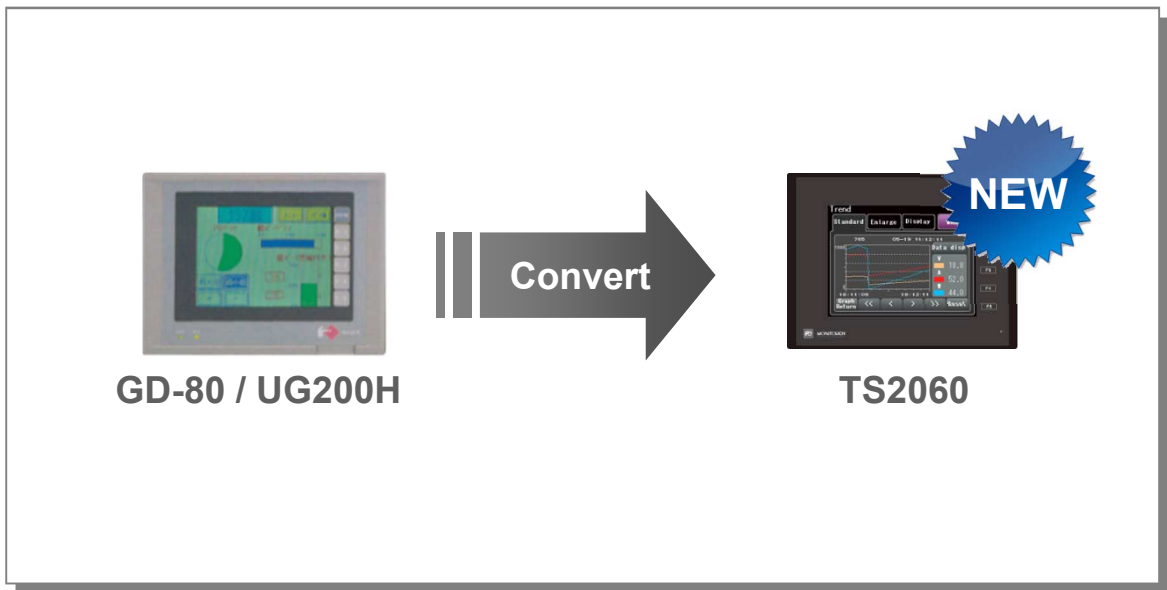


# TECHNOSHOT

## TS2060 Replacement Guidance

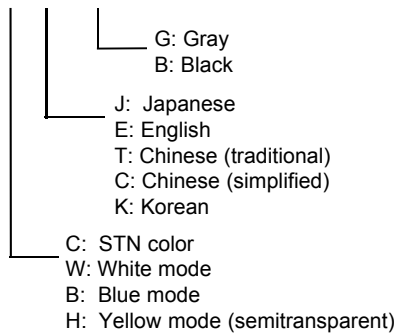
GD-80/UG200H > TS2060



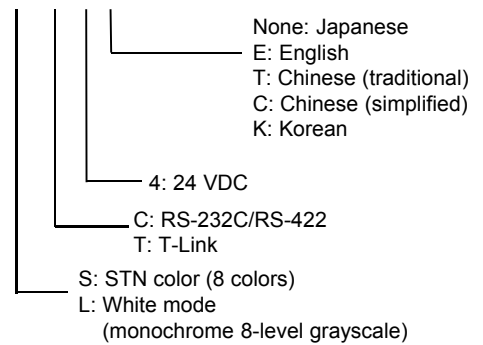
- GD-81S/UG200H

- Models

GD-81S□□-□



UG200H-□□4□



- Main differences

GD-81S/UG200H	
GD-81SCx-x UG200H-Sx4x	GD-81SWx-x GD-81SBx-x GD-81SHx-x UG200H-Lx4x

Recommended models for replacement

TS2060
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Front view		
External dimensions (mm)		
Panel cut-out dimensions (mm) *1		
Display device	STN color	White mode
Colors	16 colors	8-level grayscale
Effective display area	5.7-inch	
Resolution	320 × 240 dots	
Touch switch	Matrix	
Comm. I/F	Serial	D-sub 25-pin: RS-232C / RS-422/485
	Network	T-Link *4
Power supply	24 VDC	
Power supply terminal block shape *6	Spade/ring terminal, Screw drive: Phillips	

Front view		
External dimensions (mm)		
Panel cut-out dimensions (mm) *1		
Display device	TFT color	
Colors	Color: 65,536 colors Monochrome: 16-level grayscale	
Effective display area	5.7-inch	
Resolution	320 × 240 dots	
Touch switch	Analog *2	
Comm. I/F	<b>MJ2 *3: Modular jack 8-pin</b> RS-232C / RS-422 (4-wire)/485 (2-wire)	
Communication unit	None *5	
Power supply	24 VDC	
Power supply terminal block shape *6	Pin terminal, Screw drive: Slot	

\*1 Use Hakko Electronics' mounting panel adaptor "PAD-V606".

