



iQ Platform Graphic Operation Terminal Screen Design Software MELSOFT GT Works3



Professional designs.

Maximized efficiency.

Intuitive operations.

All made possible by GT Works3.

Whether the goal is to improve design efficiency, create unique screens, or reuse existing ones,

MELSOFT GT Works3 is the perfect solution. It offers ready-to-use sample screens and enables reuse of

pre-existing designs to accelerate time-to-market.

Additionally, fully integrated to the GOT screen is connectivity to Mitsubishi FA products as well as other applications. And because everything is designed to operate intuitively, first time users do not have to worry about a learning curve. GT Works3 is truly triggering a revolution in screen design.







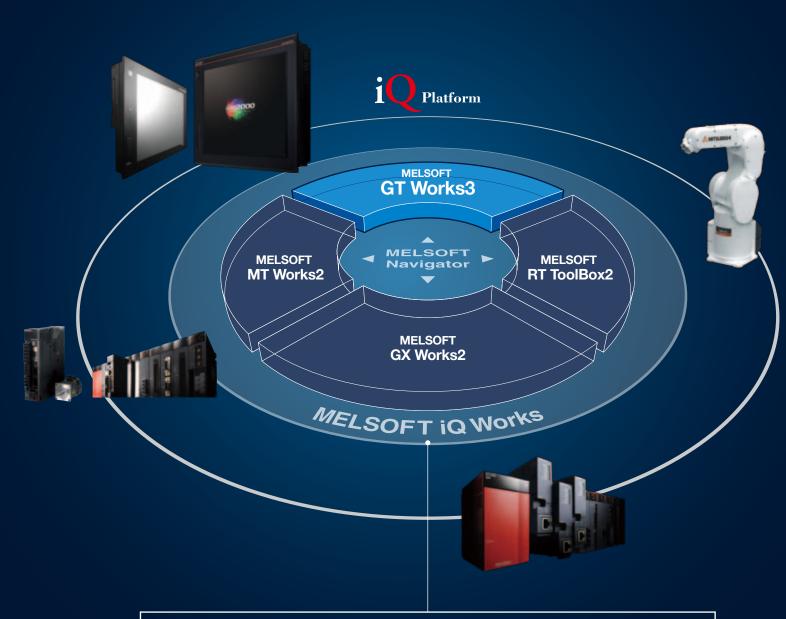




## **GOT Screen Design Software**

## MELSOFT GT Works3

This integrated software is used to create professional screen designs for GOTs. Developed with the concepts of "Simplicity", "Sleekness", and "User-friendliness" in mind, this is a powerful tool that pushes boundaries and delivers endless design possibilities.



FA Integrated Engineering Software

## **MELSOFT iQ Works**

MELSOFT iQ Works is an integrated engineering software product, composing of GX Works2, MT Works2, GT Works3, and RT ToolBox2. By sharing information such as system designs and programming as the entire control system, the system design and programming efficiency are improved and total cost reduction is achieved.





System Management Software

## **MELSOFT Navigator**

MELSOFT Navigator, along with GX Works2, MT Works2, and GT Works3, facilitates system level design and acts as the interface between each software. Useful functions include design of system configuration, parameter batch setting, system labels, and batch read.



Programmable Controller Engineering Software

## **MELSOFT GX Works2**

This software comprehensively supports programmable controller design and maintenance. In addition to inheriting program resources created with GX Developer, familiar functions have been refined to provide more intuitive operation and reduce engineering costs.



Motion Controller Engineering Software

## MELSOFT MT Works2

This software comprehensively supports motion controller design and maintenance. Reductions to the motion system's TCO are assisted by intuitive settings on a graphical screen, programming functions and convenient functions such as the digital oscillation simulator.



Robot Engineering Software

## **MELSOFT RT ToolBox2**

This software provides comprehensive support from program creation to startup, adjustment, and maintenance. A variety of convenient functions include the 3D evaluation simulator that allows parameters and peripheral devices to be visualized, and the maintenance forecast that facilitates preventive maintenance.



# GOT Screen Design Software MELSOFT GT Works 3+plus

Highly recommended functions to easily design professional screens.

PNG images have smooth contours even when enlarged, and outline fonts that support 8 dots to 240 dots for professional looking screens.

PNG image system library

Crisp looking outline font whether small or large

2 Effectively use screen assets with "Utilize Data Function" NEW

Use keyword search to find applicable screens from sample or past projects. Reusing pre-existing screens increases design efficiency.



Faster device input with "Input Assist"

NEW GOT2000

GOT2000

Applicable devices are displayed for fast and easy device input.





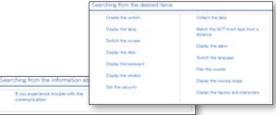
# 4

## Quick search with "Help" function

Search for information with the function name, specifications or with phrases on information you need or are having trouble with.

Press the F1 key to display related help.





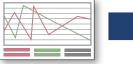
⇒P.15

Upgrade

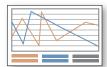
# 5

# "Templates" simplify screen customization

Register devices and colors for objects and figures as templates to easily change them in a batch.









I don't need to select each change anymore! I can make changes in a batch!





# Backward compatibility with GOT1000

Just select the GOT type in the
Type Setting to open the
drawing screen for your GOT type.



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Supported only with GOT2000Supported with both GOT2000 and GOT1000

