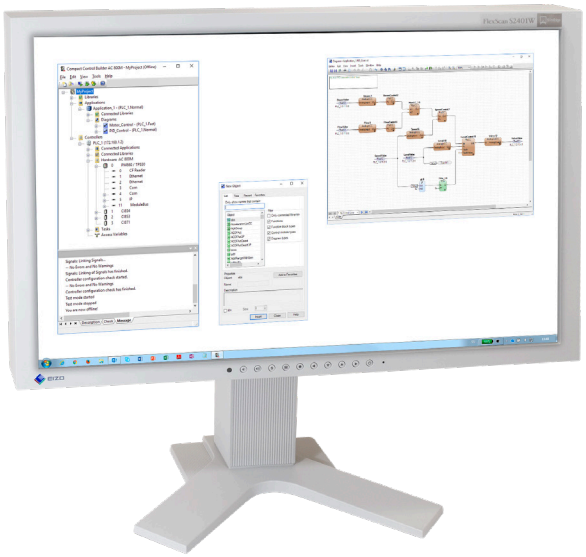
Compact Control Builder

When engineering efficency matters



Compact Control Builder

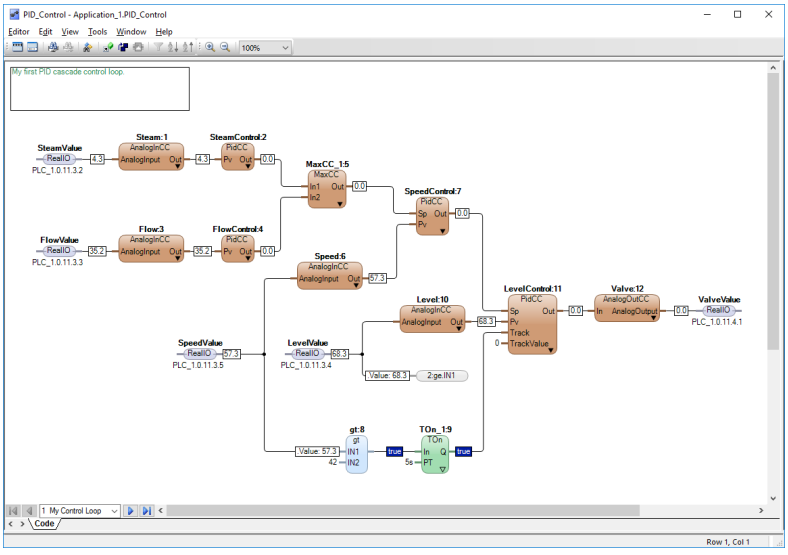
The Compact Control Builder, is a powerful tool based on the windows environment for creating control solutions and reusable control libraries for the AC 800M Process PLC. From binary logic to advanced regulatory control, from discrete process signals to high-level process objects.

It provides freedom of choice, allowing you to select the best programming language for the task, supporting six different programming "languages", which are[1]: Instruction List, Structured Text, Function Block Diagram, Sequential Function Chart, Ladder Diagram, and Control Modules, the latter being ABB's own contribution to higher application engineering efficiency and ease of use. Furthermore, feel free to mix these "languages"as you create your code by combining Structured Text, Function Blocks, Functions, Sequential Function Charts and ABB's Control Modules into the same block-based editor.

The Compact Control Builder 6.2.0-0 supports the following operation systems:
- Windows 11 Pro and Windows 10 Pro, 64-bit
- Windows 10 LTCS 2021 and LTSC 2019 Enterprise & IOT versions
- Windows Server 2022 and 2019 Standard/Datacenter

Control Diagram Editor
Control Diagram Editor is the next generation editor which helps to increase engineering efficiency, reduce engineering mistakes, and enable the creation of logic which is easy to read and maintain.
Control modules in combination with Control Diagram Editor supports forward and feedback signals in one and the same variable. The result is powerful and easy to read control logic.

Control Diagram Editor



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Fotnote 1:
According to the IEC 61131-3 standard.

