



ABB Control Technologies

Recording and Control

The most complete picture of your process

ABB's Recorders and Controllers

Giving you a complete picture of your process

ScreenMaster, ControlMaster and Commander are the names behind a comprehensive range of recording and control instrumentation from ABB that meet the demanding requirements of a broad range of industries. The range includes process controllers, digital indicators, chart recorders and paperless recorders, all of which share the same high standards of reliability and flexibility and are capable of withstanding the harshest of process environments.

Something for every application

ABB's extensive range of data recorders and process controllers means there is an option for every application, whether complex or simple, large or small.

From the plant floor to the field, ABB's ScreenMaster range of paperless recorders represents the latest in electronic data recording and analysis. Whether for localised data display or plant-wide access to process information, ScreenMaster data recorders give you fast and easy access to detailed data on your process, supported by an extensive array of data security features that meet the most stringent requirements.

When it's time to review what you've recorded, ABB's DataManager Pro PC-based analysis software quickly gives you an in-depth picture of what's happening in your application.

For those who prefer a traditional paper record, there's also the proven Commander range of strip and circular chart recorders, which offer a host of advanced features including the ability to store data electronically.

The same philosophy of simplicity and efficiency is also at the heart of our ControlMaster range of universal process

controllers and indicators. Whether you're a plant or process manager, electrical engineer, process operator or maintenance engineer, the comprehensive portfolio of powerful features embedded in the ControlMaster range gives you everything you need. Choosing the right device for your application is also made simple, with a concise line of models with flexible I/O and functional capability.

Process protection and full functionality

All of ABB's recording and control instruments have a high degree of dust and water protection, many to NEMA 4X and IP66 as standard. Bright and clear displays mean process status can be seen at a glance. A high specification of I/O connections such as universal inputs and transmitter power supplies are provided within the standard instrument build.

Totalizers, math functions and logic equations are available on many instruments and are perfect for meeting the requirements of demanding applications. MODBUS RS485 and TCP communications facilities are available for linking instruments to SCADA and PLC systems. In addition, Ethernet communications provide easy remote supervision functionality and email notification of critical process events.

At a glance

Paperless recorders



SM500F
Field mountable
videographic recorder

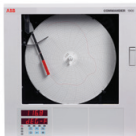


RVG200
Touchscreen paperless recorder

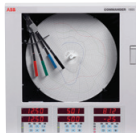


SM3000
Multi-point videographic recorder

Circular chart recorders



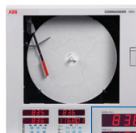
Commander 1900
Circular chart recorder



Commander 1900
Recorder/controller



Commander 1950
Pasteurizer recorder/controller



Commander 1960
Multi-recipe profile recorder/controller



C1300 advanced circular chart recorder

Process controllers and indicators



Commander 310
Universal process controller



Commander 160 Wall/Post mounted
Universal indicator



ControlMaster
CM10 Single loop controller



ControlMaster
CM15 process indicator



ControlMaster
CM30 single or dual loop controller



ControlMaster
CM50 single or dual loop controller

Strip chart recorders



Commander SR100B
Process recorder



Commander SR100A
Advanced process recorder

ABB ScreenMaster paperless recorders

ABB's ScreenMaster paperless recorders provide the reliable, cost effective and secure solution for paperless data recording and analysis

ABB's ScreenMaster paperless recorder family provides a solution for every recording application. Whether you want a field mountable device that can be installed anywhere, a multipoint device for a comprehensive overview of your process, or slick and easy operation using the latest touchscreen technology, ABB's ScreenMaster recorders offer a versatile, secure and proven alternative to traditional paper-based devices.



Features include:

- High specification 21 CFR Part 11 compliant data security
- High visibility process displays
- Remote access and operation via Ethernet
- Hosedown protection to IP66 and NEMA 4X
- Automated process data management
- Flexible recording capability including alarms, totalizers, math and batch recording
- AMS2750 compliant input accuracy

Powerful yet simple

Setting up and operating a ScreenMaster recorder is easy. A simple menu-based interface takes the hard work out of configuration and makes it easy to find and view your process data, with multiple display formats offering a wide choice of viewing options.

Suitable for even the most arduous environments

Protected to NEMA 4X and IP66 as standard, ScreenMaster recorders can be installed next to the process in even the wettest or grimmest conditions, giving you local access to your information at your fingertips.