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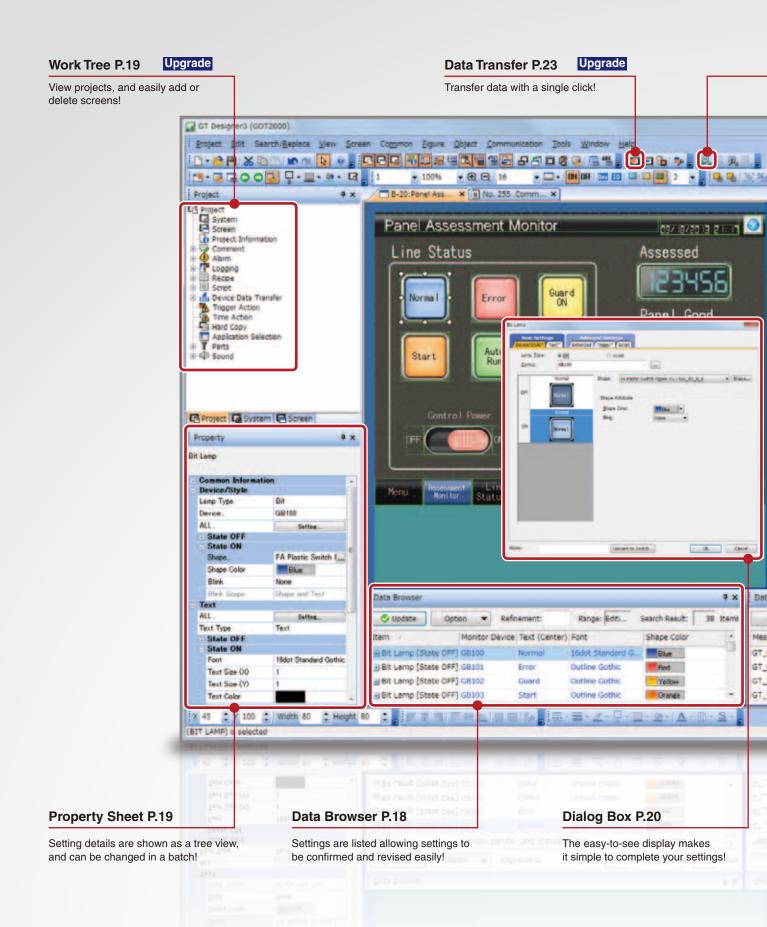
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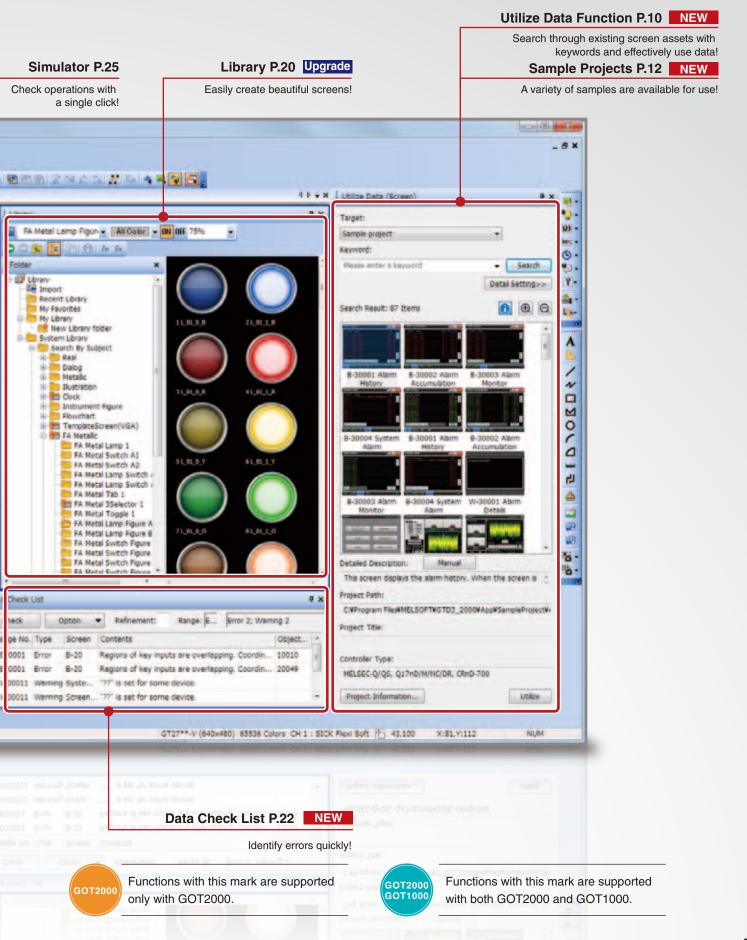
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## **Screen Configuration (GOT2000)**





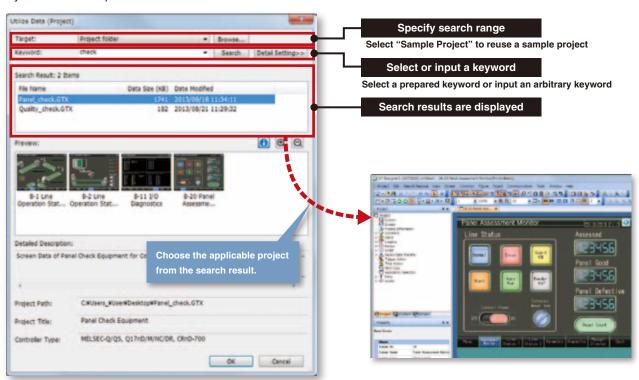
## Reuse existing screens to increase efficiency!

Use keywords to search for screens from past projects or the provided sample projects. Simply select the applicable data to import and reuse in a new project.

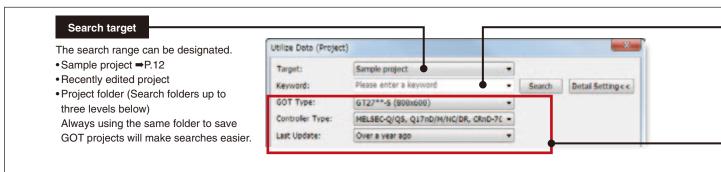


#### Reuse previous projects

When creating a new project, search through the existing projects to find any existing projects that may be reused. Keyword search helps narrow down the search.



○ Procedure:[Project] → [New] → [Utilize Data]



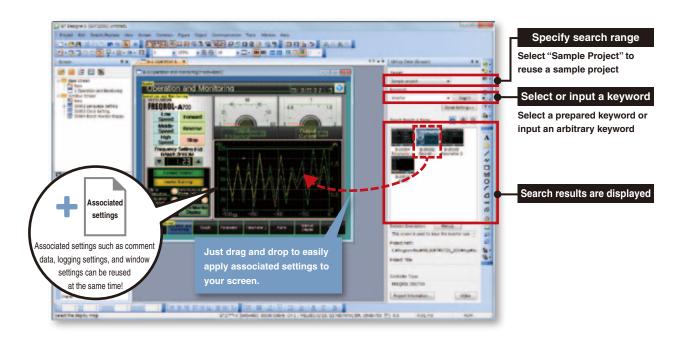
**NEW** Utilize Data Function

GOT2000



#### Reuse previous screens

Reuse individual screens from past or sample projects. The settings, such as comments and logging settings, are also applied and reused.



- Procedure:[Screen] → [New] → [Utilize Data]
- Shortcut keys: Ctrl + Shift + F

#### Search keywords

Select a prepared keyword or input an arbitrary keyword to search the data. When utilizing a project, the entered keyword is searched from the file name and project information (project title, detailed description, created by).

When creating a project, input character strings and explanations that can be used as keywords in the project information.

This will make subsequent searches easier!

When utilizing a screen, the entered keyword is searched from the file name, screen name, detailed description on screen, object name, figure name and template name.

#### Refined search

Refine the search by the GOT type, controller type and last update to quickly find the data you want to utilize.

## Variety of sample projects available for use with utilize data function

A variety of sample projects for frequently used functions, for monitoring connected devices and setting parameters are available.