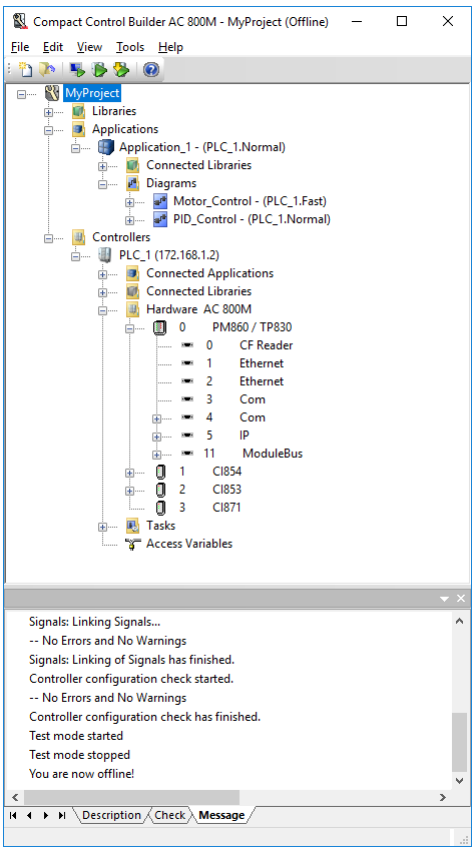
Features and Benefits

- Promotes re-use of code by means of user-defined libraries of data- and function-block types
- Intuitive, graphical navigation by a Windows Explorer-like Project Explorer
- Libraries of ready-for-use functions for efficient programming
- Supports all the five IEC 61131-3 programming languages in a single integrated environment
- Supplements the five standard languages with Control Modules for high-level configuration of control applications graphically
- Supports multitasking, multicontroller and multi-user application development
- Offers powerful simulation and on-line facilities for testing and troubleshooting
- Alarm and Event handling
- Sequence of events
- Extensive on-line help
- Supports ABB S800 IO soft marshalling
- Auto IO allocation through signals

Hierarchical Object Orientation

AC 800M application software is object-oriented in a structured way, which means that changes made to an object type or instance thereof only affects that type (and all of its instances) or that instance only.

Compact Control Builder



For this reason, subsequent bug fixes, updates, improvements, expansions etc. can be performed quickly and easily. It also means that the different program sections can be assigned their own priorities and cycle times with a large measure of freedom.

All solutions run in a common language runtime environment (CLR) in the controller, making it possible to access information between solutions in different languages seamlessly. So each contributing project engineer can develop solutions in the preferred language for each task without having to consider which languages related modules are written in.

For Both Small and Large Projects

Compact Control Builder is intended for both small and large projects by not only efficiently supporting the development of “flat” and “linear” applications but also structured ones, solution libraries, multi-controller applications, multi-user applications, and multi-engineer projects.

To safeguard investments made in applications development, the resulting user software can be exported to and imported from other control systems featuring the AC 800M controller, e.g. ABB 800xA systems.

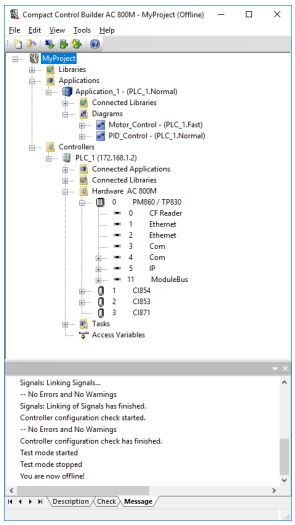
Users can create their own data types and functions and these can be re-used over and over again to increase engineering efficiency and quality. A Windows Explorer-like Project Explorer offers graphical navigation through the entire project, easy configuration of the system hardware and rapid creation/identification of program modules to be developed/edited. On-line, context-sensitive help speeds up data- and program-code entry.