Secure, precise, reliable recording

Flexible recording capability

A wide range of features give ScreenMaster recorders the flexibility to meet the requirements of almost any recording application.

Flow recording

Flow totalizers enable instantaneous flow rates to be totaled and recorded. An automatic reset capability enables reports of daily, weekly, monthly flow volumes to be generated and alarms to be raised if predefined flow limits for a given time period are exceeded.

Powerful maths

Mathematical functions such as averages and deviations can be calculated using ScreenMaster's math and logic option. Results of math calculations can be displayed, recorded and used to drive alarms and totalizers.

Batch recording

For batch processes, ScreenMaster's batch recording option allows data including batch numbers and product type

information to be recorded alongside process data. With ABB's DataManager Pro software, collected batch records can be rapidly displayed by searching for their batch number or batches with common attributes identified.

The highest levels of data protection

Every model in the ScreenMaster range incorporates the highest levels of protection against the accidental loss of valuable process data.

Multiple users can be configured, each with individual user name, password and access rights. A comprehensive audit log records configuration changes, calibration changes, system events and many other items key to data security. Where applicable, all entries are detailed with operator identification. Operators can securely annotate the chart with comments and signatures.

ScreenMaster's standard complement of security features mean that it is also fully compliant with the requirements of 21 CFR Part 11.



Ethernet communications

It is very simple to connect a ScreenMaster recorder to an existing plant network via Ethernet communications. Once connected, archived data and email facilities become instantly available. Using a modem router or GSM technology, the ScreenMaster's labour-saving Ethernet features can still be used even when a recorder is in a remote location.

Remote process monitoring

Remote access to a ScreenMaster is possible via the use of any standard web browser. Detailed real-time information is available for current alarm and totalizer conditions, memory card status and many other key process details. For an on-line demonstration of this feature enter <http://217.46.239.73> in to the address bar of your web browser.

Email notification

Keep up to date with the latest process alarms or critical process events with email notifications which can be automatically sent to your PC or smartphone. The same technology can also be used to provide routine performance updates, giving you even greater power over your process.