\*2 Two points on the screen cannot be pressed simultaneously. For two-point pressing, use a switch on the screen and a function switch.

\*3 When using the existing cable, use Hakko Electronics' conversion cable "MJ2-PLC". When connecting with a Mitsubishi A series CPU or QnA series CPU, use "V706-ACPU".

When connecting with a Mitsubishi FX series CPU (FX1/FX2) or Hitachi Industrial Equipment Systems H series (RS-232C), use TS2060i with the optional unit "DUR-00".

When using the existing cable, use Hakko Electronics' conversion cable "D9-D25".

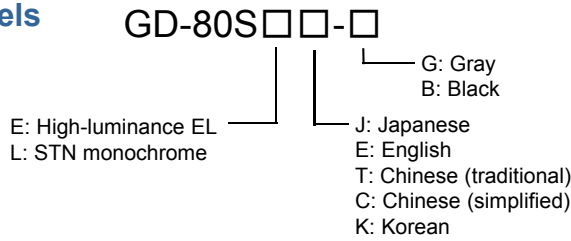
\*4 Available only with UG200H-xT4x

\*5 Use TS2060i with "CUR-01".



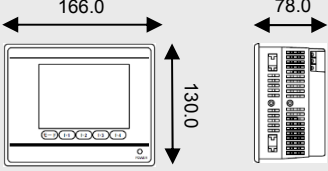
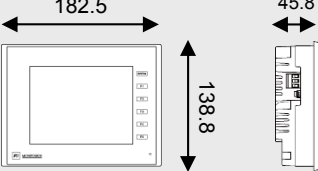
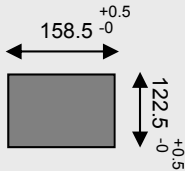
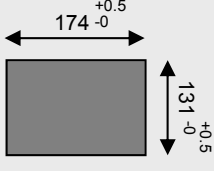
\*6 For details, refer to page 4.

- GD-80S

- Models



- Main differences

	GD-80S		Recommended models for replacement
	GD-80SEx-x	GD-80SLx-x	TS2060
Front view			
External dimensions (mm)			
Panel cut-out dimensions (mm) *1			
Display device	High-luminance EL	STN monochrome	<b>TFT color</b>
Colors	2 colors (black and orange)	2 colors (black and white)	<b>Color: 65,536 colors Monochrome: 16-level grayscale</b>
Effective display area	5.7-inch		5.7-inch
Resolution	320 × 240 dots		320 × 240 dots
Touch switch	Matrix		<b>Analog</b> *2
Comm. I/F	Serial	D-sub 15-pin: RS-232C / RS-422/485	<b>MJ2</b> *3: <b>Modular jack 8-pin</b> RS-232C / RS-422 (4-wire)/485 (2-wire)
Power supply	24 VDC		24 VDC
Power supply terminal block shape *4	Spade/ring terminal, Screw drive: Phillips		<b>Pin terminal, Screw drive: Slot</b>

\*1 For details on the mounting procedure, contact your local distributor.

\*2 Two points on the screen cannot be pressed simultaneously. For two-point pressing, use a switch on the screen and a function switch.

\*3 When using the existing cable, wiring needs to be changed. For details, refer to page 4.

When connecting with a Mitsubishi A series CPU or QnA series CPU, use the "V706-ACPU" cable.

When connecting with a Mitsubishi FX series CPU (FX1/FX2) or Hitachi Industrial Equipment Systems H series (RS-232C), use TS2060i with the optional unit "DUR-00".

\*4 For details, refer to page 4.

### - Differences in wiring

For TS2060 (modular jack 8-pin)

GD-80S (CN2: D-sub 15-pin)

Pin No.	Signal	Description
1	FG	Frame ground
2	RD	RS-232C receive data
3	SD	RS-232C send data
4	CS	RS-232C CS clear to send
5	RS	RS-232C RS request to send
6		
7	SG	Signal ground
8		
9	COM	Output common
10	+RD	RS-422 receive data (+)
11	-RD	RS-422 receive data (-)
12	+SD	RS-422 send data (+)
13	-SD	RS-422 send data (-)
14	RUN	RUN signal
15	BZ	Buzzer signal

TS2060 (MJ2: modular jack 8-pin)

Pin No.	Signal	Description
1	+SD/RD	RS-485 data (+)
	+SD	RS-422 send data (+)
2	-SD/RD	RS-485 data (-)
	-SD	RS-422 send data (-)
3	+5V	+5 V external power supply Max. 150 mA
4		
5	SG	Signal ground
6		
7	RD	RS-232C receive data
	+RD	RS-422 receive data (+)
8	SD	RS-232C send data
	-RD	RS-422 receive data (-)