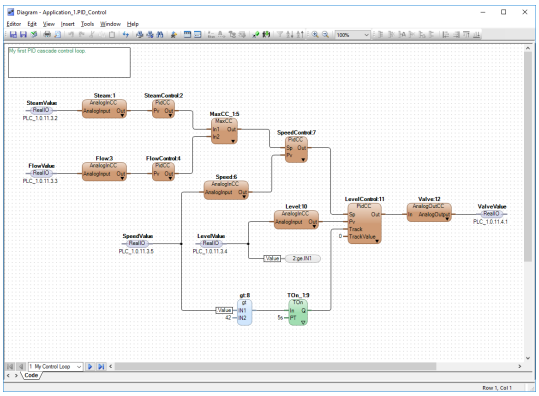
A search engine makes it easy to find anything of interest, from entire program modules, to tiny symbols, including deployment locations of parameters and variables.

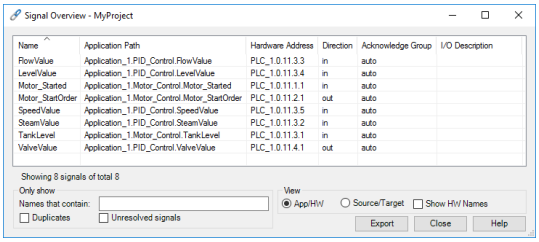
Programs can be developed off line and execution be simulated without having the controller hardware connected.

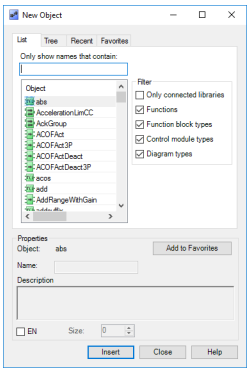
The entire project, including hardware settings, functionality libraries, and applications can be translated to MS Word™ documents for printing or further editing/reformatting.

Compact Control Builder dialogue examples









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AC 800M application software is object-oriented in a structured way, which means that changes made to an object type or instance thereof only affects that type (and all of its instances) or that instance only.

When done, the application can either be stored on a non-volatile flash memory card and the card can simply be plugged into the target controller for easy commissioning. Or it can be downloaded to battery backed-up RAM in the Process PLC for applications where frequent changes/upgrades are envisaged in the future.

The execution of the application can be reviewed and optimized off-line or during the download to the controller, to avoid conflicts between different tasks.

A number of on-line facilities for testing, program modification and commissioning are offered, and the status of I/O signals, variables, etc. can easily be inspected in real time. Faulty hardware is marked red, manually overridden inputs and outputs are marked yellow.

Data Types, Variables and Functions

Compact Control Builder supports data types such as Booleans, integers, floating-point numbers, strings, time, date, etc. All in accordance with the IEC 61131-3 standard. These basic data types can be combined into new structured data types, which in turn may contain other structured data types. Variable identifiers may be up to 32 characters long.

The library of functions available is probably the industry's largest, containing everything from simple AND and OR gates to ready-for-use self-tuning – adaptive – PID controllers. Not to forget unique elements for direct interfacing with variable-speed drives and for easy handling of all the software-related redundancy features the AC 800M process PLC offers.

Basic functions can be combined into new, user -defined functions and these be re-used over and over again, currently or in the future.

AC 800M
scalable and flexible process PLC with high availability

Challenging business goals require a flexible and powerful process PLC. Working individually or in combination, AC 800M helps you control a broad spectrum of industrial processing applications thanks to its high flexibility, scalability, and availability.

AC 800M is a modular process PLC with a rich set of communication functions as well as full redundancy and support for a large range of I/O systems configured with Compact Control Builder software, AC 800M is open to participate in any kind of control solution. Re-use of code and libraries of ready-to-use functions also promotes an efficient configuration and setup.

The AC800M family is rail mounted based and built for the most harsh environments as well as the most demanding applications.

Flexible, cost-effective control solutions that are easy to implement and change are the hallmark of Compact Product Suite. Like other products in this range, the AC 800M Process PLC is built with openness in mind. Individually or in combination with other products on the market, it creates reliable control solutions that are easy to afford and manage. Its rich set of functions help improve production control, maximize availability and minimize maintenance.

Compact Control bulder now **Support PROFINET APL devices according to PA Profile 4.02 MU1**. Based on open IEC and IEEE standards, Ethernet-APL technology brings the proven benefits and economies of scale of high-speed Ethernet communications out into the field and beyond, simplifying direct all projects.