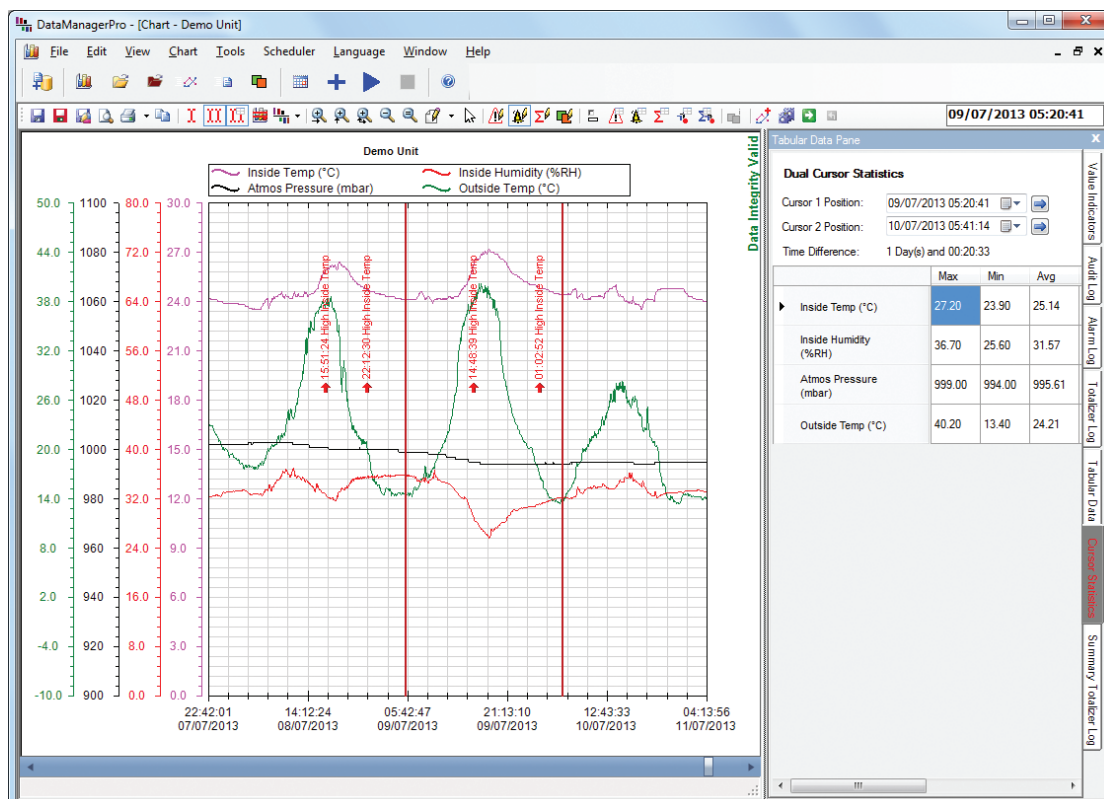
Real-time data communication

Via the use of MODBUS TCP or RTU protocol, a ScreenMaster recorder can communicate the process values being monitored to a DCS, SCADA, PLC or other similar system. Alternatively, data values can be communicated to a ScreenMaster for display to the operator and secure logging of the data.

DataManager Pro

ABB's DataManager Pro advanced data review software opens up a raft of new possibilities for interrogating and presenting recorded data. The software creates a database of recorded data providing secure long-term storage and enabling instant access to data regardless of when or on which ScreenMaster it was recorded.

Via Ethernet communications, DataManager Pro can be integrated with any number of ScreenMaster recorders to create a fully automatic data gathering and storage system. Data is automatically collected from the networked recorders and made available for review.



View
DataManager
Pro videos



ABB Paperless recorders

SM500F

Field-mountable paperless recorder

The SM500F is the world's first field-mountable videographic data recorder. Featuring seven process inputs, twelve recording channels and available with wall, panel and pipe mounting options, it provides a truly simple recording solution that can be used anywhere, anyhow and by anyone. Its fully sealed IP66 and NEMA 4X enclosure means it is ideal for use in even the most hostile environments, including hosedown and dusty applications.

View
SM500F video



RVG200

Touchscreen paperless recorder

The RVG200 recorder takes the established operating and security benefits of the ScreenMaster range one step further. Features include touchscreen 'swipe' operation, front and rear USB ports for connecting peripheral devices, including a barcode scanner and keyboard, and Ethernet and RS485 communications.

Up to 24 process signals can be connected to the RVG200's analog inputs or transferred to it via digital communications.

View
RVG200 video



SM3000

Multi-point paperless recorder

Using the SM3000, up to 36 channels can be recorded, with data able to be arranged in a variety of views to provide users with a tailored view of their process. Six process groups are provided, allowing channels to be grouped together and individual displays created for different processes.

Process data can be easily viewed on the SM3000's large 31cm (12.1in) display in a wide variety of formats, including a circular chart and a combined overview format showing all six process groups.



ABB ControlMaster universal process controllers

Control your process at a higher level

Whether you're a plant or process manager, electrical engineer, process operator or maintenance engineer, the future of process control instrumentation starts here. ABB's new ControlMaster range elevates process monitoring and control to an altogether higher level.

ABB has used its experience in controllers and indicators to create a new generation of process control instruments that are more intuitive, easier to operate and significantly more powerful in use.

ControlMaster

A line-up of four instruments with the functionality and capability you need to meet the challenges of an information hungry process control industry.

From ABB's legacy in controllers and indicators, the new ControlMaster range of distinctive, accomplished and innovative instruments not only focuses on each model being easier and more powerful in use, but with such a concise number of function-rich units, it's now much easier to choose the right ControlMaster for your process application.

Innovative, easy to use HMI

Each ControlMaster has an innovative HMI at the heart of its operation, providing a common link with other instrumentation products from ABB. So, if you know one, you know them all. Operation is so easy that you will be impressed by the efficiency of it all.



ABB ControlMaster universal process controllers

Advanced controls and functionality

On each of the four ControlMaster instruments, higher levels of functionality are right at your fingertips. Features include math, totalization and a frequency input, logic, gain-scheduling, split output, valve control and real time alarms.

pPI predictive control enables processes with long dead times to be easily controlled. Simple configuration needs only three parameters - proportional band, integral time and dead time. Adaptive control means automatic adjustment of control response to correct changing process dynamics. Valuable where processes have varying or uncontrolled types of load, it provides continuous tuning for optimum control efficiency 24/7. Dual loop control independently manages two separate processes. The loops operate entirely independently while ControlMaster's flexibility and functionality provides interlock and interaction between both if required. Processes can be displayed simultaneously on one screen without compromising data.

