

# INTERFACE BOARDS FOR FTP-627/637DCL/ DSL25X SERIES

## ■ INTERFACE

### 1. Centronics interface

#### (1) Connector (CN1)

Connector part number : BM30B-SRDS-G-TFC (JST) or equivalent

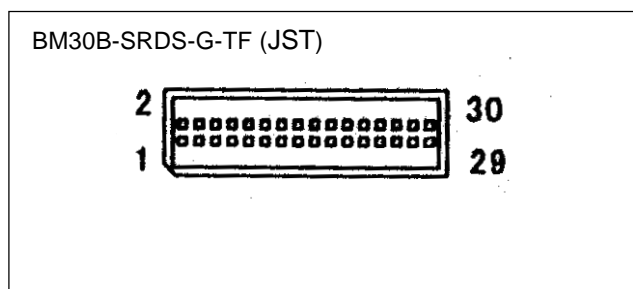
Mating connector part number : SHDR-30V-S-B (JST) or equivalent

#### (2) Connector pin assignment

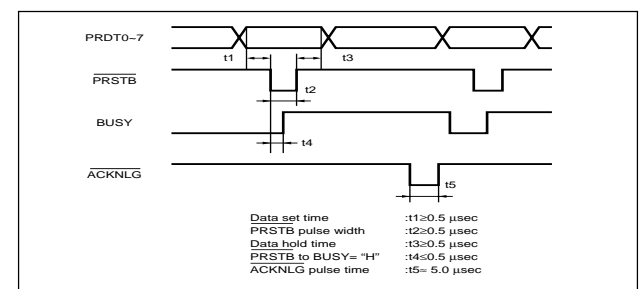
No.	Signal	I/O	Contents	No.	Signal	I/O	Contents
1	$\overline{\text{PRSTB}}$	I	Data strobe	2	$\overline{\text{PRSTB-RET}}$	—	Connected to logic GND
3	PRDT0	I	Data 0	4	PRDT0-RET	—	Connected to logic GND
5	PRDT1	I	Data 1	6	PRDT1-RET	—	Connected to logic GND
7	PRDT2	I	Data 2	8	PRDT2-RET	—	Connected to logic GND
9	PRDT3	I	Data 3	10	PRDT3-RET	—	Connected to logic GND
11	PRDT4	I	Data 4	12	PRDT4-RET	—	Connected to logic GND
13	PRDT5	I	Data 5	14	PRDT5-RET	—	Connected to logic GND
15	PRDT6	I	Data 6	16	PRDT6-RET	—	Connected to logic GND
17	PRDT7	I	Data 7	18	PRDT7-RET	—	Connected to logic GND
19	$\overline{\text{ACKNLG}}$	O	Data input acknowledge	20	$\overline{\text{ACKNLG-RET}}$	—	Connected to logic GND
21	BUSY	O	Busy	22	BUSY-RET	—	Connected to logic GND
23	RINF2	O	Printer status 2	24	$\overline{\text{INPRM-RET}}$	—	Connected to logic GND
25	$\overline{\text{SLCTIN}}$	I	Printer select	26	$\overline{\text{INPRM}}$	I	Reset
27	RINF1	O	Printer status 1	28	RINF3	O	Printer status 3
29	$\overline{\text{ATF}}$	I	Paper feed request	30	GND	—	Logic GND

- Notes:
- Symbol “—” means a negative logic signal.
  - “-RET” signal is a return signal of the twisted pair cable.
  - “I” or “O” means a signal direction from the interface board side.

#### (3) Connector pin number



#### (4) Data input signal timing



## (5) Printer status signals

	Error status	RINF1	RINF2	RINF3
1.	Paper out	Low	High	Low
2.	Paper near end	High	High	Low
3.	Head up	High	Low	Low
4.	Head temperature abnormality	High	Low	High
5.	Head voltage abnormality	Low	High	High
6.	Hardware abnormality	High	High	High
7.	Mark detection abnormality	Low	Low	Low
8.	Normal	Low	Low	High