Sliding switch for MJ2 port of TS2060  
Up: RS-232C (2-wire)  
Down: RS-422 (4-wire)

For TS2060i + DUR-00 (D-sub 9-pin)

GD-80S (CN2: D-sub 15-pin)

Pin No.	Signal	Description
1	FG	Frame ground
2	RD	RS-232C receive data
3	SD	RS-232C send data
4	CS	RS-232C CS clear to send
5	RS	RS-232C RS request to send
6		
7	SG	Signal ground
8		
9	COM	Output common
10	+RD	RS-422 receive data (+)
11	-RD	RS-422 receive data (-)
12	+SD	RS-422 send data (+)
13	-SD	RS-422 send data (-)
14	RUN	RUN signal
15	BZ	Buzzer signal

DUR-00 (CN1: D-sub 9-pin)

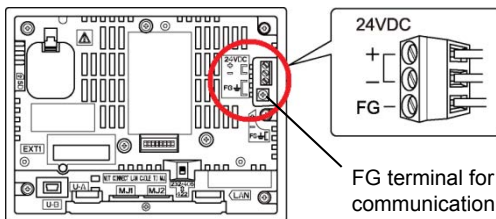
Pin No.	Signal		Description
	232C	422	
1	NC	+RD	Not used RS-422 receive data (+)
2	RD	-RD	RS-232C receive data RS-422 receive data (-)
3	SD	-SD	RS-232C send data RS-422 send data (-)
4	NC	+SD	Not used RS-422 send data (+)
5	SG	SG	Signal ground
6	NC	+RS	Not used RS-422 RS send data (+)
7	RS	-RS	RS-232C RS request to send RS-422 RS send data (-)
8	CS	NC	RS-232C CS clear to send Not used
9	NC	+5V	Not used Terminating resistance

### - Power supply terminals

The shape of the terminal block differs. If the power supply cable is connected with a spade or ring terminal, the end of the cable must be modified.

Connect the frame ground (FG) wire for communication to the FG terminal for communication.

#### - TS2060



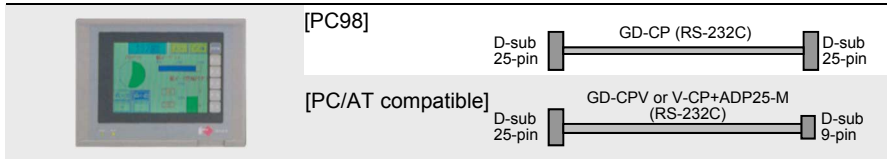
\* A flat-head screwdriver is necessary to tighten the screws for the power supply terminals.  
Recommended screwdriver: SZS 0.6 × 3.5 (Phoenix Contact)

#### • Power supply cable specifications

<p><b>When directly connecting the cable</b></p>	<p>Power supply cable: AWG 18 to AWG 14 stranded wire/solid wire (diameter: 1.0 to 1.6 mm)</p> <p>FG wire: AWG 20 to AWG 14 stranded wire/solid wire (diameter: 0.8 to 1.6 mm)</p>
<p><b>When using pin terminals</b></p>	<p>Recommended pin terminal: AI 0.75-6 GY, AI 1-6 RD, AI 1.5-6 BK (Phoenix Contact's pin type)</p> <p>Recommended crimping tool: CRIMPFOX 6 (Phoenix Contact)</p>

### - Screen program transfer

#### - GD-81S/UG200H



[Screen configuration software]

**GD-SFT80 / UG200S-3N**  
PC98 MS-DOS

#### - GD-80S



**GD-SFT80W / UG200S-3W**  
Windows Ver.3.1 / 95 / 98 / NT

\* For details on wiring drawings, refer to the GD-80S Hardware Specifications Manual.

#### [TS2060]



**V-SFT-6 (Ver. 6.0.16.0 or later)**  
Windows XP / XP 64 Edition / Vista (32bit, 64bit) / 7 (32bit, 64bit) / 8 (32bit, 64bit) / 8.1 (32bit, 64bit) / 10 (32bit, 64bit)

### - Screen program conversion

The GD-80/UG200H screen program can be converted to the TS2060i screen program by using V-SFT-6 (screen configuration software). When a GD-80/UG200H screen program is opened on V-SFT-6, the [Edit Model Selection] window is displayed. Select "TS2060i".

For details, refer to the TS2060 File Conversion Manual.

\* The indicated recommended model for replacement can be used with minimal restrictions. Please note that other models not described here can also be used; make a selection according to your system requirements.

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