP-83GMCL483 (300dpi, with cutter and 1 black mark sensor on left)	
	FTP-83GMCL483#03 (300dpi, with cutter, and 3 black mark sensors on left, right and center)	
LSI for driving	FTP-63GCU483-R	
Interface board	FTP-63GDSL483-R (for FTP-63GMCL483(#03)) FTP-83GDSL483-R (for FTP-83GMCL483(#03))	
Interface cable	RS232C	FTP-628Y302-R
	USB	FTP-63GY311#01-R
Power supply cable	FTP-629Y603	

■ Specifications

Item	Specifications		
Part number	FTP-63GMCL483 / FTP-63GMCL483#03		FTP-83GMCL483 / FTP-83GMCL483#03
Printing method	Thermal sensitive line dot method		
Dot structure	640 dots/lines		960 dots/lines
Resolution	8 x 8 dots/mm (203 dpi)		11.8 x 11.8 dots/mm (300 dpi)
Effective printing area	80 mm		81.312 mm
Max. paper width*1	86mm +0/-1mm		
Paper thickness	60-150µm		
Printing speed*2	350mm/s at 24V operating voltage with 60 to 100µm thick paper		200mm/s at 24V operating voltage with 60 to 100µm thick paper
Operating voltage	For print head*3	24VDC±10%, 4.5A	
	For motor (printer unit)	24VDC±10%, 1.5A (max.)	
	For motor (cutter unit)	24VDC±10%, 1.5A (max.) (FCL Components standard circuit)	
	For logic	3.3VDC ±9% or 5VDC±5%, 0.125A (max.)	
Dimensions (WxDxH)	Printer mechanism	123.7 x 40.0 x 61.0mm	
	Interface board	40 x 95 x 15 mm	
Weight	Printer mechanism	Approx. 370g	
	Interface board	Under development	
Expected life	Head	Pulse durability: 100 million pulse/dot Abrasion resistance: 200km (at 25°C, 12.5% max. standard paper)	
	Cutter (full or partial)	2 million cuts with 60 to 100µm thick paper 1 million cuts with 101 to 150µm thick paper	

*1: There may be exceptions

*2: At 24.0V operating voltage, +25°C, printing rate 25% max., back tension 1N max with FCL Components standard paper.

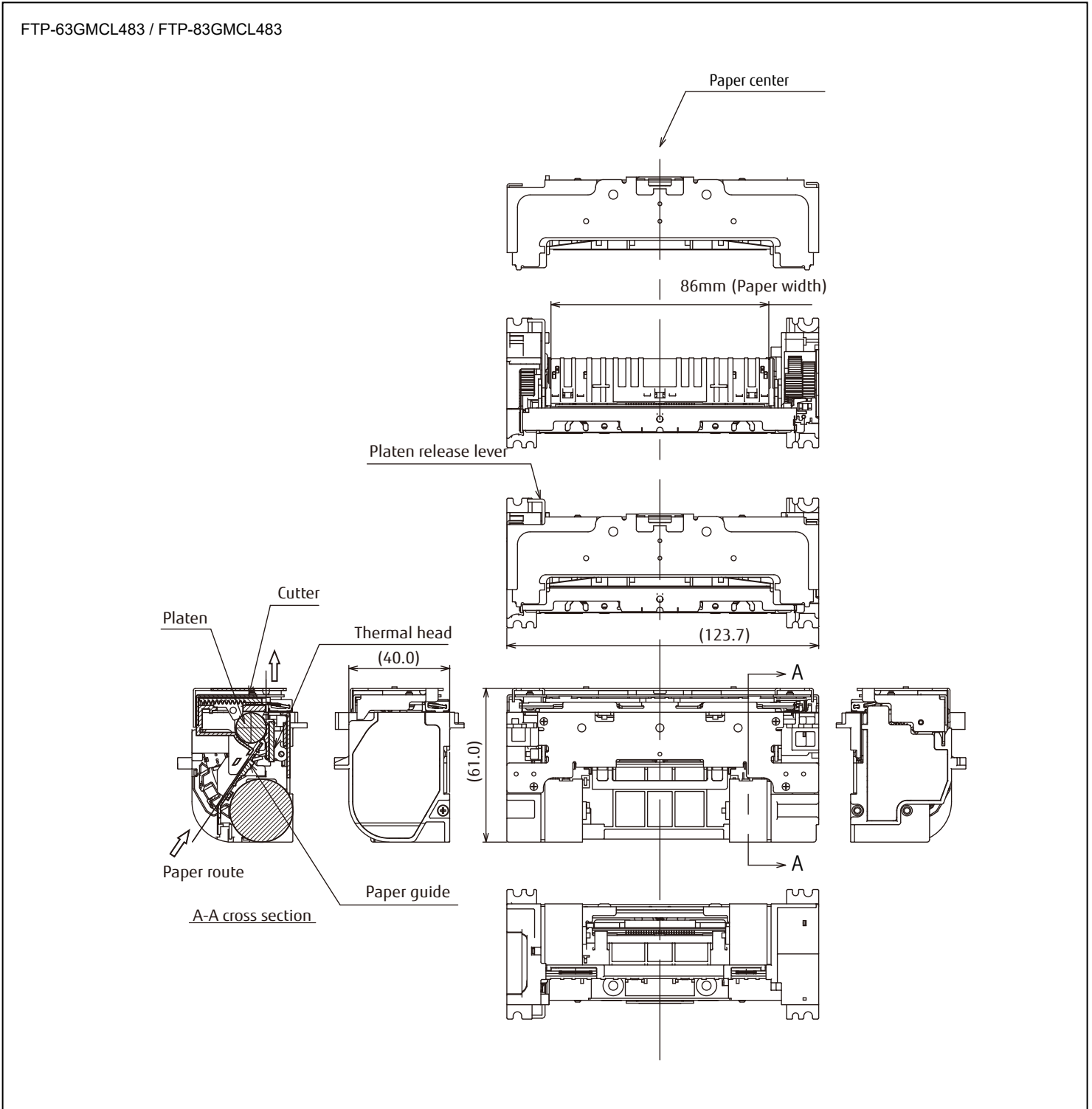
*3: FTP-63GMCL483: 650Ω, FTP-83GMCL483: 1,000Ω at head voltage 24V and concurrent dots 120 dots.