Communications protocols

Ethernet communications provides high levels of connectivity. Remote process monitoring is made easy via the integrated web server. A ControlMaster can send emails upon alarm conditions or critical process status, providing instant notification to a plant supervisor. Modbus communications (TCP or RTU) enable rapid connection to PLCs and control systems. Modbus also provides simple, fast connection of multiple ControlMasters to a ScreenMaster recorder to create a multipoint control and data logging system.

Customizable full color TFT display

The ControlMaster range enables clear, comprehensive process status and history trending. Information messages and configuration menus are displayed in full text, unabbreviated or scrolled as on other commonly used process control display technologies. Custom set-up is fast and uses pre-defined display templates, as well as template customization with unique display values and colors.

Scalable I/O and functionality

I/O, functionality and template availability is easily expanded with additional plug-and-play input models and function keys, making a single ControlMaster unit fully scalable from basic through to complex control applications. Users can now standardize on a single product so operators have the familiarity of a single user interface regardless of application requirements.

Historical trending

ControlMaster features short-term trending capability, providing invaluable information during commissioning or for the history of unattended processes.

Diagnostics

To quickly alert an operator to important process information, ControlMaster's diagnostic functions clearly display messages detailing fault conditions, abnormal process status and maintenance requirements. At any time the operator can also switch to an alarm and diagnostic status display to gain an overview of any active messages.

Template based configuration

ControlMaster configuration is vastly simplified by using application templates. Selecting the template best suited to your process requirements automatically configures I/O and control functionality while display templates are selected automatically.



Commander circular chart recorders

The tried and tested solution for process recording

ABB's Commander circular chart recorders provide a tried and tested solution for a host of industries such as water and waste water, food, chemical and pharmaceutical and heat treatment.

COMMANDER 1900

Circular chart recorder

The COMMANDER 1900 is a fully programmable circular chart recorder for up to four process signals.



Straightforward operator controls and robust construction make it suitable for a number of industrial environments. Advanced functionality is complemented by a powerful range of options that give it the flexibility to match your application needs.

NEMA 4X/IP66 protection means that the recorder will thrive in even the harshest industrial environments.

– Status at a glance

High visibility, six-digit displays provide a clear indication of up to four process values simultaneously and active alarms are signalled below the main display.

- The clearly labelled tactile keypad gives direct access for operator adjustments and configuration programming without the door being opened. A password protected system prevents unauthorized access to configuration menus.

– Recording versatility

The chart is easy to set up. Pen ranges are individually set to give the best resolution for each signal and the time per revolution can be selected from between one hour and thirty-two days. A true time event pen facility allows one pen to be set up as a three-position event marker on the same time line as pen one.

– Math and logic

User configurable math functions, mass flow calculations, totalizers and RH tables are all fully supported. The logic capability allows interlocking and the integration of discrete and continuous functions to solve a wide range of process problems.

– Timers and clock

Two real-time events triggered by the recorder's clock can be configured to operate relays, start/stop the chart or enable other actions within the recorder.

Commander circular chart recorders

Built to meet your needs

Modular architecture gives you a wide choice of hardware configuration with up to five input/output modules that can be added to the basic instrument.

The standard I/O module supplied with every pen comes complete with a fully isolated analog input, a relay output, transmitter power supply, isolated analog retransmission and two digital inputs. Further I/O capability is provided by a range of plug-in modules:

- Analog input and relay – for use with math function
- Four relays – channel alarm outputs
- Eight digital inputs – linked using logic equations
- Eight digital outputs – TTL level alarm outputs
- MODBUS RS 485 communications – interfaces with PCs and PLCs

The COMMANDER 1900 can be quickly upgraded to meet your changing process requirements.

- Additional recording channels, math capability or input and output can be retro-fitted on site using plug-in cards and easily-fitted pen arms.

– MODBUS RS485 Communications

Communication with PCs or PLCs is achieved via the RS485 serial communications link, enabling the COMMANDER 1900 to serve as the front end of plant-wide data acquisition systems. Using the MODBUS RTU protocol, all process inputs and other variables can be continuously read by a host PC running on a wide variety of standard SCADA packages.