Easily create project data to match your purpose and application.

#### Sample projects to make it easy to use GOT's convenient functions





#### Sample projects for monitoring connected devices and setting parameters, etc.





Inverter



Temperature controller



Simple motion



Q motion



Servo



**NEW** Sample Projects



#### Sample projects for confirming device and network status

#### Device monitor



#### CC-Link network monitor



#### Signal towers

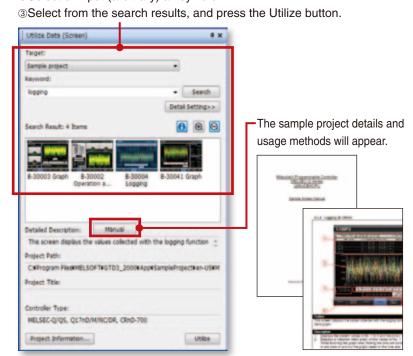


#### AnyWireASLINK



### Using sample projects

- ①Select "Sample Project" as the Target on the Utilize Data screen.
- ②Select or input (arbitrary) a keyword.



## Quick and easy device settings!

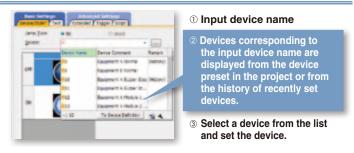
NEW Input Assist



When setting devices, the list of utilizable data is displayed from the preset devices or from the device comments and device definitions.

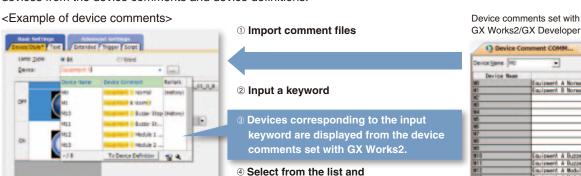
#### Displaying utilizable data from preset devices

The list of utilizable devices are displayed when the device name is input in the device setting dialog. The device comments and device definitions are also displayed, so that this information can be referred to when setting devices.



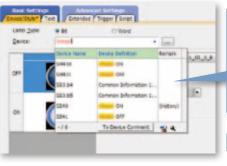
#### Displaying utilizable data from device comments and device definitions

When a keyword is input in the device setting dialog, the list of utilizable devices is displayed. Search for and set the devices from the device comments and device definitions.









1) Input a keyword

set the device

- **Devices corresponding to the input** keyword are displayed from the GOT internal device function names or the device definitions about special devices of connected device (servo, programmable controller, etc.).
- 3 Select "GB40 Always ON"

④ Device setting is completed!



#### Search target

Select from "Device Name and Comment/Definition", "Device Name" or "Comment/Definition".

#### Input keywords

Separate keywords with a single space to search and refine the data with multiple keywords. Connected channels can be specified with "@n" (n=1 to 4). (For Ch2 M0: @2 M0)

Procedure: Automatically display when inputting devices

## Information right at your fingertips!

Upgrade Help



Quickly search for the information you need with the powerful help function.

### Various searching methods to match your situation (GOT2000 only) NEW

Search for information with the function name, specifications or with phrases on information you need or are having trouble with.





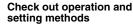


### Quickly confirm with F1 key

Press the F1 key and jump to help for the dialog being edited!

Quickly check setting methods and other information!





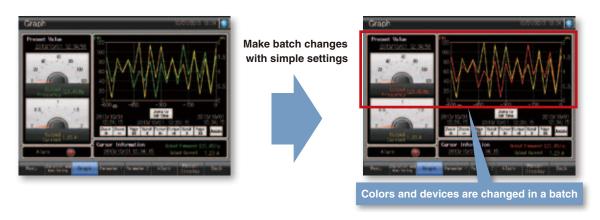
## **Check out functions**



- Procedure: [Help] → [GT Designer3 Help]
- Shortcut key: F1

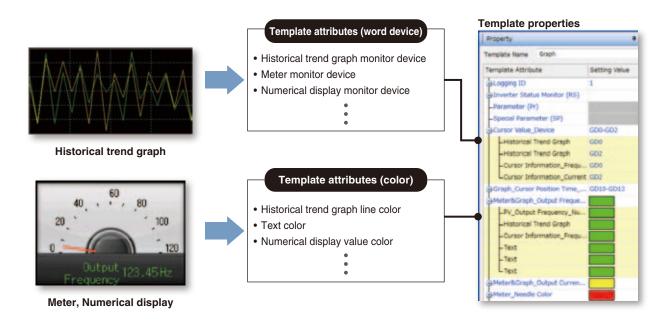
## Use templates to greatly reduce your screen creation time!

Customize each template to the desired look-and-feel, ranging from color options to device selection.



#### What are templates?

Attributes such as devices and colors can be set for each template. You can easily change devices and colors by associating each object with the template's attribute.

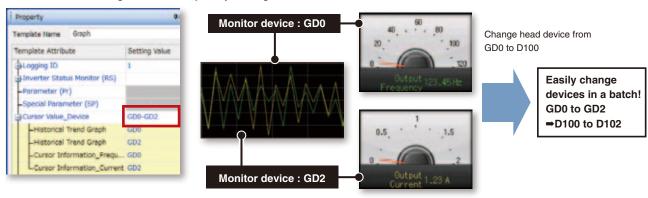


**Templates** 



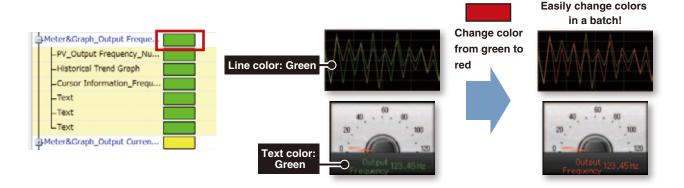
#### **Changing devices**

Devices can be changed in a batch just by setting the head device.



#### **Changing colors**

Colors can be changed in a batch.



Numerical value, Text, Figure, Font, Text size can also be changed.

