Control^{IT} Process controller

Instrument overview and selection table

Industrial^{IT}

CP/CT single-loop temperature controllers

- CP4, CP8, CT16, CT32: small formats, large display
- 1 control loop, for simple control tasks
- to be installed on aggregates and machines

Digitric process controllers

- D100 and D500 ready-made solutions for many applications
- Communication via PROFIBUS DPV1, Modbus RTU, OPC, DDE
- D100, process-controlled changes of display color, quick configuration through template code
- D500, freely configurable, 1...4 loops

Protronic process controllers

- P100, P500, P550, format 72 mm x 144 mm
- P100, in short housing
- P500, P550, universal controllers, 1...4 loops, expandable to up to 7 hardware modules
- P550 with graphical display

PC Software

- IBIS-R+ Engineering Tool: parameter setting, documentation, commissioning, controller operation and monitoring in online mode
- ProcessStudio: simulation tool for controllers and control loops, configuration testing without any risks, pre-commissioning
- R&C Process Data Management: process data acquisition, visualization, archiving; use of open standards (OPC, FDT, HTML, ...), device-independent, quick and easy use through pre-defined visualization pages





Single-loop temperature controllers of the CP/CT-series, overview

Product series		CT32	CT16	CP8	CP4
Specifications			SVe CTI6	SEL CP8	PV SV• SU• SEL
Dimensions	Front Installed depth	48 mm x 24 mm 98 mm	48 mm x 48 mm 79.8 mm	48 mm x 96 mm 100 mm	96 mm x 96 mm 100 mm
Features		extremely low inve designed for stand process value and setable measuring easily adaptable to easy to handle parameterizable a ramp/soak functio timer function (CT PID and fuzzy con self-tuning	softment cost Jard applications I set value displayed I ranges to the control task and configurable, eith n for the set value 16 and CT32 only) trol	in parallel (switchable er locally (menu) or re	e for the CT32) emotely (special software)
Display		4-digit LED display for process and set value	4-digit LED display	for process and set v	<i>r</i> alue
Control functions		single-loop • on/off control • heating/cooling co • continuous contro • alarm signalling	ontrol I		
Limit relays (depending on the model)		max. 2	max. 2 or 1 + heater burnout alarm (optional)	2 + heater burnout	alarm (optional)
Inputs	analog	1 measuring input (4	420 mA, 15 V, To	C, Pt100)	
	digital	max. 2	max. 1	_	
Relay outputs	analog or	1 x 420 mA			
	digital	1 or 2 as relays or v	oltage pulses for SS	R	
Protection class (front)		IP 66		IP 54	
Self-test		yes			
Self-tuning		yes			
Communication		option: RS 485 (Mo	dbus RTU)	-	
Certificates		CE, UL, cUL			
Main applications		heat technology, me plastics processing, air conditioning, env	echanical engineering electrical installation vironmental protectio	g, apparatus enginee s, automation, found n, food and beverage	ring, aggregate engineering, textiles and ry practice, soldering, heating, ventilation, es, automotive engineering
Data sheet		10/61-1.12 EN			

Note: This list does not include the PE/PS/PA industrial and process controllers, which will be part of our product range by end 2002.

