



ST400-AG41-24V (RS-422/485)
ST401-AG41-24V (RS-232)



ST400 & ST401 24VDC, RS-232 or RS-422/485 Serial

3.8" Amber Low Cost Graphic Touch Screen

- Fast and Powerful 100Mhz RISC Processor.
- Six function buttons configurable per screen.
- Industry's best protocol support.
- Bar Code support for parts tracking and inventory control.
- Extensive Multi-language character support.
- Zero maintenance amber LED backlight applications needing high contrast and visibility.
- UL Listed, Class 1, Division 2 hazardous location certifications.

FEATURES

- 3.8 Inch Touch Screen
- LED Backlit Amber LCD
- 320 x 240 QVGA Resolution
- Supports Wide Variety of Serial Protocols
- RS-422/485 Com Port (ST400)
- RS-232 Com Port (ST401)
- Six Function Keys
- 24V DC Power
- Multi-language

INFORMATION



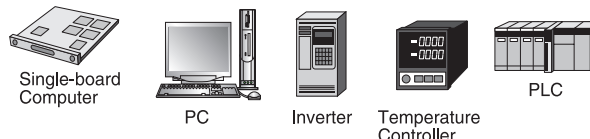
Powered by:
GP-PRO/PB III C
Package03 HMI Screen
Editor Development
Software

- Advanced featured graphics editor for drawing objects, animation, creating pre-configured operator objects, etc.
- Recipes Trending, Alarm/Event Management, Scheduling, Pop-up keypads, etc.
- Password protected; 15 level security.
- Time scheduling for equipment start uptime and periodic tasks.
- Script functions to interface to custom OEM equipment.

COMMUNICATION

Versatile interfaces support flexible and expanding control system needs:

- **Connect to various controllers via RS-232, RS-422, or RS-485 serial port.**



- **Also supports serial devices; such as single or two-dimensional bar code readers.**



CONNECTIVITY

Pin Connection	Pin No.	Signal	Signal Name	Direction
ST400 RS-422 Serial Interface 	1	RDA	Receive data A	Input
	2	RDB	Receive data B	Input
	3	SDA	Send data A	Output
	4	ERA	Enable receive A	Output
	5	SG	Ground	-
	6	CSB	Clear send B	Input
	7	SDB	Send data B	Output
	8	CSA	Clear send A	Input
	9	ERB	Enable receive B	Output
Pin Connection	Pin No.	Signal	Signal Name	Direction
ST401 RS-232 Serial Interface 	1	CD	Carrier detect	Input
	2	RD	Receive data	Input
	3	SD	Send data	Output
	4	ER	Enable receive	Output
	5	SG	Ground	-
	6	DR	Data set ready	Input
	7	RS	Request send	Output
	8	CS	Clear send	Input
	9	RI	Ring indicate	Input



Partial List of Controllers Supported:

GE Fanuc
Schneider
Fuji Electric
Modicon
Mitsubishi
Yokogawa

Koyo
Omron
Rockwell
Siemens
Matsushita
Toyota ... and MORE

ST400 & ST401 SPECIFICATIONS

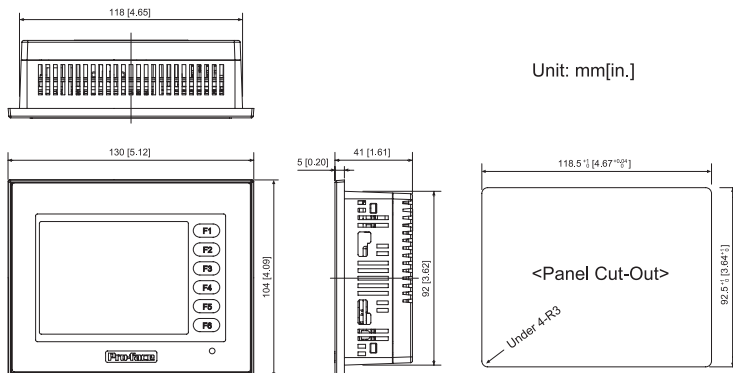
FUNCTIONAL SPECIFICATIONS

Display Type	Amber Monochrome LCD
Display Colors	Monochrome; up to 8 levels of gray
Backlight	LED backlight maintenance free
Display Resolution	320 x 240 pixels
Effective Display Area (mm)	W76.7mm [3.02in.] x H57.5mm [2.26in.]
Brightness Control	2 levels of adjustment available via touch panel
Contrast Control	8 levels of adjustment available via touch panel
Character Sizes	8x8, 8x16, 16x16, 32x32 dot fonts
Font Sizes	Width can be expanded 1 to 8 times. Height can be expanded 1/2 and 1 to 8 times
Memory - Application	640KB FLASH EPROM
Memory - Data Backup	96KB SRAM - uses a lithium battery
Serial (COM 1) Interface	(ST400) RS-422 / RS-485, 9-pin D-sub, Data Transmission Speed: 2400 to 115.2 kbps (ST401) RS-232, 9-pin D-sub, Data Transmission Speed: 2400 to 115.2 kbps
Tool Connector Port	8-pin mini Din, Asynchronous TTL Level non-procedural command interface for program download, barcode reader interface

GENERAL SPECIFICATIONS

Electrical	Input Voltage	24VDC
	Rated Voltage Range	19.2VDC to 28.8VDC
	Power Consumption	7W or less
Environmental	Ambient Operating Temp.	0°C to 50°C (Cabinet interior and panel face)
	Storage Temperature	-20°C to 60°C
	Operating Humidity	10%RH to 90%RH (non-condensing, drybulb temperature: 39°C or less)
	Storage Humidity	10%RH to 90%RH (non-condensing, drybulb temperature: 39°C or less)
Structural	Vibration Resistance	IEC61131-2 (JIS B 3501) compliant. When vibration is NOT continuous: 10Hz to 57Hz 0.075mm, 57Hz to 150Hz 9.8m/s ² . When vibration is continuous: 10Hz to 57Hz 0.035mm, 57Hz to 150Hz 4.9m/s ² X,Y, Z direction for 10 times 80 min.)
	Ratings	NEMA TYPE#250 Type 4 x/12 Equivalent to IP65 (Indoor use only)
	Certifications	UL/cUL Listed, UL508, UL1604 CL 1 Div 2, CE EN55011, EN61000-6-2
	External Dimensions	W130mm[5.12in.] x H104mm [4.09in.] x D41mm [1.61in.]
	Weight	0.4kg (1.1lb) or less

EXTERNAL DIMENSIONS



SOFTWARE COMPATIBILITY



Powered by:
GP-PRO/PB III C Package03
HMI Screen Editor Development
Software

ORDERING INFORMATION

ORDER NUMBER

ST400-AG41-24V

ST401-AG41-24V

OPTIONAL ACCESSORIES

GPW-CB02

GPW-CB03

HMI-CAB-ST001

ST400-DF01

PLC Cable

DESCRIPTION

3.8" Amber, 640KB Mem., 1 RS-422/485 Serial Port, 24VDC, UL, CE

3.8" Amber, 640KB Mem., 1 RS-232 Serial Port, 24VDC, UL, CE

Programming Cable, PC RS-232, 9 pin D-Sub application download cable

Programming Cable, PC USB, application download cable

Generic serial communication cable, ST40x to open end wires, 3 meters

Overlay Screen Protection Sheet (qty 5)

Wide variety of PLC cables available

Xycom Automation, Inc.
a Pro-face America Company

734-429-4971

Fax: 734-429-1010

http://www.xycom.com

Customer Support Hotline:
734-944-0482



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ST402-AG41-24V



ST402 - 24VDC, Siemens MPI 485

3.8" Amber Low Cost Graphic Touch Screen

- Fast and Powerful 100Mhz RISC Processor
- Six function buttons configurable per screen
- Direct support for Siemens MPI 485 communications
- UL CL1, Div 2 certifications
- Bar code reader support for security systems and inventory control
- Extensive Multi-language character support
- Zero maintenance LED backlight ideal for applications needing high contrast and visibility

FEATURES

- 3.8 Inch Touch Screen
- LED Backlit Amber LCD
- 320 x 240 QVGA Resolution
- 15-Level Password Security
- Siemens MPI 485 Com Port
- Secondary RS-422 (Limited) Serial Port
- Six Function Keys
- 24V DC Power
- Multi-language

INFORMATION



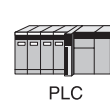
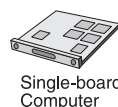
**Powered by:
GP-PRO/PB III C
Package03 HMI Screen
Editor Development
Software**

- Advanced featured graphics editor for drawing objects, animation, creating pre-configured operator objects, etc.
- Recipes Trending, Alarm/Event Management, Scheduling, Pop-up keypads, etc.
- Password protected; 15 level security.
- Time scheduling for equipment start uptime and periodic tasks.
- Script functions to interface to custom OEM equipment.