- Items that can be registered in templates
   Figure, Object
- Attributes that can be registered and changed in templates
   Device (Bit, Word), Numerical value, Text, Color, Figure, Font, Text size

Selecting from library ○ Procedure: [View] → [Docking Window] → [Library List (Template)]

Shortcut key: Alt + F9

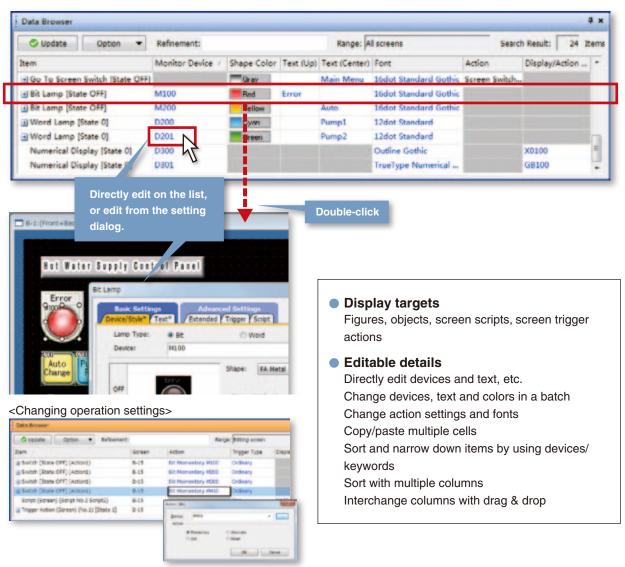
Creating a template ○ Procedure: Select object → Right click → [Template Registration]

## **Efficiently edit data on multiple screens!**

**Data Browser** 

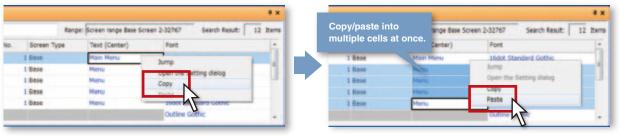


The data browser shows a list of objects used in the project. The settings can be edited directly on the browser or by opening a setting dialog. You can easily identify any duplicate data and no longer have to open multiple screens.



<Copying or pasting multiple cells>

Change names of Go To Screen switches to Main Menu (screen No.1) from "Menu" to "Main Menu" on all screens.



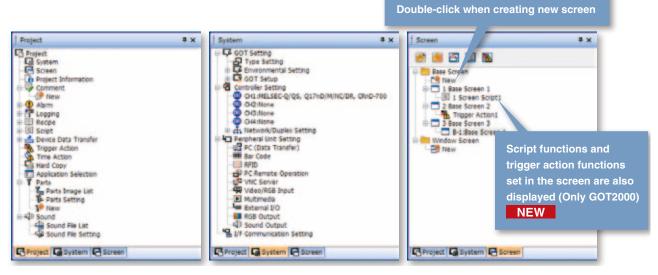
- Procedure: [View] → [Docking Window] → [Data Browser]

## Easy access to setting items!

**Upgrade Work Tree** 



All setting items in the project are categorized into the three groups "Project", "System" or "Screen". Find the item you want to set quickly and easily.



Project tree display

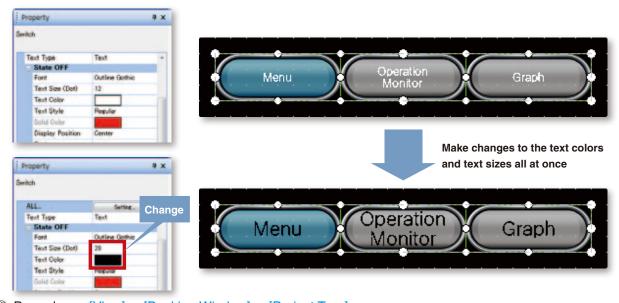
- Procedures: [View] → [Docking Window] → [Project Tree]
- Shortcut key: Alt + 0

## Easily check and make batch changes!

**Property Sheet** 



Once an object or figure is selected, its settings are displayed on the work tree. This eliminates the need to open separate dialogs to set colors, devices, and other settings. These settings can also be changed all at once if multiple objects and figures are selected.



- Procedures: [View] → [Docking Window] → [Project Tree]

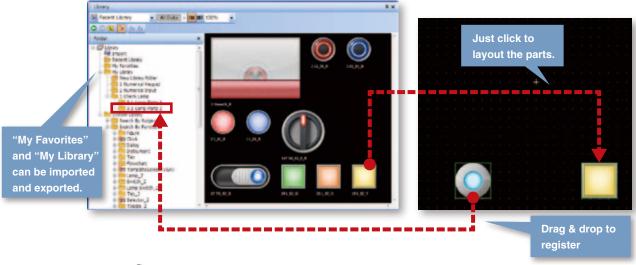
## Quickly find the screens and parts you need!

Library



Use the easy-to-view tree display to select screens and parts from the "Subject", "Function", "Recent Library" or "My Favorites".

User-created parts can be shared on other personal computers allowing screen assets to be used effectively.



Library list display

- Procedures: [View] ⇒ [Docking Window] ⇒ [Library List]

Library list (template) display

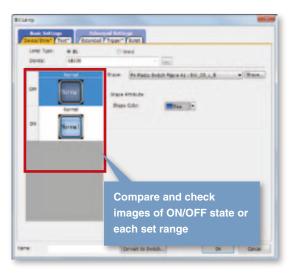
- Procedures: [View] → [Docking Window] → [Library List (Template)]
- Shortcut key: Alt + F9

## View set sections in a glance!

**Dialog Box** 



Perform intuitive settings and operations with the easy-to-understand terms and display items. An asterisk (\*) is displayed at set tabs allowing you to identify in which section settings have been modified.





Dialog box display

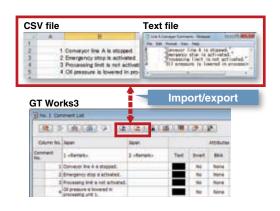
○ Procedure: Select object → double-click or select object → Alt + Enter

## Improve the comment input efficiency!

Interaction with Other Applications



Interact with other applications and quickly input comments.



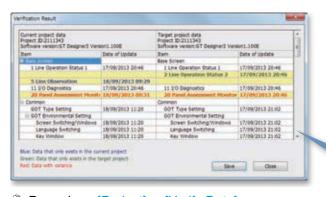
- Import/export CSV/Unicode® text file format data
- Copy & paste from Microsoft® Excel® or GX Works2 to GT Works3

## Quickly identify differences in the data!

**Upgrade Data Verification** 



#### Verify the project data.



Verification with GOT

Compare the project data in the GOT and personal computer.

Project verification

Compare project data being edited on the personal computer with data for a different project.

Even details of common settings can be compared in detail. (Only GOT2000)

○ Procedure: [Project] → [Verify Data]

## **Easily create specifications!**

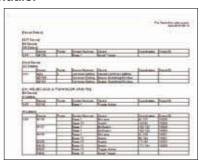
**Printing Function** 



The cover, screen images and the list of set devices, etc., can be printed or output to a file making it simple to create specifications and operation manuals.