Digitric process controllers, overview

Product series		D100 single-loop process controller	D500 multi-loop process controller		
		ABB Digitric	ABB Digitric		
		SP.w.	SP-		
		Digitric 180	FIC-101		
			x 248n3h		
		₩° 18585 🚃	W1 73,5 H3-h		
			the second secon		
		FSC 0	9-ESC- 9-		
		MENU MENU	ACCOUNT AND A AC		
o		0	5		
Specifications	E	00	00.000		
Dimensions	Front Installed depth	96 mm x 96 mm 145 mm	96 mm x 96 mm 200 mm		
Features		universal controller. high functionality	200 mm		
		 control algorithm for control loops with considerable 	e dead time (Smith predictor)		
		• integrated ramp/soak function (10 programs)			
		 state correction for gas and steam (real gases) integrated functions library 			
		user-guidance through plain text instructions			
		• bus-compatible interface (Modbus RTU, PROFIBUS	S DP (slave))		
		 configuration either through keypad entries and pla configuration through Eurotion Block Diagram (EBC 	In text or via the IBIS-R+ software on a PC		
		 configuration through Function Block Diagram (FBD) and Instruction List (IL) via IBIS-R+ (D500 only) quick configuration through template code (D100 only) 			
		self-tuning and parameter control			
		 data memory with flash EPROM 			
		• 1 control loop	• 4 control loops		
		• expandable (1 I/O module)	• expandable (4 I/O modules)		
D'a ala			freely configurable		
Display		and color change	LC display with text support		
Control functions		• on/off control	ramp/soak function		
		nealing/off/cooling control step control	manual station set point station		
		continuous control	ratio station		
		multi-component control	 process interface and data logger 		
		• ratio control			
		• alarm station	cascade control		
I to the state of the			override control		
(depending on the mode	el)	outputs)	outputs)		
Inputs	analog	1 universal input (mA, Pt100, TC, mV), expandable	1 universal input (mA, Pt100, TC, mV), expandable		
	digital	2 digital inputs/outputs - 1 universal input)	2 digital inputs/outputs avpandable (up to 24 digital		
	ugitai	inputs/outputs)	inputs/outputs)		
Outputs	analog	1 x mA, expandable (up to 3 analog outputs)	1 x mA, expandable (up to 6 analog outputs)		
	digital	2 digital inputs/outputs, expandable (up to 6 digital	2 digital inputs/outputs, expandable (up to 24 digital		
		inputs/outputs), 3 relays, expandable (up to 4 relays)	inputs/outputs), 2 relays, expandable (up to 4 relays)		
Protection class (front)		IP 65			
Self-test Self-tuning		yes ves			
Communication		RS 232, RS 485			
Protocol		Modbus RTU, PROFIBUS DP/DPV1 (slave), OPC, DE	DE		
		-	lateral communication (optional)		
Certificates		CE, VdTUV water level, temperature to DIN 3440	CE		
Main applications		industrial furnaces, lab furnaces, vessel control, mixture control, gas distributors, water level and fill level			
		sterilizers, mechanical engineering, small vessel cons	struction, steel and metal industries		
Data sheet		10/61-6.11 EN	10/61-6.15 EN		

Protronic process controllers, overview

Product series		P100 single-loop controller	P500/P550 multi-loop controller			
Specifications		Alli Protronic Protronic X ISS 72 shar I I IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	ABB Protronic Frothermic ISS 722 share ISS 7300 share ISS			
Dimensions	Front Inst. depth	72 mm x 144 mm 272 mm or 210 mm	72 mm x 144 mm 272 mm			
Features		 universal controller, high functionality control algorithm for control loops wit integrated ramp/soak function (10 pro state correction for gas and steam (re integrated functions library user-guidance through plain text instr bus-compatible interface (Modbus RT configuration either through keypad e self-tuning and parameter control data memory with flash EPROM 2 control loops with 1 control output 	 h considerable dead time (Smith predictor) ograms) al gases) uctions FU, PROFIBUS DP (slave)) Intries and plain text or via the IBIS-R+ software on a PC 4 control loops expandable (7 I/O modules) storage of configuration data using a memory card configuration through Function Block Diagram (FBD) and Instructi List (IL) 	on		
Display		LC display with text support	LC graphical display with trend data display			
Control functions		on/off control step control continuous control multi-component control cascade control ratio control	override control ramp/soak function manual stations set point stations ratio stations air/fuel mixture control			
Limit signals		basic device: 4 digital outputs (expanda	able)			
Inputs	analog	1 universal input (mA, Pt100, TC, mV), 1 x mA input, expandable (up to 28 analog outputs for P500/P550)				
digital		4 digital inputs/outputs, expandable (up to 42 digital inputs/outputs for P500/P550)				
Outputs	analog digital	1 x mA, expandable (up to 6 analog outputs for P500/P550) 4 digital inputs/outputs, expandable (up to 42 digital inputs/outputs for P500/P550); P500/P550 expandable with up to 8 relayer				
Protection class (f	ront)	IP 65				
Self-test Self-tuning		yes ves				
Communication Protocol		RS 232, RS 485 Modbus RTU, PROFIBUS DP/DPV1 (sl	ave), OPC, DDE lateral communication (optional)			
Certificates		CE water level according to VdTÜV temperature according to DIN 3440	· · · · ·			
Main applications		temperature, pressure and flow control industrial furnaces, vessel control, mixt water level and fill level control, autocla	in process automation; ure control, gas distributors, ves, heat exchangers, climatic chambers			
Data sheet		10/62-6.11 EN	10/62-6.15 EN	_		