COMMUNICATION

Versatile interfaces support flexible and expanding control system needs:

■ Connect via Siemens MPI 485 Interface



■ Supports serial devices such as single or two-dimensional bar code readers



CONNECTIVITY



**Siemens MPI RS-485
Serial Interface**

Pin Connection	Pin No.	Signal	Signal Name	Direction
	1	NC	No connection	-
	2	NC	No connection	-
	3	LINE(+)	Line (+)	In/Output
	4	RTS	Request Send	Output
	5	SG	Ground	-
	6	5V	5V External Output ^{*1}	Output
	7	NC	No connection	-
	8	LINE(-)	Line (-)	In/Output
	9	NC	No connection	-

*1 The connector of the ST side is socket type.

**Port 2 RS-422 Serial Expansion Interface
for scripting and bar code readers *1**

Pin Connection	Pin No.	Signal	Signal Name	Direction
	1	RDA	Receive data A	Input
	2	RDB	Receive data B	Input
	3	SDA	Send data A	Output
	4	ERA	Enable receive A	Output
	5	SG	Ground	-
	6	CSB	Clear send B	Input
	7	SDB	Send data B	Output
	8	CSA	Clear send A	Input
	9	ERB	Enable receive B	Output

*1 The connector of the ST side is pin type.

Note: Standard serial protocol drivers are not supported with this port. Use ST400 model for RS-422 / RS-485 applications.

ST402 SPECIFICATIONS

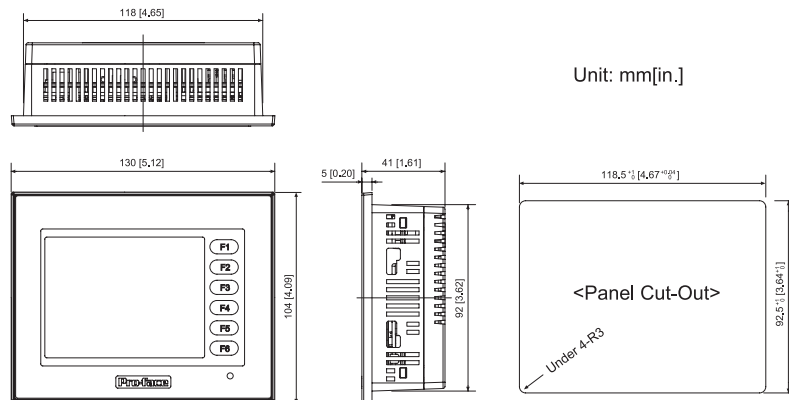
FUNCTIONAL SPECIFICATIONS

Display Type	Amber Monochrome LCD
Display Colors	Monochrome; up to 8 levels of gray
Backlight	LED backlight; maintenance free
Display Resolution	320 x 240 pixels
Effective Display Area (mm)	W76.7mm [3.02in.] x H57.5mm [2.26in.]
Brightness Control	2 levels of adjustment available via touch panel
Contrast Control	8 levels of adjustment available via touch panel
Character Sizes	8x8, 8x16, 16x16, 32x32 dot fonts
Font Sizes	Width can be expanded 1 to 8 times. Height can be expanded 1/2 and 1 to 8 times
Memory - Application	640 KB FLASH EPROM
Memory - Data Backup	96 KB SRAM - uses a lithium battery
Serial Interface	Siemens MPI RS-485, 9-pin D-sub, Data Transmission Speed: 2400 to 187.5 kbps
Expansion Serial Interface	RS-422, Data Transmission Speed: 2400 to 38.4 bps for scripting and bar code readers
Tool Connector Port	8-pin Din, Asynchronous TTL Level non-procedural command interface for program download, bar code reader interface

GENERAL SPECIFICATIONS

Electrical	Input Voltage	24VDC
	Rated Voltage Range	19.2VDC to 28.8VDC
	Power Consumption	7W or less
Environmental	Ambient Operating Temp.	0°C to 50°C (Cabinet interior and panel face)
	Storage Temperature	-20°C to 60°C
	Operating Humidity	10%RH to 90%RH (non-condensing, wetbulb temperature: 39°C or less)
	Storage Humidity	10%RH to 90%RH (non-condensing, wetbulb temperature: 39°C or less)
Structural	Vibration Resistance	IEC61131-2 (JIS B 3501) compliant. When vibration is NOT continuous: 10Hz to 57Hz 0.075mm, 57Hz to 150Hz 9.8m/s ² . When vibration is continuous: 10Hz to 57Hz 0.035mm, 57Hz to 150Hz 4.9m/s ² X,Y, Z direction for 10 times (80min.)
	Ratings	NEMA TYPE#250 Type 4 x/12 Equivalent to IP65
	Certifications	UL/cUL Listed, UL508, UL1604 CL 1 Div 2, CE EN55011, EN61000-6-2
	External Dimensions	W130mm[5.12in.] x H104mm [4.09in.] x D41mm [1.61in.]
	Weight	0.4kg (1.1lb) or less