- Procedure: [Project] → [Print]
- Shortcut key: Ctrl + P

## Improving Debugging Efficiency

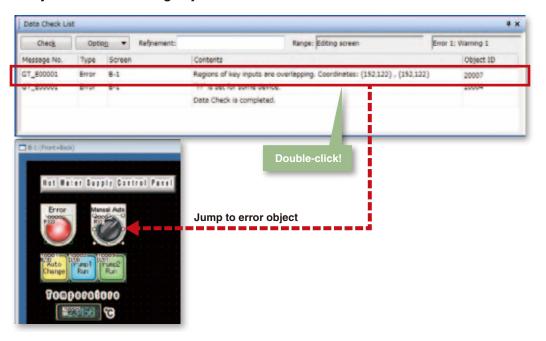
## Identify errors quickly!

NEW Data Check List



The touch switch quantity and overlapping state, object quantity and illegal devices are checked and the results are displayed as a list.

Double-click on an error or warning line to jump to the corresponding object. Quickly identify errors and warning objects.



○ Procedure: [View] → [Docking Window] → [Data Check List]

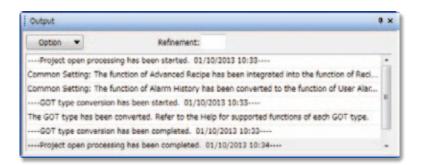
## Notify the data processing state and errors

**NEW** Output Window



Messages indicating the progress of processes such as the GOT type conversion and utilizing other projects, errors and warnings are displayed as a list.

Any incompatible functions found are displayed as warnings when opening the project data edited with a newer version of screen design software with an older version software.



○ Procedure: [View] → [Docking Window] → [Output]

## Send data with a single click!

**Upgrade Data Transfer** 



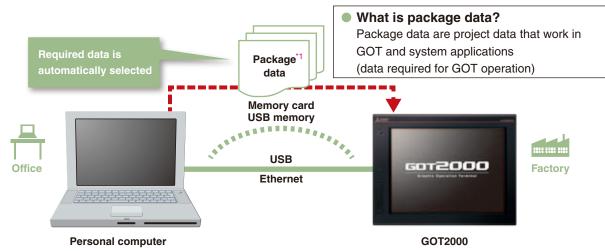
Easily send project data just by clicking the GOT write button.

Automatically select the necessary data according to the project data.

In addition to directly sending data from the personal computer to the GOT, it can also be sent via the programmable controller. (Only GOT2000) NEW

#### Automatically select necessary data according to the project data

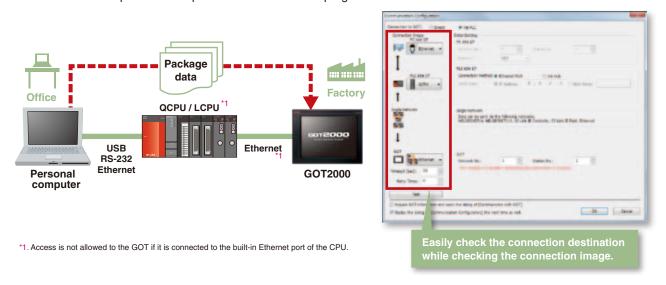
Since the data required for the project data is automatically selected, it can be easily sent with a single click.



<sup>\*1.</sup> With GOT1000, the project data and required OS are transferred.

## Transfer data even via the programmable controller (Only GOT2000) NEW

Send data from the personal computer to the GOT via the programmable controller.



○ Procedure: [Communication] → [Write to GOT]

Shortcut key: Shift + F11

## **Easy simulations!**

**Screen Preview** 



Use the screen preview function to check the state of screen switching and the display status of lamps and switches, etc.

Screen images can be printed or saved as bitmaps, making it easy to create specifications and operation manuals.

State 2

<Confirming Go To Screen switches>





<Switching lamp/switch display (ON/OFF)>



<Switching lamp/switch display (states)>



Alt key + click (next State) or Shift key + click (previous State) can also be used to change the State.

<Changing numerical display/input preview value>



- Procedure: [View] → [Preview]

## Check operations with a single click!

**Simulator** 

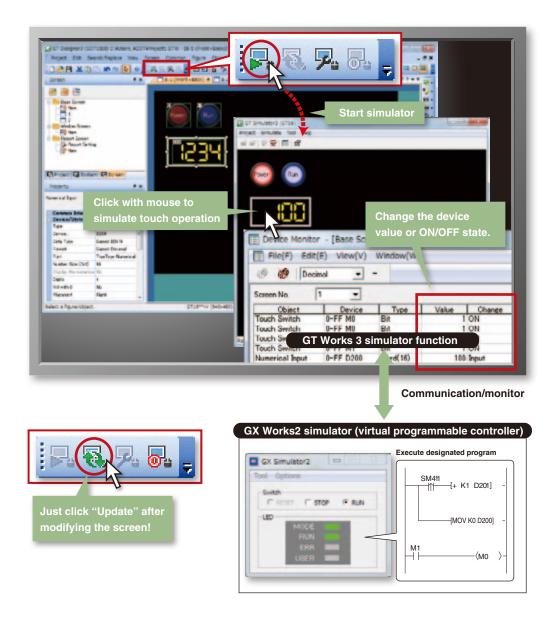


Since the operation of the project data can be confirmed on the personal computer, the program can be efficiently debugged while making changes on the screen.

Even if an actual machine is not available, the operations can be confirmed with a personal computer and sequence programs.

The screen images can be printed and saved, and easily used when creating specifications and operation manuals.

- \* GX Works2 or GX Simulator is required separately.
- \*The GOT2000 device monitor is coming soon.



○ Procedures: [Tool] → [Simulator] → [Activate]

## Prevent your valuable data from being leaked or changed

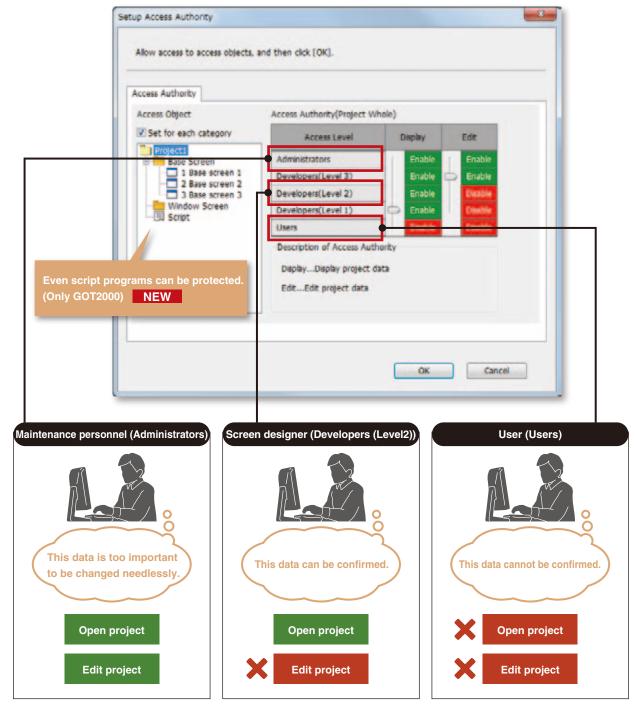
**Upgrade Security** 



Users having access to project data can be restricted.