Software overview

Product series	IBIS-R+ Engineering Tool	ProcessStudio	R&C Process Data Management
Specifications	BCS Risketickaker : Logi Detritionalms Bunchtars Signaturder Offician Zwick Imperiation Signature of Constraints Imperiation Signature of Constand Signated of Constraints Imperiation Signatu	Ventilstellungsregelung Name: Verkistellungsregelung FALSE BA33R FALSE YeA2 Kiblen Ks 1 Offset 5 T1/sek 5 Upersefvert	
Features	 parameterization and configuration of P100/P500/P550 and D100/D500 controllers free configuration of control functions, implementation of these functions in the controllers (except D100, P100) PC-aided controller commissioning PC-based operation and monitoring of controllers in online-mode trend data recording graphical function plan editor in accordance with IEC 1131-3 configuration using Function Block Diagram FBD or Instruction List IL documentation of device data and functionalities modem connection to the controller via the phone line is possible 	 controller and process simulation on a PC risk-free testing of the P100/ P500/P550/D100/D500 controller configuration time-saving pre-commissioning can be integrated with IBIS-R+ from version 1.00.0362 on. 	 modular software for process data acquisition, visualization, archiving and device parameterization process data acquisition via OPC server visualization of the acquired data through line charts, bargraphs, numerical and analog indicators data archiving with OPC/HDA server device parameterization using the Device Type Manager (DTM) in accordance with the FDT standard R&C Process Data Management software includes the following products: device configuration process data visualization Modbus OPC server data archiving
PC hardware requirements	 PC, IBM-compatible 486 processor or higher (Pentium with high clock rate recommended) at least 8 MB RAM a hard disk with at least 45 MB free space 	 PC, IBM-compatible Pentium processor, 166 MHz or higher 64 MB RAM a hard disk with at least 2 MB free space CD-ROM drive for installing SVGA card with at least 256 colors 	 PC, IBM-compatible, Pentium processor, 166 MHz or higher 64 MB RAM a hard disk with at least 20 MB free space CD-ROM drive for installing SVGA card with at least 256 colors
Operating system, software requirements	Windows 3.1, 95, 98, NT	Windows 95, 98, NT Engineering Tool IBIS-R+ version 1.00.0362 or higher	Windows 98, NT-4-SP4, 2000 Internet Explorer 5.01 or higher
Delivered as	CD-ROM	CD-ROM	CD-ROM
Languages	German English French	German English French	German English French (under preparation)
Applications	all fields where P100/P500/P550 process controllers and D100/D500 industrial controllers are used	all fields where P100/P500/P550 process controllers and D100/D500 industrial controllers are used	all fields of the producing and process- ing industries, for central device and process data management from a PC
Data sheet	10/62-6.70 EN	10/49-8.30 EN	

The Industrial^{IT} wordmark and all mentioned product names in the form XXXXX^{IT} are registered or pending trademarks of ABB.

ABB has Sales & Customer Support expertise in over 100 countries worldwide.

www.abb.com



ABB Ltd. Howard Road, St. Neots Cambridgeshire, PE19 8EU UK Tel: +44 (0)1480 475321 Fax: +44 (0)1480 217948 ABB Inc. 125 E. County Line Road Warminster, PA 18974 USA Tel: +1 215 674 6000 Fax: +1 215 674 7183

ABB Automation Products GmbH

Hoeseler Platz 2 42579 Heiligenhaus Germany Tel: +49 2056 12-5181 Fax: +49 2056 12-5081 The Company's policy is one of continuous product improvement and the right is reserved to modify the information contained herein without notice.

Printed in the Fed. Rep. of Germany (12.02)

© ABB 2002