Item		Specifications
Part number		FTP-63GMCL483 / FTP-63GMCL483#03 FTP-83GMCL483 / FTP-83GMCL483#03
Environmental conditions	Operating temperature* ⁴	+5°C to +40°C (guarantee) (no condensation with FCL Components' standard paper)
	Operating humidity* ⁵	20 to 85% RH, at -20°C to +40°C
	Storage temperature	-20°C to +70°C (no condensation)
	Storage humidity	5 to 95% RH
Detection functions	Head temperature	By thermistor
	Motor temperature	By thermistor
	Paper out/Mark detect	By photointerrupter
	Platen open/close	By mechanical switch
	Cutter home position	By transparent type photo sensor
Recommended thermal sensitive paper	Standard paper	PD150R (Oji paper)
	Thick paper	PD450-145 (Oji paper)

*⁴: -5°C to +40°C printing density assurance range

*⁵: Humidity shall be decrease gradually to 52% RH max.(+50°C) and 12% RH min. (+60°C) in the range of +40°C to +50°C

• Printer mechanism



- Note:
1. Dimensions are nominal value)tolerance $\pm 0.5\text{mm}$ unless otherwise specified.
 2. Dimensions in () is reference value.
 3. Please connect a printer frame to FG of terminal at a screwpoint.
 4. The mounting position of the paper sensor changed depending on the product.

■ Connector pin assignment

CN1: Motor and sensor connector

Recommended connector: IMSA-9690S-22Y902 (Iriso Electronics) or equivalent

No	Signal	Content	I/O
1	SW	Platen open detection swich	OUT (IN)
2	SW	Platen open detection swich	IN (OUT)
3	MTM	Motor thermistor	OUT (IN)
4	MTM	Motor thermistor	IN (OUT)
5	MT_B	Paper motor B phase	SINK SOURCE
6	MT_B	Paper motor B phase	SINK SOURCE
7	MT_/B	Paper motor /B phase	SINK SOURCE
8	MT_/B	Paper motor /B phase	SINK SOURCE
9	MT_A	Paper motor A phase	SINK SOURCE
10	MT_A	Paper motor A phase	SINK SOURCE
11	MT_/A	Paper motor /A phase	SINK SOURCE
12	MT_/A	Paper motor /A phase	SINK SOURCE
13	VSEN	Paper detection sensor power	-
14	PHK3 *1	Paper detection sensor 3 cathode	OUT
15	PHE3 *1	Paper detection sensor 3 emitter	OUT
16	PHC3 *1	Paper detection sensor 3 collector	IN
17	PHK2 *1	Paper detection sensor 2 cathode	OUT
18	PHE2 *1	Paper detection sensor 2 emitter	OUT
19	PHC2 *1	Paper detection sensor 2 collector	IN
20	PHK1	Paper detection sensor 1 cathode	OUT
21	PHE1	Paper detection sensor 1 emitter	OUT
22	PHC1	Paper detection sensor 1 collector	IN

* FTP-63/83GMCL483 equips only sensor 1, FTP-63/83GMCL483#03 equips all sensors (1,2,3)

■ CN2: Motor and sensor connector

Recommended connector: IMSA-9690S-12Y902 (Iriso Electronics) or equivalent

No	Signal	Content	I/O
1	CMT_B	Cutter motor B phase	SINK SOURCE
2	CMT_B	Cutter motor B phase	SINK SOURCE
3	CMT_/B	Cutter motor /B phase	SINK SOURCE
4	CMT_/B	Cutter motor /B phase	SINK SOURCE
5	CMT_A	Cutter motor A phase	SINK SOURCE
6	CMT_A	Cutter motor A phase	SINK SOURCE
7	CMT_/A	Cutter motor /A phase	SINK SOURCE
8	CMT_/A	Cutter motor /A phase	SINK SOURCE
9	N.C.	Not connectd	-
10	VSEN	Home detection sensor power	-
11	CPHE	Home detection sensor emitter	OUT
12	CPHK	Home detection sensor cathode	OUT

■ CN3: Thermal head connector

Recommended connector: FPC1.0B-26P Vence or equivalent

No	Signal	Content	I/O
1	VH	Head drive power	-
2	VH	Head drive power	-
3	VH	Head drive power	-
4	VH	Head drive power	-
5	CLK	Head clock	IN
6	/LAT	Head data latch	IN
7	/STB2	Head strobe 2	IN
8	/STB1	Head strobe 1	IN
9	TM	Head thermistor	OUT
10	GND	Ground	-
11	GND	Ground	-
12	GND	Ground	-
13	GND	Ground	-
14	GND	Ground	-
15	GND	Ground	-
16	GND	Ground	-
17	GND	Ground	-
18	GND	Ground	-
19	VDD	Head logic power	-
20	/STB4	Head strobe 4	IN
21	/STB3	Head strobe 3	IN
22	DI	Head data in	IN
23	VH	Head drive power	-
24	VH	Head drive power	-
25	VH	Head drive power	-
26	VH	Head drive power	-

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