Prevent illegal editing of project data by setting access authority (display/edit) for each user. Access authority can be set for each project or each screen.

\* Project data having security set with GT Works3 Version 1.45X or later cannot be handled with a version older than GT Works3 Version 1.45X.



 $<sup>\</sup>ensuremath{^{\star}}\xspace$  A password for transferring data with the GOT can also be set.

<sup>○</sup> Procedure: [Project] → [Security]

#### Further reduce total costs

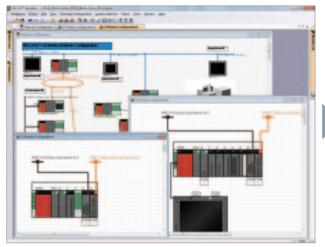
#### **MELSOFT iQ Works**

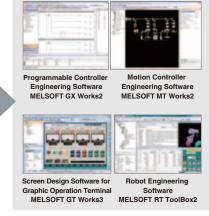


MELSOFT iQ Works suite integrates the engineering software (GX Works2, MT Works2, GT Works3, RT ToolBox2). The system designing efficiency and programming efficiency are improved and total costs are reduced by sharing the designing information, including system design and programming, for the entire control system.

#### **MELSOFT Navigator**

MELSOFT Navigator, along with GX Works2, MT Works2, GT Works3, and RT ToolBox2, facilitates system level design and acts as the interface between each software. Useful functions include design of system configuration, parameter batch setting, system labels, and batch read.





**MELSOFT Navigator** 

#### No need to set parameters for each tool

The information set in the system configuration diagram can be applied in a batch to each program in GX Works2, MT Works2, and GT Works3. \*1

There is no more need to start up each software and check the consistency.

#### Share labels and automatically change related projects

With MELSOFT Navigator, labels can be shared between the programmable controller, motion controller and GOT. For example, if the device assignment is changed in the programmable controller project, the changes are automatically applied to the motion controller and GOT project.

#### Mitsubishi FA Integration Concept



Solution for radically resolving various FA challenges from a point of TCO\*... That is "iQ Platform". Advanced technologies are integrated, optimized and innovated to reduce costs in development, production and maintenance.

\* TCO: Total Cost of Ownership

improved Quality / intelligent & Quick / innovation & Quest

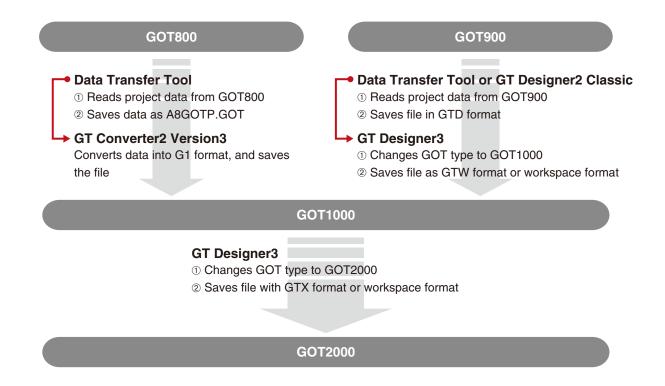
<sup>\*1.</sup> Detailed parameters must be set with each tool.

## Effectively use screen assets!

**Project Data Utilization** 



Existing project data can be utilized allowing your valuable screen assets to be used effectively.



## Utilize library data used with GOT1000! Library Data Utilization

GOT2000 GOT1000

Library data and template data for GOT1000 can be imported into the GOT2000's system library. Design new screens for GOT2000 while inheriting the screen images for existing models.



## Easily transfer data from existing models! Data Transfer Tool



Project data can be transferred from a personal computer that is not equipped with the screen design software. (The tool is included with GT Works3.)



- Target GOT
   GOT2000, GOT1000, GOT900, GOT800
- Target data
  Project data
  Resource data (GOT2000, GOT1000 only)
- Compatible OS Microsoft® Windows® 8, Microsoft® Windows® 7, Microsoft® Windows Vista®, Microsoft® Windows® XP, Microsoft® Windows® 2000

## Effectively use screen assets!

**GT Converter2** 

Convert GOT800 Series project data into GT Works3 compatible data. (Included with GT Works3)



- Supported screen design software
  - GOT800 Series screen design software (SW3NIW-A8GOTP)
  - Digital Electronics Corporation screen design software (GP-PRO/PB III Series)
  - \* There are some data and functions that cannot be converted.

GOT900 Series screen design software

**GT Designer2 Classic** 

Read, write and edit the GOT900 Series project data.



## **Operating Environment/Product List**

#### MELSOFT GT Works3 (English Version) operating environment

Item	Specifications			
Model	Personal computer that Windows® runs on.			
	Microsoft® Windows® 8 (Enterprise, Pro) (32 bit, 64 bit) 112'4'5'6			
	Microsoft® Windows® 8 (32 bit, 64 bit) *1'2'4'5			
os	Microsoft® Windows® 7 (Ultimate, Enterprise, Professional, Home Premium) (32 bit, 64 bit) 11234			
(English, Simplified Chinese, Traditional Chinese, Korean,	Microsoft® Windows® 7 Starter (32 bit)*1'2			
German versions)	Microsoft® Windows Vista® (Ultimate, Enterprise, Business, Home Premium, Home Basic) (32 bit) Service Pack1 or later **12			
	Microsoft® Windows® XP (Professional, Home Edition) (32 bit) Service Pack2 or later 112			
	Microsoft® Windows® 2000 Professional Service Pack4 or later <sup>↑</sup>			
CPU	1GHz or faster recommended			
	For Windows® 8(64 bit), Windows® 7(64 bit): 2GB or more recommended			
Memory	For Windows® 8(32 bit), Windows® 7(32 bit), Windows Vista®(32 bit): 1GB or more recommended			
	For Windows® XP, Windows® 2000: 512MB or more recommended			
Display	Resolution XGA (1024 × 768 dots) or higher			
	For installation: 2GB or more recommended			
Hard disk space	For execution: 512MB or more recommended			
Display color	High Color (16 bits) or higher			
Other hardware	Use the hardware compatible with the above OS. For installation: mouse, keyboard, DVD-ROM drive, or CD-ROM drive For execution: mouse, keyboard For printing: printer Use the following hardware when required For simulation (Only when outputting the buzzer sound): Sound card, speaker			
Applicable GOT	GOT2000 series, GOT1000 series			
Applicable software version	ersion GT Works3 Version 1.100E or later			

For Windows® 8, Windows® 7 and Windows Vista®, the standard user or administrator account is required.