- The unit can be wall/pipe or panel mounted anywhere in the plant and, with its rating of NEMA 4X/IP66, it can be subjected to rigorous cleaning with complete confidence.

COMMANDER 1900 Recorder/Controller

A fully programmable, circular chart recorder with integral capability for single or dual loop PID control. Analog, heat/cool, time proportioning or on/off control can all be selected as standard. Motorized valve operation, with or without feedback, is available as an option. The instrument offers seamless integration of loop functionality to solve process problems, eliminating the need for auxiliary devices.

Specific applications can be fully met by using the full range of options available, including one to four-pen recording; flow totalization; process alarms; ramp/soak profile - giving outstanding flexibility in just one instrument.



Commander circular chart recorders

COMMANDER 1950

Pasteurizer recorder / controller

Three separate models give outstanding coverage of pasteurizer applications. From a simple recording device to the top-of-the-range hot or cold product controller / recorder, all versions are fitted with a four-position, true-time event pen which indicates forward flow, divert, CIP and secondary divert.

- The COMMANDER 1951 records the hot product temperature and either divert set point or cold product temperature.
- The COMMANDER 1952 is a recorder/controller. It controls hot water and records hot product and either divert set point or cold product temperature.
- The COMMANDER 1953 is the top-of-the-range recorder/controller, combining all the capabilities of the C1952 with cold product temperature control from the cold product temperature probe.



COMMANDER 1960

Multi-recipe profile recorder/controller

For applications where advanced ramp/soak profiling control and the recording of multiple process parameters is all-important. It is designed as a totally self-contained unit with 20 profiles/99 segments and features such as guaranteed ramp/soak, a dedicated operator display and time events to assign relays/outputs to individual or multiple segments.



C1300 circular chart recorder

Adding a new dimension to paper chart recording

Building on ABB's successful COMMANDER recorder range, the C1300 provides a powerful and flexible data recorder for many industrial applications, but particularly water and waste water treatment.

ABB's C1300 advanced circular chart recorder combines established paper chart recording technology with the latest advances in electronic data collection, giving you more power than ever before to use your recorded data to its full potential.

Eliminate complexity

With the C1300, the time and complexity needed for setting up and operating traditional recorders is greatly reduced. Push button controls and commands displayed in full English on the unit's LCD panels help reduce set-up time and eliminate the need for specialist knowledge.

A configuration back-up port enables the C1300 to be configured simply by plugging it into a PC. Using this facility, configuration files can be copied between different recorders - ideal wherever multiple units are installed.

For totalization applications, the C1300 can also automatically program itself to calculate relationships between different volumetric and instantaneous flow values. The totalizer can also be programmed to reset at specific times to automatically gather daily, weekly or monthly totals.

See things more clearly

Collecting and reviewing data is also very easy. LCD panels display multi-digit totalization figures together with channel tag and engineering unit values.

Get the most from your data

The C1300 lets you do more with your data. By incorporating data logging technology from our ScreenMaster series videographic recorder range, the C1300 allows data to be viewed exactly when you want it. Totalizer data can be automatically collected on a daily, weekly or monthly basis and can be viewed on the unit's LCD display panels.

Flexibility to meet your needs

As your plant needs grow, so can the C1300. Upgrading the unit is very easy - plug-in modules allow extra recording channels, relay outputs, math capabilities and totalizers to be added without having to remove the unit.

Install anywhere

Wherever it is installed, the C1300 is the ideal choice.

Full NEMA 4X / IP66 protection makes it suitable for use in the wettest or dustiest locations. The unit's backlit, transreflective display also presents the data clearly in any lighting conditions. Wiring up is simple, with detachable terminal blocks enabling easy connection of input and output wiring.



Commander field-mountable controller/indicators

The fit anywhere universal process controller/indicators

A highly versatile universal single-loop controller in a robust NEMA 4X/IP66 field-mounting enclosure, the wallpipe-mounted Commander 310 universal process controller eliminates the need to fit expensive panels or enclosures and can be mounted right next to your process – no matter how harsh the environment.

The instrument has extensive control and I/O capabilities fitted as standard, allowing it to be configured rapidly for almost any application.

– PID control

The isolated analog output provides the standard control output to I/P converters, etc. Alternatively, built-in relays can be used to generate a time-proportioning control output.