## 2. RS-232C

### (1) Connector (CN2)

Connector part number : B8B-ZR-SM3A-TF (J.S.T.) or equivalent

Mating connector part number : ZHR-8 (J.S.T.) or equivalent

### (2) Connector pin assignment

No.	Signal	I/O	Contents No.	No.	Signal	I/O	Contents No.
1	RD	I	Receive data	2	TD	O	Transmission data
3	DTR	O	Data terminal ready	4	GND	-	Signal ground
5	DSR	I	Data set ready	6	$\overline{\text{SLCTIN}}$	I	Printer select
7	$\overline{\text{INPRM}}$	I	Reset	8	$\overline{\text{AFT}}$	I	Paper feed request

#### Notes:

- Symbol “ $\overline{\quad}$ ” means a negative logic signal.
- “I” or “O” means a signal direction from the interface board side.

## ■ CONNECTOR PIN ASSIGNMENT OF MECHANISM (FPC)

### 1. Thermal Head (CN 3)

Part number : 52610-2490 Molex or equivalent

#### FTP-627MCL401 PIN ASSIGNMENT

No	Signal	I/O	Contents
1	PHK	—	Cathode
2	VSEN	O	Logic power supply
3	PHE		Paper out detection signal
4	+24 V	—	Power supply for thermal head
5	DO	O	Print data out signal
6	STB2	O	Head energizing control signal
7	STB3	O	
8	+5V	O	Logic power supply
9	GND	—	Gound of power supply
10	GND	—	
11	GND	—	
12	TM	I	Thermistor
13	STB1	O	Head energizing signal
14	LAT	O	Print data latch signal
15	CLK	O	Datacomm clock signal
16	+24V	—	Power supply for thermal head
17	+24V	—	
18	SW	O	Platen open detection signal
19	SW	—	
20	MT-A	—	Phase signal for motor
21	MT-/A	—	
22	MT-B	—	
23	MT-/B	—	
24	NC	—	Not connected

### 2. Cutter unit (CN 4)

Part number : 52610-0890 Molex or equivalent

#### FTP-627MCL401PIN ASSIGNMENT

No	Signal	I/O	Contents
1	VSEN	O	Logic power supply
2	PHE		Home Position Signal
3	PHK	-	Cathode side of sensor
4	MTA	-	Cutter drive signal
5	MT/A	-	Cutter drive signal
6	MTB	-	Cutter drive signal
7	MT/B	-	Cutter drive signal
8	N.C.	-	Not connected

## ■ CONNECTOR PIN ASSIGNMENT OF MECHANISM (FPC)

### 1. Thermal Head (CN 9)

Part number : 52610-3090 Molex or equivalent

#### FTP-637MCL401 PIN ASSIGNMENT

No	Signal	I/O	Contents
1	PHK	—	Cathode
2	VSEN	O	Logic power supply
3	PHE		Paper out detection signal
4	+24 V	—	Power supply for thermal head
5	+24V	—	
6	+24V	—	
7	DO	O	Print data out signal
8	STB3	O	Head energizing signal
9	STB4	O	
10	+5V	O	Logic power supply
11	GND	—	Ground for thermal head
12	GND	—	
13	GND	—	
14	GND	—	
15	GND	—	
16	GND	—	
17	TM		Thermistor
18	STB1	O	Head energizing signal
19	STB2	O	
20	LAT	O	Print data latch signal
21	CLK	O	Datacomm clock signal
22	+24V	—	Power supply for thermal head
23	+24V	—	
24	+24V	—	
25	SW		Platen open detection signal
26	SW	O	
27	MT-A	—	Phase signal for motor
28	MT-/A	—	
29	MT-B	—	
30	MT-/B	—	

### 2. Cutter unit (CN10)

Part number : 52610-0890 Molex or equivalent

#### FTP-637MCL401 PIN ASSIGNMENT

No	Signal	I/O	Contents
1	VSEN	O	Logic power supply
2	PHE		Home Position Signal
3	PHK	-	Cathode side of sensor
4	MTA	-	Cutter drive signal
5	MT/A	-	Cutter drive signal
6	MTB	-	Cutter drive signal
7	MT/B	-	Cutter drive signal
8	N.C.	-	Not connected

## ■ INTERFACE BOARD CONNECTOR PIN ASSIGNMENT

### 1. Connector for logic power supply (CN6)

Part number : S3B-PH-SM3-TB (J.S.T) or equivalent (board side)