For Windows® 8, Windows® 7 and Windows Vista®, the standard user or administrator account is required.

To interact GT Designer3 with other MELSOFT applications which are used under the administrator authority, use GT Designer3 under the administrator authority.

The following functions are not supported.

Application start in Windows® compatibility mode

Fast user switching

Change your desktop themes (fonts)

Remote desktop

PIP setting other than the normal size (For Windows® XP and Windows Vista®)

Setting the size of texts and illustrations on the screen to any size other than [Small-100%] (For Windows® 7 and Windows® 8)

Windows XP® Mode is not supported.

- \*4 Windows® Touch is not supported.
  \*5 Modern UI Style is not supported.
- \*6 Hyper-V is not supported.

#### **Product list**

	Product name	Model name	Contents			
	LIMI course desire estrucus	SW1DND-GTWK3-E	Facilials	Standard license product		
HMI screen design software MELSOFT GT Works3 11	SW1DND-GTWK3-EA English Version		Volume license product *2	DVD-ROM		
WELSOFT GT WORKS		SW1DND-GTWK3-EAZ	version	Additional license product *2 *5		
	FA Integrated Engineering Software SW1DND-IQWK-E		English	Standard license product (Version1.77F or later)	DVD-ROM	
	MELSOFT iQ Works *1 *3 *4	SWIDIND-IQWK-E	Version	Standard license product (version 1.77F or later)	DAD-UOIM	

- \*1 CD-ROM product is also available. For inquiries, please contact your local sales office.

  \*2 The desired number of licenses (2 or more) can be purchased. For details, please contact your local sales office.

  \*3 Volume license product and additional license product are also available. For more details, please refer to the MELSOFT iQ Works catalog (L(NA)08232).

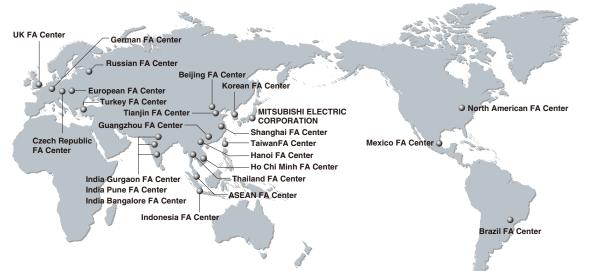
  \*4 The product includes the following software.

  \* Motion Cor
- \*\* The product includes the following software.

  \* System Management Software [MELSOFT Navigator] \* Programmable Controller Engineering Software [MELSOFT GX Works2] \* Screen Design Software for Graphic Operation Terminal [MELSOFT GT Works3] \* Robot Programming Software [MELSOFT RT ToolBox2 mini] \*

  \* This product does not include the DVD-ROM. Only the license certificate with the product ID No. is issued.

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#### MELSEC-Q Series Universal Model



Introducing the high-speed QCPU (QnUDVCPU) for faster processing of large data volumes.

- @Realize high-speed, high-accuracy machine control with various iQ Platform compatible controllers and multiple CPUs.
- ©Easily connect to GOTs and Programming tools using built-in Ethernet port.
- ©25 models from 10 k step small capacity to 1000 k step large capacity, are available.
- Seamless communication and flexible integration at any network level.





10k steps to 1000k steps 256 points to 4096 points/8192 points 120ns to 1.9ns

USB (all models equipped), Ethernet, RS-232, memory card, extended SRAM cassette I/O, analog, high-speed counter, positioning, simple motion, temperature input, temperature control, network module Building block type Ethernet, CC-Link IE controller network, CC-Link IE field network, CC-Link,

CC-Link/LT, MELSECNET/H, SSCNETII (/H), AnyWire, RS-232, RS-422

#### Programmable Controller | MELSEC-L Series

"Light & Flexible" condensing various functions easily and flexibly.

- ©CPU equipped as a standard with various functions including counter, positioning and CC-Link.
- The base-less structure with high degree of freedom saves space in the control panel.
- ©Easily confirm the system status and change the settings with the display unit.
- ©Ten models are available in program capacities from 20 k steps to 260 k steps.

#### Product specifications

Program capacity
Number of input/output points [X/Y]
Number of input/output device points [X/Y]
Basic instruction processing speed (LD instruction)
External connection interface
Function modules
Unit expansion style
Network

20 k steps/60 k steps/260 k steps 1024 points/4096 points 8192 points 60 ns/ 40 ns/ 9.5 ns USB, Ethernet, RS-232, SD memory card, CC-Link (L26CPU-BT/PBT) I/O, analog, high-speed counter, positioning, simple motion, temperature control, network module Base-less structure Ethernet, CC-Link IE Field network, CC-Link, CC-Link/LT, SSCNETIII(/H), RS-232, RS-422

#### Programmable Controller | MELSEC-F Series



- ©Supporting small-scale control from 10 points to 384 points (using CC-Link) with an outstanding cost performance.
- ©Wide range of options available for additional functions required by your system.
- ©Easy to use and highly reliable. More than 12 million units have shipped worldwide. (April 2013)
- OSmall-scale control is available in various networks such as CC-Link, Ethernet, and MODBUS.

#### Product specifications



Program capacity 16k steps (FX3s) to 64 k steps (FX3U/FX3UC) Number of input/output points 10 points (FX3s) to 384 points (FX3U/FX3UC with CC-Link)  $0.21 \mu s$  (FX<sub>38</sub>) to 65 ns (FX<sub>3U</sub>/FX<sub>3UC</sub>) Basic instruction processing speed RS-422, USB (FX3S/FX3G/FX3GE Only), Ethernet (FX3GE Only), CC-Link/LT (FX3UC-32MT-LT(-2) only) External connection interface Built-in functions I/O, high-speed counter input, positioning pulse output, analog (FX<sub>3GE</sub> only) Extended functions I/O, analog, temperature control, high-speed counter, positioning, network Unit expansion style Backplane-less design Ethernet, CC-Link, CC-Link/LT, SSCNETIII, CANopen, J1939, RS-232C, RS-422, RS-485, MODBUS Network





#### AC Servo

#### Mitsubishi General-Purpose AC Servo MELSERVO-J4 Series



#### Industry-leading level of high performance servo

- Olndustry-leading level of basic performance: Speed frequency response (2.5kHz), 4,000,000 (4,194,304p/rev) encoder
- OAdvanced one-touch tuning function achieves the one-touch adjustment of advanced vibration suppression control II, etc.
- ©Equipped with large capacity drive recorder and machine diagnosis function for easy maintenance.