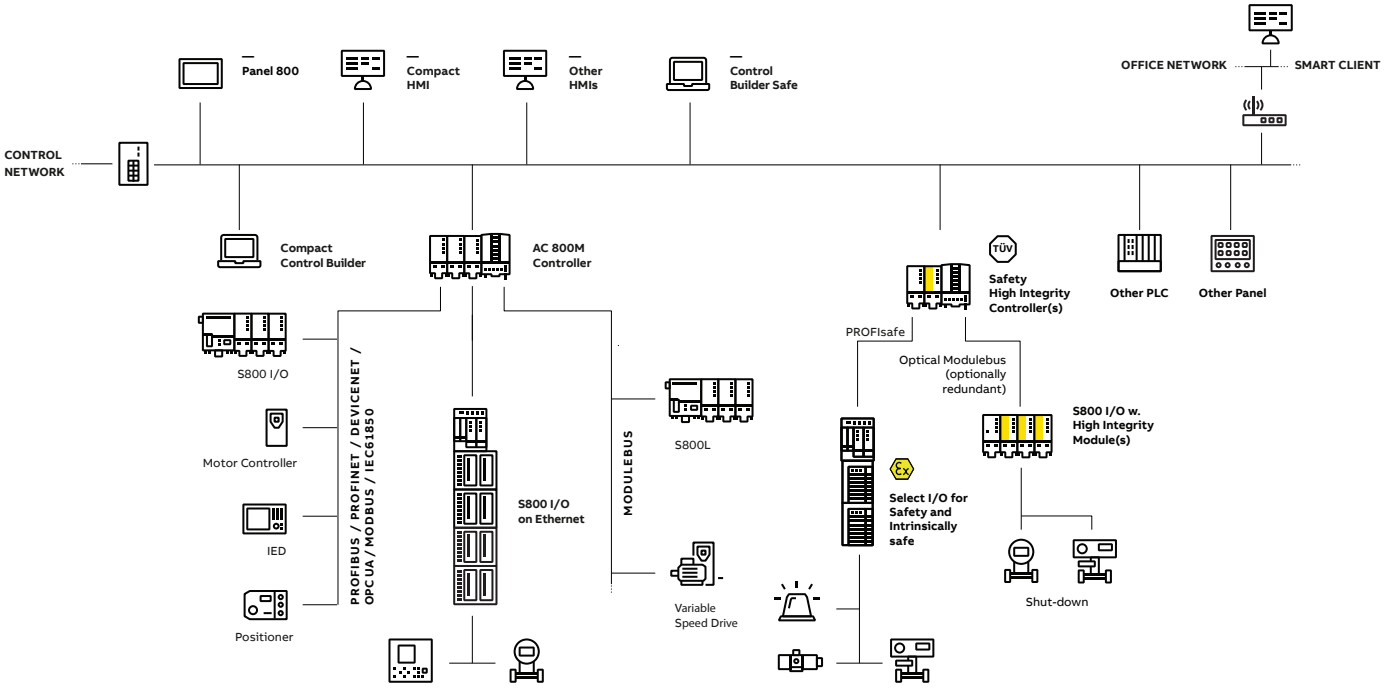
Features and benefits

- Full modularitay and flexibility
- Scalable design for easy expansion
- Fault tolerance gives maximum availability.
- Powerful control solutions and reusable libraries
- Industrial controller made for demanding applications and harsh environments
- Supports SIL3 hardware
- Safety controllers available
- Ethernet-APL support

AC 800M controller

AC 800M PM891 controller

AC 800M HI w SM812 module



Full modularity and flexibility
Connectivity and expansion options make AC 800M exceptionally open and scalable; easy to connect and easy to adapt according to your changing control needs.

The CPU modules vary in terms of processing power, memory size, and redundancy support from low-cost, medium power to high-power, full redundancy. All controllers support up to 12 communication interfaces, these can be mixed according to your application needs allowing to integrate I/O systems and access a wide range of field devices.

