

# GP2301S

## Control Terminal with Color Display for R6000 Controller

3-349-272-03  
1/7.03

- **Graphic Control Panel**  
5.7" display in rugged aluminum housing
- **STN Color LCD**  
Resolution: 320 x 240 pixels, 64 colors
- **Touch-Screen**
- **IP 65 Protection**
- **RS 485 Modbus**  
Communications protocol for the R6000
- **GP-PRO/PB III Configuration Software**  
for Windows 95, 98, NT, 2000 and XP



### Applications

The Proface GP2301S control terminal is connected to the R6000 via the Modbus and displays actual value, setpoint, on-time, on-off and status (manual or automatic) with the standard application.

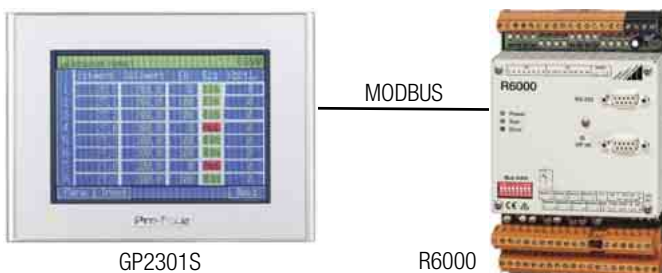
Setpoints can be entered and all parameters can be configured using the touch-screen.

### Options

- Customer-specific adaptation of the standard application
- Expansion of the control loop overview to more than 8 channels
- GP-Pro/PBII developmental software for the creation of individualized applications

### Standard Applications

- Connection to an R6000 controller
- Separate menus for each control loop for the display and setup of control parameters, controller function and configuration, temperature parameters and status messages
- Separate menus for display and setup of the output configuration
- Overview display for all 8 control loops: actual value, setpoint, on-time, on/off, status
- Trend display for all 8 control loops including a bar graph for system deviation and on-time, and a numeric display for actual value and setpoint



### Interface Connector Pin Assignments

25-pin sub-miniature socket connector  
RS232 connection to PC and RS 485 connection to R6000

Pin	Signal	Designation	Pin	Signal	Designation
1	FG	Frame ground	14	VCC	5 V + 5%, 0.25 A output
2	SD	Send data (RS 232C)	15	SDB	Send data B (RS 422)
3	RD	Receive data (RS 232C)	16	RDB	Receive data B (RS 422)
4	RS	Request to send (RS 232C)	17	RI	Run indicate (RS 232C)
5	CS	Clear to send (RS 232C)	18	CSB	Clear to send B (RS 422)
6	DR	Data set ready (RS 232C)	19	ERB	Enable receive B (RS 422)
7	SG	Signal ground	20	ER	Enable receive (RS 232C)
8	CD	Carrier detect (RS 232C)	21	CSA	Clear to send A (RS 422)
9	TRMX	Termination (RS 422)	22	IRA	Enable receive A (RS 422)
10	RDA	I receive data A (RS 422)	23	NC	Not connected (reserved)
11	SDA	I send data A (RS 422)	24	NC	Not connected (reserved)
12	NC	Not connected (reserved)	25	NC	Not connected (reserved)
13	NC	Not connected (reserved)			

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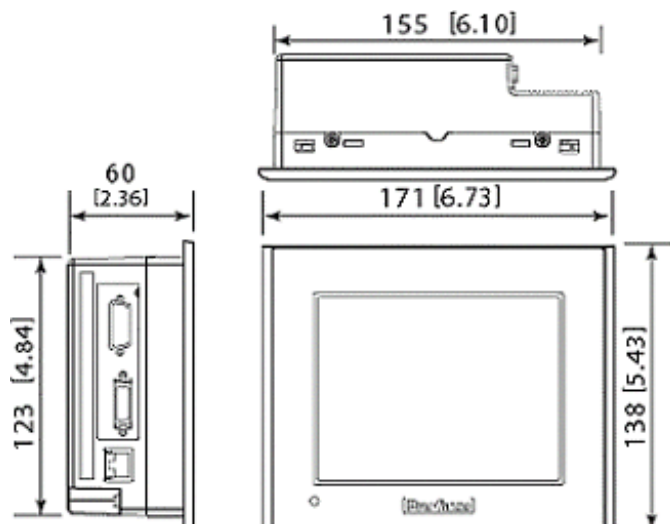
## Control Terminal with Color Display for R6000 Controller

### Technical Data

Display Functions:	
Type	STN color LCD
Colors	64
Background illumination	CCFL (MTBF 50,000 hours at 25° C and 24 hour operation)
Resolution	320 x 240 pixels
Display range	115.2 x 86.4 mm (W x H)
Features	Blinking / inverse display
Brightness	Adjustable to 4 levels via touch-screen
Contrast	Adjustable to 8 levels via touch-screen
Character sets	ASCII
Text: 8 x 8 pixels	30 lines of 40 characters each
8 x 16 pixels	15 lines of 40 characters each
16 x 16 pixels	15 lines of 20 characters each
32 x 32 pixels	7 lines of 10 characters each
Character size	Width x factor of 1, 2, 4 or 8, height x factor of ½, 1, 4 or 8
Touch-screen	Durable membrane pad (16 x 12 touch-keys)
Status LED	Green: normal operation Orange: background illumination is weakening
Electrical Data	
Input voltage	24 V DC
Voltage range	19.2 to 28.8 V DC
Power consumption	Max. 22 W
Allowable voltage drop	Max. 10 ms (voltage drop may last max. 1 second)
Dielectric strength	1000 V AC, 20 mA for 1 min. (L-PE)
Insulation resistance	At least 20 MOhm at 500 V DC (L-PE)
Protection (front panel)	IP 65f (JEM1030) / NEMA #250 type 4x/12
Ambient Conditions	
Operating temperature	0 to 50° C
Storage temperature	-20 to 60° C
Relative humidity	10% relative humidity, no condensation
Cooling	Natural air circulation
Resistance to vibration	IEC61131-2 compatible
Interference resistance (interference simulator)	Interference suppression: 1 kVpp, pulse duration: 1 µs rise, interval: 1 ns
Atmosphere	May not contain aggressive gases
Certification	EN55022 class A, EN50082-2, UL60950
Grounding	Max. 100 Ohm
Memory	
Application memory	1 MB flash EPROM
Backup memory	128 KB SRAM with lithium battery
Interfaces	
Serial interface	Asynchronous transmission mode: RS 232C – RS 422, data length: 7 or 8 bits, stop bits: 1 or 2, transmission speed: 2400 to 115.2 kbps, parity: none, even or odd
Extended serial interface	1 channel, for connection to a host system
Mini DIN connector	Asynchronous interface with TTL level I/F
CF module interface	1 slot (compact flash)

### Mechanical Design

Outside dimensions (WxHxD)	171 x 138 x 60 mm
Panel cutout (WxH)	156 x 123.5 mm
Weight	Max. 1.2 kg



### Order Information

Designation	Article Number
GP2301S control terminal	GP2301S
Interface cable, 1.5 m	GP2301S-R6000-0
Interface cable > 1.5 m	GP2301S-R6000-9
GP2301S programming set with manuals, data cable (PC to terminal) and GP-PRO/PB III software on CD, German only, for Windows 95, 98, NT, 2000 and XP	GP2301S

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