#### Product Specifications

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Power supply specifications	1-phase/3-phase 200V AC, 3-phase 400V AC
Command interface	SSCNET II/H, SSCNET II (compatible in J3 compatibility mode), CC-Link IE Field
	Network interface with Motion, pulse train, analog
Control mode	Position/Speed/Torque/Fully closed loop
Speed frequency response	2.5kHz
Tuning function	Advanced one-touch tuning, advanced vibration suppression control II, robust filter, etc.
Safety function	STO, SS1
	SS2, SOS, SLS, SBC, SSM (compatible when combined with motion controller)
Compatible servo motor	Rotary servo motor (rated output: 0.05 to 22kW), linear servo motor (continuous
	thrust 50 to 3000N), direct drive motor (rated torque: 2 to 240N·m)

#### Inverter

#### FR-A800 Series



#### High-functionality, high-performance inverter

- ©Realize even higher responsiveness during real sensor-less vector control or vector control, and achieve faster operating frequencies.
- ©The latest automatic tuning function supports various induction motors and also sensor-less PM motors.
- The standard model is compatible with EU Safety Standards STO (PLd, SIL2). Add options to support higher level safety standards.
- OA variety of useful functions provide USB memory support and customization with a PLC function.

#### Product Specifications

Inverter capacity	200V class: 0.4kW to 90kW, 400V class: 0.4kW to 500kW		
Control method	High-carrier frequency PWM control (Select from V/F, advanced flux vector,		
	real sensor-less vector or PM sensor-less vector control), vector control (when using options)		
Output frequency range	0.2 to 590Hz (when using V/F control or advanced flux vector control)		
Regenerative braking torque	200V class: 0.4K to 1.5K (150% at 3%ED) 2.2K/3.7K (100% at 3%ED) 5.5K/7.5K (100% at 2%ED)		
(Maximum tolerable usage rate)	11K to 55K (20% continuous) 75K or more (10% continuous), 400V class: 0.4K to 7.5K (100% at 2%ED)		
	11K to 55K (20% continuous) 75K or more (10% continuous)		
Starting torque	200% 0.3Hz (3.7K or less), 150% 0.3Hz (5.5K or more) (when using real sensor-less vector, vector control)		

#### Robo<sup>\*</sup>

#### MELEA E Series



High speed, high precision and high reliability industrial robot

- ©Compact body and slim arm design, allowing operating area to be expanded and load capacity increased.
- The fastest in its class using high performance motors and unique driver control technology.
- Olmproved flexibility for robot layout design considerations.
- Optimal motor control tuning set automatically based on operating position, posture, and load conditions.

#### Product Specifications

Degrees of freedom	Vertical:6 Horizontal:4
Installation	Vertical:Floor-mount, ceiling mount, wall mount (Range of motion for J1 is limited) Horizontal:Floor-mount
Maximum load capacity	Vertical:2-20kg Horizontal:3-20kg
Maximum reach radius	Vertical:504-1503mm Horizontal:350-1,000mm

## Shortcut Keys

## Shortcut keys

Shortcut key	Operation	Icon	Tool bar	Menu	
Ctrl + N	Create a new project		Main	Project	
Ctrl + O	Open an existing project	B	Main	Project	
Ctrl + S	Overwrite the current project	<b>"</b>	Main	Project	
Ctrl + P	Display the print setting dialog	<b>=</b>	Main	Project	
F1	Display GT Designer3 Help	0			
Ctrl + Z	Cancel the last action	F	Edit	Edit	
Ctrl + X	Cut	×	Edit	Edit	
Ctrl + C	Сору	<b>P</b>	Edit	Edit	
Ctrl + V	Paste	E	Edit	Edit	
Ctrl + D	Duplicate	Ph .	Edit	Edit	
Ctrl + G	Group	100	Edit	Edit	
Ctrl + U	Ungroup	- Mar	Edit	Edit	
Ctrl + L	Rotate the selected data by 90 degrees to the left	1	Edit	Edit - Rotate/Flip	
Ctrl + R	Rotate the selected data by 90 degrees to the right	4	Edit	Edit - Rotate/Flip	
(With figure/object selected) Alt + ← → ↑ ↓	Move 1 dot				
Tab	Select the next object/figure				
Shift + Tab	Select the previous object/figure				
Ctrl + Alt + P	Open the previous screen	0	Screen	Screen	
Ctrl + Alt + N	Open the next screen		Screen	Screen	
Ctrl + W	Close the current screen		Screen		
(With figure/object selected) Alt + Enter	Open the setting dialog of the selected data	<i>-</i>	Edit	Edit	
(Over dialog) Ctrl + Page Up	Switch to the left tab				
(Over dialog) Ctrl + Page Down	Switch to the right tab				
(Over comment list) Alt + N	Add a comment line				
(Over screen editor) Ctrl + I	Show the screen preview	Q	View		
F7	Display ON/OFF-state of editor screen	ON OFF	View		
Alt + 0(zero)	Display/hide Project tree	r <sub>c</sub>	View		
Alt + 1(one)	Display/hide Propertysheet	<b>7</b> 6	View		
F9	Display/hide Library List		View		
Ctrl + Shift + F	Display/hide Utilize Data (Screen)	<b>=</b>	View	View	
Ctrl + F10	Activate simulator	묫	Simulator	Tools - Simulator	

#### Inquiry

#### Where should we contact if we are interested in purchasing the software or need technical information?

A Please contact your local sales office for any inquiries about the product.

#### **Products**

### Q We are currently using the GOT1000 Series screen design software GT Works3. Do we need to purchase new screen design software to design screen data for the GOT2000 Series?

A The GOT2000 Series screen data can be designed with GT Works3 Version 1.100E or later. If your version of GT Works3 is older than Version1.100E, there is no need to purchase the new version. For more details, please contact your local sales office.

#### **Q** What language is available?

A GT Works3 is available in English, Japanese, and Chinese.

#### Q Can the GOT1000 Series screen data be used with the GOT2000 Series?

A The GOT1000 Series screen data can be used with the GOT2000 Series just by changing the GOT type.

#### Q Can the GOT2000 Series screen data be used with the GOT1000 Series?

A The GOT2000 Series screen data cannot be converted into the GOT1000 Series screen data, and thus cannot be used with the GOT1000 Series.

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The actual color may differ slightly from the pictures in this catalog.

The actual display may differ from what are shown on GOT screen images.













## iQ Platform Graphic Operation Terminal Screen Design Software MELSOFT GT Works3

#### Precautions for Choosing the Products

This catalog explains the typical features and functions of MELSOFT GT Works3 and does not provide restrictions and other information on usage and module combinations When using the products, always read the user's manuals of the products.

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#### 

- To use the products given in this catalog properly, always read the related manuals before starting to use them.
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