– Solid state relay (SSR)

A 12V time proportioning logic output can be used to drive solid-state relays (SSRs).

– Valve position

Twin relays and a valve position input are provided for closed-loop control of a motorized valve. Boundless control (without position feedback) is also available in the standard unit.

– Heat/cool

Heat/cool control strategies may be implemented on the standard unit using a combination of the analog outputs and relays.

– Ramp/soak set point profiles

The standard ramp/soak facility provides 30 segments, freely assignable amongst nine programs. A segment event function enables relays to be switched on or off at predetermined points within the program.



Field-mounted indicators/controllers

Versatility, choice, precision

A choice of wall and panel-mounted indicators for process and electrical measurements

COMMANDER 160

Wall/post-mounted universal indicator

Housed in a NEMA 4X/IP66, weatherproof enclosure, the COMMANDER 160 is a robust and adaptable indicator for temperature, pressure, flow, level and other process variables under the harshest of process conditions. It can be mounted locally to the measurement point.

Datum L160 Wall/post-mounted level indicator

The DATUM L160 wall-mounted level indicator is based on the Commander 160 universal indicator and has the same basic functionality. Additional features of the L160 include level-specific functions such as built-in SG correction with the ability to display either actual level or corrected volume. Additionally, a 20-point custom linearizer also makes the L160 ideal for non-linear tanks and vessels.



Strip chart recorders

ABB's SR100 strip chart recorder meets any process needs. The SR100 is available in either an advanced or basic version, both with in-built flexibility to match any process application.

COMMANDER SR100B **100mm process recorder**

The SR100B provides simple, reliable and cost effective recording of up to six process variables for everyday use but comes with features normally only found in top-of-the-range models.

A clear view of process status is provided by the LCD display. Chart annotation and recent recording can be quickly examined using the 'Easy-View' facility. With ease-of-use firmly in mind, the SR100 can be supplied preconfigured for the signal types and ranges you specify when ordering.

COMMANDER SR100A **100mm advanced process recorder**

The definitive recorder for paper recording, the SR100A combines all the attributes of the SR100B plus exciting features that help solve the process problems of the real world. These include a range of advanced processing capabilities, such as flow totalization, math blocks, logic equations, configurable displays and full message printing, all of which can be configured via the front panel or PC configuration software.



ScreenMaster product selection guide

Standard ✓

Optional ●

Model	SM500F	RVG200	SM3000
General features			
Display	120mm (4.7 in) TFT Mono STN or 140mm (5.7 in) TFT	140mm (5.7 in) TFT	310mm (12.1 in) TFT
Operator interface	Tactile keys	Touchscreen	Tactile keys
Internal memory	64MB Flash	256MB Standard 2GB Optional	8MB Flash
Memory card	SD	SD	Compact Flash
Number of software recording channels	12	24	36
Process groups	2	6	6
USB		✓	
Process inputs			
Universal analog / Digital inputs	1 to 7	6, 12, 18 or 24	Up to 36
2 wire transmitter power supply	2 loops optional	12 optional	2 loops standard 8 optional
Additional I/O			
Relays	1 standard, 2 optional	1 standard, 24 optional	24 optional
Digital inputs		10 optional	24 optional
Digital outputs		12 optional	24 optional
Analog outputs		12 optional	8 optional
MODBUS RS485	●	●	
Ethernet	●	✓	✓
Advanced processing			
Alarms	48 (4 per channel)	96 (4 per channel)	144 (4 per channel)
Totalizers	24 optional (2 per channel)	96 optional (2 per channel)	72 (2 per channel)
Advanced math / Logic	●	●	●
21 CFR Part 11 compliant security	✓	✓	✓
Batch recording	●	●	●
Physical attributes			
IP Rating	NEMA 4X & IP66	NEMA 4X & IP66	NEMA 4X & IP66
Panel cut out	138mm x 138mm (5.43 in x 5.43 in)	138mm x 138mm (5.43 in x 5.43 in)	281mm x 281mm (11.06 in x 11.06 in)
Power supply	85-265V ac or 10-36V dc	Combined 100-to 240V ac and 24V dc	85-265V ac or 24V dc
Overall size	144mm x 144mm x 79mm (5.67 in x 5.67 in x 3.1 in)	144mm x 144mm x 175mm (5.67 in x 5.67 in x 6.9 in)	288mm x 288mm x 245mm (11.34 in x 11.34 in x 10 in)
Mounting options	Panel, Wall or Pipe	Panel	Panel