EXTERNAL DIMENSIONS



SOFTWARE COMPATIBILITY



GP-PRO C-Package 03 HMI Development software

ORDERING INFORMATION

ORDER NUMBER

ST402-AG41-24V

DESCRIPTION

3.8" Amber, 640KB Mem., 1 Siemens MPI 485 Port, RS-422 port, 24V, UL, CE

OPTIONAL ACCESSORIES

GPW-CB02

Programming Cable, PC RS-232, 9 pin D-Sub application download cable

GPW-CB03

Programming Cable, PC USB, application download cable

HMI-CAB-ST001

Generic serial communication cable, ST40x to open end wires, 3 meters

ST400-DF01

Overlay Screen Protection Sheet (qty 5)

CA3-CBL422/5M-01

RS-422 cable, 5M, connects ST400/402, other end is 6 wire spade lug

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Switch
between two
colors!

ST403-AG41-24V



ST403 - Ethernet & RS-232/RS-422

3.8" Amber/Red Low Cost Graphic Touch Screen

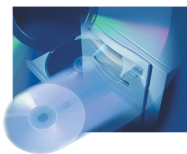
- Fast and Powerful 100Mhz RISC Processor
- Six function buttons configurable per screen
- Both Ethernet and RS-232/RS-422 communications
- Simultaneous multi-protocol support using Pro-Designer software
- Bar code reader support for security systems and inventory control
- Extensive Multi-language character support
- UL Listed, Class 1, Division 2 hazardous location certifications
- Data sharing connectivity to Microsoft programs using Pro-Server software

FEATURES

- 3.8 Inch Touch Screen
- LED Backlit Amber/Red LCD
- 320 x 240 QVGA Resolution
- Ethernet Port (10baseT)
- Data Sharing via Pro-Server
- RS-232/RS-422 Com Port Configurable
- Six Function Keys
- 24V DC Power
- Multi-language

INFORMATION

Various HMI software solutions available to match your needs:

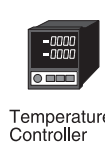
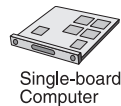


- Advanced featured Graphics Editor for drawing objects, animation, creating pre-configured operator objects, scripting, etc.
- Recipes Trending, Data Logging, Alarm/Event Management, Security, etc.
- Software application connectivity via OPC, DDE, SQL, DLL, SMTP Email
- Graphic file import: BMP, JPG, EMF, PNG
- Optional Web-enabled browser features

COMMUNICATION

Versatile interfaces support flexible and expanding control system needs:

■ **Connect to various controllers via Ethernet or serial interfaces**



■ **Supports serial devices such as single or two-dimensional bar code readers**



CONNECTIVITY



RS-232 / RS-422 Serial Interface

Pin Connection	Pin No.	Signal	Signal Name	Direction
	1	CD/RDA	Carrier detect /Receive data A	Input /Input
	2	RD/RDB	Receive data /Receive data B	Input /Input
	3	SD/SDA	Send data/Send data A	Output /Output
	4	ER/ERA	Enable receive /Enable receive A	Output /Output
	5	SG/SG	Ground/Ground	-
	6	DR/CSB	Data set ready/Clear send B	Input /Input
	7	RS/SDB	Request send /Send data B	Output /Output
	8	CS/CSA	Clear send/Clear send A	Input /Input
	9	RI/ERB	Ring indicate /Enable receive B	Input /Output

Partial List of Controllers Supported:

GE Fanuc

Series 90-30
Series 90-70
PowerMate (Motion Controller)
Fanuc Series 16, 18, 16i, 18i, 21i

Schneider

Twido
Quantum
Momentum
Micro & Nano

Mitsubishi

MELSEC-A
MELSEC-FX
MELSEC-Q
MELSEC-QNA

Rockwell

SLC500
MicroLogix
ControlLogix
CompactLogix

Koyo

DL205, 305, 405

Siemens

Simatic-S5
Simatic-S7-200, 300, 400

IDEC

Micro &
MicroSmart

Yokogawa

Matsushita

Fuji Electric

AND MORE...