No.	Signal	I/O	Contents No.	No.	Signal	I/O	Contents No.
1	+5V	-	Power supply for logic	2	NC	-	No connection
3	GND	-	Ground				

### 2. Connector for power supply for head/motor (CN7)

Part number : S6B-XH-SM3-TB (J.S.T) or equivalent (board side)

No.	Signal	I/O	Contents No.	No.	Signal	I/O	Contents No.
1	+24V		Power supply for head	2	+24V		Power supply for head
3	+24V		Power supply for head	4	GND	-	Ground
5	GND	-	Ground	6	GND	-	Ground

### 3. Connector for paper near-end sensor detection (CN8)

Part number : B2B-PH-SM3-TB (J.S.T) or equivalent (board side)

No.	Signal	I/O	Contents No.	No.	Signal	I/O	Contents No.
1	+5V	-	Power supply for logic	2	NES	I	Paper near-end detection signal

## ■ COMMANDS

Command	Contents
HT	Moves print position to the next tab.
LF	Line feed.
FF	Feeds forms (new page).
ESC EM+n	Setting the amount of the feeding at automatic paper feed.
ECS RS	Sets reverse printing.
ESC US	Resets reverse printing.
ESC ! + n	Sets print mode.
ESC % + n	External registration character specification/cancellation.
ESC &+y+c1+c2+x+d1~dN	Download character definition.
ESC *+m+n1+n2+d1~dN	Sets bit image mode.
ESC 2	Sets 1/6 inch line feed length.
ESC 3+n	Sets the line feed length.
ESC ? + n	External registration character deletion.
ESC @	Printer initialization.
ESC A+n	Sets the space between the line.
ESC C+n	Sets the page length by character line.
ESC D+d1~dN+NUL	Sets the tab position.
ESC J+n	Feeds paper in forward direction and prints.
ESC K+n	Reverse paper feed.
ESC R +n	International character specification.
ESC V+n	Right rotation 90°.
ESC X+m+n	Setting the turning time of the motor excitation.
ESC c+1+n	Sets internal processing (including auto paper loading).
ESC d+n	Printing and n-line feeding.
ESC e +n	Prints and reverse feeds n-lines.
ECS s+n	Sets printing speed.
ECS t+n	Character code table selection.
ESC {+n	Sets/resets upside down printing.

Commands continued

Command	Contents
FS !+n	Kanji printing mode collective specification.
FS &	Kanji printing mode specification.
FS *+m+n <sub>1</sub> +n <sub>2</sub> +d <sub>1</sub> ~d <sub>N</sub>	High speed collective image printing specified.
FS .	Kanji printing mode cancellation.
FS 9+n	Detection function enable/disable setting.
FS C+n	Kanji code system selection.
FS E+n	Correction of impressed energy.
FS W+n	Kanji double height and width mode specification/cancellation.
GS &+m+x+y <sub>1</sub> +y <sub>2</sub> +d <sub>1</sub> ~d <sub>N</sub>	Registration of image data.
GS '+m+n	Prints registered image data.
GS <	Line feeds to the next mark.
GS A+m+n	Sets the line feed length after mark detection.
GS E+n	Sets print quality.
GS V+n+m	Paper cutting (for pending cutter models only).
GS e+n+m	Sets bar code width.
GS h+n	Sets bar code height.
GS k+m+n+d <sub>1</sub> ~d <sub>N</sub> +NUL	Selects bar code type and prints.
GS w+n	Sets bar code width magnification.
GS a+n	Setting and cancellation of auto status transmission (serial mode only).
FS r+n	Parameter transmission. (Serial Mode only).

## ■ OPTIONS

### 1. Cables

Name		Part Number	Length (mm)
Interface Cable (between board and equipment)	For Centronics (CN1)	FTP-628Y202	500 (19.7 inches)
	For RS232C (CN2)	FTP-628Y302	500 (19.7 inches)
Power supply cable	Logic (CN6)	FTP-629Y401	300 (11.8 inches)
	Head / motor (CN7)	FTP-629Y601	

### 2. Paper holder

Name	Part number
Paper Flange	FTP-040HF
Paper Stand	FTP-040HS

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