ControlMaster product selection guide

Standard ✓

Optional ●

Model	CM10	CM15	CM30	CM50
General features				
Size	1/8 DIN (48 x 96mm)	1/8 DIN (Horizontal) (96 x 48mm)	¼ DIN (96 x 96mm)	3 x 6 DIN (76 x 144mm)
Display	5.6cm (2.2in) Color TFT	5.6cm (2.2in) Color TFT	8.9cm (3.5in) Color TFT	8.9cm (3.5in) Color TFT
Dust/Water protection	IP66 & NEMA 4 X	IP66 & NEMA 4 X	IP66 & NEMA 4 X	IP66 & NEMA 4 X
Supply voltage	85-265V a.c. std (24V d.c. opt.)	85-265V a.c. std (24V d.c. opt.)	85-265V a.c. std (24V d.c. opt.)	85-265V a.c. std (24V d.c. opt.)
Control capabilities				
PID (analog/time proportioning)	✓		✓	✓
Motorized valve	✓		✓	✓
Split output (heat cool)	✓		✓	✓
Adaptive control			●	●
pPI (predictive)			●	●
Gain scheduling	●		●	●
Autotune	✓		✓	✓
Templates				
Single loop	✓		✓	✓
Single loop with feed forward			●	●
Auto/manual station	●		●	●
Analog backup station	●		●	●
Manual loader	●		●	●
Cascade			●	●
Cascade with feed forward			●	●
Ratio controller			●	●
Ratio station			●	●
Dual loop			●	●
Indicator	●	✓	●	●
Dual indicator	●	●	●	●
Inputs				
Universal (TC, RTD, Resistance, mA, Volt, mV & Frequency)	1 std	1 std	1 std (1 opt)	1 std (1 opt)
Process (TC, mA, Volts, mV & Digital)	1 std	1 std	1 std (1 opt)	1 std (1 opt)
Digital	2 opt	2 opt	6 opt	2 std (4 opt)
Transmitter power supply	2 std	2 std	2 std (2 opt)	2 std (2 opt)

ControlMaster product selection guide (continued)

Standard ✓

Optional ●

Model	CM10	CM15	CM30	CM50
Outputs				
Analog / logic	1 std	1 std	1 std	1 std
Analog	1 opt	1 opt	1 opt	1 opt
Relay	1 std (3 opt)	1 std (3 opt)	1 std (3 opt)	2 std (2 opt)
Digital	2 opt	2 opt	6 opt	2 std (4 opt)
Advanced features				
Math	●	●	●	●
Logic	●	●	●	●
Custom linearizers	●	●	●	●
Delay timers	●	●	●	●
Real-time alarms	●	●	●	●
Totalization		✓	●	●
Historical trending			●	●
Communications				
Ethernet	●	●	●	●
RS485 MODBUS	●	●	●	●

Circular recorders product selection guide

Standard ✓

Optional ●

*** not available on 1901

Model	C1300	C1900	C1950	C1960
Recording function				
Traces	1,2,3 or 4	1,2,3 or 4	1,2 or 3	1,2 or 3
Chart type	Circular	Circular	Circular	Circular
Event pen function	✓	✓	✓	✓
Truetime event	✓	●	✓	●
Chart speed	1hr-32 days	1hr-32 days	1hr-32 days	1hr-32 days
Process connections				
Universal inputs	✓	✓	✓	✓
Transmitter power supply	1 std per channel	1std per channel***	1 std per channel	1 std per channel
Alarm relays	1 std per channel, 8 opt	1 std per channel, 8 opt***	1 std per channel, 8 opt	1 std per channel, 8 opt
Digital I/O	2 std per channel, 24 opt	2 std per channel, 24 opt***	2 std per channel, 24 opt***	2 std per channel, 24 opt***
Analog outputs	1 std per channel	1std per channel***	1 std per channel	1 std per channel
MODBUS RS 485	●	***	●	●
Advanced processing				
Totalizers	●	●		
Maths block	●	●		
Logic equations	8		8	8
	N/A	Up to 2 opt	Up to 2 opt	1 std, 1 opt
Ramp/Soak profile	N/A	●		20 profiles, 99 segments
General				
Size	382 x 386mm (15.04 x 15.23in)	382 x 386mm (15.04 x 15.23in)	382 x 386mm (15.04 x 15.23in)	382 x 386mm (15.04 x 15.23in)
Depth	101mm (3.98in)	101mm (3.98in)	101mm (3.98in)	101mm (3.98in)
Display	128x 64 Dot Matrix	6 Digit LED	6 Digit LED	6 Digit LED
IP rating	NEMA 3/IP54, NEMA 4X/IP66 opt	NEMA 4X/IP66	NEMA 4X/IP66	NEMA 4X/IP66
Mounting	Panel/wall/pipe	Panel/wall/pipe	Panel/wall/pipe	Panel/wall/pipe
Supply	85-265v ac	85-265v ac	85-265v ac	85-265v ac