ST403 SPECIFICATIONS

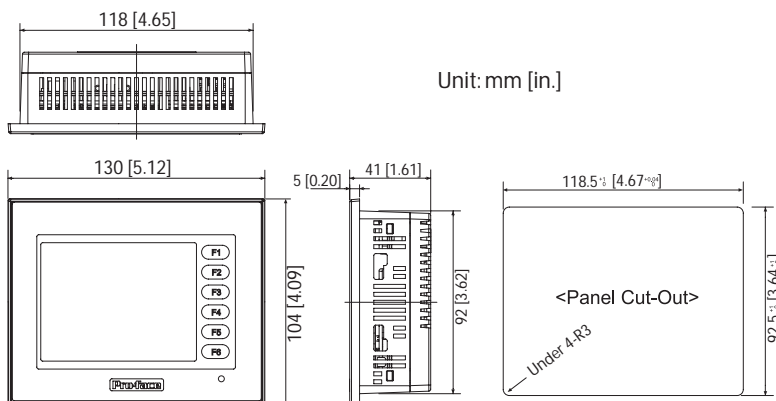
FUNCTIONAL SPECIFICATIONS

Display Type	Monochrome LCD
Display Colors	Monochrome up to 8 levels of gray
Backlight	LED backlight (Amber or Red color) maintenance free
Display Resolution	320 x 240 pixels
Effective Display Area (mm)	W76.7mm [3.02in.] x H57.5mm [2.26in.]
Brightness Control	2 levels of adjustment available via touch panel
Contrast Control	8 levels of adjustment available via touch panel
Character Sizes	8x8, 8x16, 16x16, 32x32 dot fonts
Font Sizes	Width can be expanded 1 to 8 times. Height can be expanded 1/2 and 1 to 8 times
Memory - Application	640 KB FLASH EPROM
Memory - Data Backup	96 KB SRAM - uses a lithium battery
Serial (COM 1) Interface	RS-232C/RS-422 configurable, 9-pin D-sub, Data Transmission Speed: 2400 to 115.2 kbps
Ethernet Interface	IEEE802.3, 10BASE-T
Tool Connector Port	8-pin Din, Asynchronous TTL Level non-procedural command interface for program download, bar code reader interface

GENERAL SPECIFICATIONS

Electrical	Input Voltage	24V DC
	Rated Voltage Range	19.2VDC to 28.8VDC
	Power Consumption	7W or less
Environmental	Ambient Operating Temp.	0°C to 50°C (Cabinet interior and panel face)
	Storage Temperature	-20°C to 60°C
	Operating Humidity	10%RH to 90%RH (non-condensing, drybulb temperature: 39°C or less)
	Storage Humidity	10%RH to 90%RH (non-condensing, drybulb temperature: 39°C or less)
	Vibration Resistance	IEC61131-2 (JIS B 3501) compliant. When vibration is NOT continuous: 10Hz to 57Hz 0.075mm, 57Hz to 150Hz 9.8m/s ² . When vibration is continuous: 10Hz to 57Hz 0.035mm, 57Hz to 150Hz 4.9m/s ² X,Y, Z direction for 10 times (80min.)
Structural	Ratings	NEMA TYPE#250 Type 4 x/12 Equivalent to IP65 (Indoor use only)
	Certifications	UL/cUL Listed, UL508, UL1604 CL 1 Div 2, CE EN55011, EN61000-6-2
	External Dimensions	W130mm[5.12in.] x H104mm [4.09in.] x D41mm [1.61in.]
	Weight	0.4kg (0.88lb) or less

EXTERNAL DIMENSIONS



SOFTWARE COMPATIBILITY



Pro-Designer V4.2.10 HMI Development software



GP-PRO C-Package 03 HMI Development software



Pro-Server V4.5 or better Data Collection software

ORDERING INFORMATION

ORDER NUMBER

ST403-AG41-24V

OPTIONAL ACCESSORIES

GPW-CB02

GPW-CB03

HMI-CAB-ETH

HMI-CAB-ST001

ST400-DF01

PLC Cables

DESCRIPTION

3.8" Dual Color Amber/Red LED, Ethernet and RS-232/RS-422 Port, 24V, UL, CE

Programming Cable, PC RS-232, 9 pin D-Sub application download cable

Programming Cable, PC USB, application download cable

Ethernet crossover cable, 6 ft. length

Generic serial communication cable, ST40x to open end wires, 3 meters

Overlay Screen Protection Sheet (qty 5)

Wide variety of PLC cables available

Xycom Automation

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