Data Sheet
SS/C351_10

1/4 DIN Process Controller

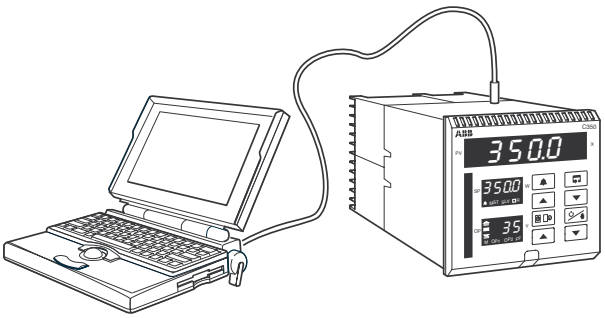
C351

- **PID controller with multiple control strategies**
  – single loop, heat/cool, motorized valve, auto/manual, analog backup or indicator
- **Three large LED displays with deviation bargraph**
  – clear and easy to follow display with color-coordinated function keys
- **Comprehensive input/output capabilities**
  – three analog inputs, two analog outputs, up to four relays and four digital inputs plus RS485 Modbus for total flexibility
- **Process security and plant safety**
  – loop break alarm, processor watchdog, password protection and intelligent power recovery
- **PC configuration for ease of setup**
  – access to advanced feature and standard settings to reduce configuration time
- **Advanced cost-saving functions**
  – math blocks, logic equations, real-time alarms, custom linearizers and soft wiring
- **Unique Control Efficiency Monitor (CEM)**
  – two autotune algorithms plus manual fine-tune using CEM for optimum performance
- **IP66/NEMA4X front face protection**
  – reliability in the harshest environments

C351 – short case 1/4 DIN controller with functionality and power as standard

Custom Linearizer

The C351 has two separate 15-breakpoint linearizers which can be programmed via the PC Configurator and applied to either inputs or outputs. These can be used for nonstandard thermocouples, nonlinear tank levels or any nonlinear input. The output linearizer accommodates any nonlinear control elements.



Customized Application Templates

Templates are provided to make the basic configuration for a particular application as simple as possible. When a template is selected the C351 assumes the preset form for that template (see below). The inputs and software blocks are soft-wired automatically to perform the selected function.

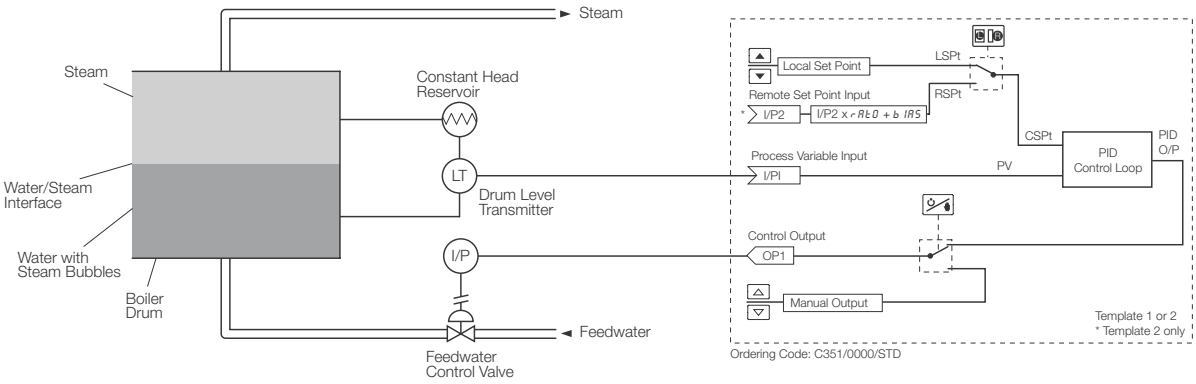
Configuration time is greatly reduced as 90% of the choices you would normally need to make in similar products are already preconfigured.

The C351 offers the following templates:

1 Single loop controller with local set point
2 Single loop controller with remote set point
3 Auto manual station (low signal detection)
4 Auto manual station (digital signal selection)
5 Analog backup station (low signal detection)
6 Analog backup station (digital signal selection)
7 Single indicator/manual loader station
8 Dual indicator/manual loader station

Single Loop Control Template – Example

A single element drum level is used in industrial boiler applications where steam demand changes slowly and/or constant BTU content fuel-fired boilers.



Ordering Code: C351/0000/STD

...Specification

Outputs

Control/Retransmission Outputs

Number	2 standard
Type	1 x programmable as analog or logic (digital) output
	1 x analog only
Isolation	Galvanically isolated from the rest of the circuitry
Analog range	0 and 20mA (programmable), max. 750Ω
	accuracy: 0.25%
Digital voltage	17V @ 20mA

Relay Outputs

Number	2 standard,
Type	SPCO, rated 5A at 115/230V AC

Digital Inputs

Number	2 standard,
Type	Volt-free
Minimum pulse	200ms

Advanced Features

Maths Blocks *

Number	4
Operators	+, –, x, ÷, Average, Maximum, Minimum, High select, Low select, √, Median select, Relative Humidity
	Input multiplexer (digitally selected)

Delay Timers *

Number	2
Programmable	Delay and Duration in seconds

Logic Equations *

Number	6
Elements	15 per equation
Operators	OR, AND, NOR, NAND, NOT, EXOR

Custom Linearizers *

Number	2
Breakpoints	15 per linearizer

* Accessed via PC Configurator

Options

Relay Outputs

Number	2
Type	SPST, rated 5A at 115/230V AC

Digital Inputs

Number	2
Type	Volt-free
Minimum pulse	200ms

Serial Communications

Connections	RS485, 2- or 4-wire
Protocol	Modbus RTU
Isolation	Galvanically isolated from the rest of the circuitry

EMC

Emissions and Immunity

Meets requirements of IEC 61326 for an Industrial Environment

Design & manufacturing standards

CSA/UL General Safety (cCSAus mark)

Satisfies the requirements of –
CAN/CSA C22.2 No. 1010.1-1-92 Standard
CAN/CSA C22.2 No. 1010.1-B97
UL Standard 3121-1

FM General Safety Pending