Strip chart recorders product selection guide

Standard ✓

Optional ●

Model	SR100B	SR100A
Recording function		
Traces	3 or 6	1,2,3,4,5 or 6
Chart type	100mm strip roll or fanfold	100mm strip roll or fanfold
Text printing	✓ limited	✓
Chart speed	0-1500mm/hr	0-1500mm/hr
Cue and review		✓
Programmable scale-printing	✓	✓
Chart zoning		
Value printing		✓
Event pen function		✓
Process connections		
Universal inputs	✓	✓
Transmitter power supply	3 std	3 std
Alarm relays	6 opt	12 opt
Digital I/O	1 std	1 std, 12 opt
Analog outputs		6 opt
MODBUS RS 485		●
Advanced processing		
Totalizers		✓
Maths block		✓
Logic equations		✓
PCMCIA memory card port		●
PC configuration		
	✓	✓
General		
Size	144 x 144 x 230mm (5.67 x 5.67 x 9.00in)	144 x 144 x 230mm (5.67 x 5.67 x 9.00in)
Cut out	138 x 138 (5.43 x 5.43in)	138 x 138 (5.43 x 5.43in)
Weight	3.3kg (7.25lbs)	3.3kg (7.25lbs)
IP rating	NEMA 3/IP65	NEMA 3/IP65
Mounting	Panel/portable	Panel/portable
Supply	85-265v ac	85-265v ac

Field mounted indicators product selection guide

Standard ✓

Optional ●

Model	C160	L160
Functions		
On/off control	✓	✓
Totalizer	✓	
Max/Min/Average	✓	✓
Custom Linearizer	✓	✓
SG Correction		✓
Inputs		
Universal	✓	
Fixed		✓
Digital	✓	✓
TX power supply	✓	✓
Outputs		
Alarm relays	2 std	2 std, 1 opt
Logic	✓	✓
Retransmission	✓	✓
Serial comms		
Modbus RTU	●	●
PC configuration		
	✓	✓
General		
Size	Wall mount 160 x 250mm (6.3 x 9.84in)	Wall mount 160 x 250mm (6.3 x 9.84in)
Depth	68mm (2.68in)	68mm (2.68in)
Display	6 Digit LED	6 Digit LED
Dust/Water protection	NEMA 4X/IP66	NEMA 4X/IP66
Supply voltage option	85-265v ac 24v dc	85-265v ac 24v dc

Field mount controller selection guide

Standard ✓

Optional ●

Model	C310
Functions	
On/off control	✓
Time proportioning	✓
Analog PID	✓
Boundless valve control	✓
Motorized valve with feedback	✓
Control capabilities	
Single-loop	✓
Heat/Cool	✓
Remote setpoint	✓
Auto/Manual station	●
Indicator	✓
Ramp/Soak	9 prog / 3 seg
Autotune	✓
Inputs	
mV V mA THC RTD	3 std
Digital	2 std
Tx power supply	✓
Outputs	
Analog control	✓
Relay control	✓
Logic control	✓
Retransmission	✓
Relays	3 std
Advanced features	
Alarm logic	✓
Serial comms	
Modbus RTU	●
General	
Size	Wall mount - 160 x 250mm (6.3 x 9.84in)
Depth	68mm (2.68in)
Display	6 Digit LED x2 bargraph
Dust/Water	NEMA 4X / IP66
Protection	115, 230v ac ± 15%

Contact us

To find your local ABB contact visit:

www.abb.com/contacts

For more product information visit:

www.abb.com/recorders

Notes:

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