These communication options enable the S800 I/O modules to be installed locally, remotely or as part of an Ethernet I/O network. With both single and redundant options, virtually any project requirement can be met.

Evenmore, AC800M is exceptionally flexibile when it comes to host control applications changes, wether code exapnsions, modifications or removals all becomes easy and with minimal risks thanks to its internal mapping functionality.

Scalable design for easy expansion
Scalability is a key attribute of the AC 800M Process PLC. Its modular design makes it just as effective for small systems as for large, integrated automation applications. For a simple Compact Product Suite application, a basic controller station may consist of a process PLC, a power supply module and local I/O modules. To scale up, simply add the CPU, I/O, communication module and power-supply options you need. The AC 800M family makes it easy to match controller configuration with control need.

Fault tolerance gives maximum availability.
Robust design and redundancy options in all critical areas of the controller and its components eliminates single-point failures and secures maximum availability.

Powerful control solutions and reusable libraries
AC 800M Process PLC is configured using the Compact Control Builder, a powerful software tool for creating logic, together they provide exceptional flexibility, to host control applications changes, wether code expansions, modifications or removals. Its powerful libraries are easily extended, making it the perfect tool for automation solution suppliers where standardization and reuse are the keys to cost-effective solutions.

Compact Control Builder supports flash memory cards for loading applications direct into the target controller. Six programming languages are available; simply choose the one most suitable for your application.

S800 I/O open process I/O system

S800 I/O is a open comprehensive, distributed, process I/O system that communicates with controllers by direct connection or over industry-standard field buses. Thanks to its open connectivity it fits a wide range of process controllers from ABB and others. Even more it carries the name ABB, the world leader in process automation.

By permitting installation in the field, close to sensors and actuators, S800 I/O reduces the installation cost by reducing the cost of cabling. And thanks to benefits such as:

Features and Benefits

- Comprehensive: S800 I/O offers costeffective solutions to practically all needs for field-device interfacing, including basic analog and digital I/O, as well as intrinsic-safety and high-integrity solutions.
- Flexible: S800 I/O is highly modular and offers a number of ways in which the modules can be interconnected and installed. Consequently, S800 I/O networks can be built in a near-infinite number of ways, from highly centralized to highly distributed.
- Compatible: Supports industry-standard field bus PROFIBUS DP which makes S800 I/O compatible also with non-ABB controllers.
- S800 I/O supports also ABB's Advant Fieldbus 100.
- Easy to configure: S800 I/O devices are configured transparently as part of their parent controllers, like local I/O. No additional knowledge or skills are required.
- Reliable: Comprehensive diagnostics, hot swapping of modules and redundancy solutions are available, ensuring that both the I/O system and the production plant will stay up.

Comprehensive and flexible

Comprehensive
Cost-effectiveness solutions are what S800 I/O has to offer, making for savings on hardware, cabling, installation and maintenance, Including a wide range of different modules to practically cover all needs of field device interfacing, from simple analog and digital I/Os to specific industrial requirements as intrinsic safety, high integrity and sequence of events are made available.

There are inputs and outputs for industry-standard d.c. and a.c. signal levels and devices, including resistance-temperature sensors and thermocouples.

There are Sequence of event (SOE) modules that can time-stamp events, i.e. input signal transitions, at the source with millisecond accuracy. Thereby providing the basis for meaningful sequence-of-events recording by the host system. In tightly interlocked processes this is essential to finding the root causes of production disturbances.

There are even pulse and frequency counters as well as intrinsic safety supporting modules. So just about all the process devices we can think of can be wired up to S800 I/O stations with a minimum of field cabling and intermediate signal conditioning.

To be even more competitive in the market a subset of the S800 I/O modules are made available denominated S800L I/O. These S800L I/O modules offer the same full-featured signal interfacing and high availability as the S800 I/O but have a lower cost because of their smaller foot print which includes the terminals in a one-piece module, allowing to save space and time in all phases of the installation.

Flexible
S800 I/O is flexible in many ways, flexible for scaling, flexible for interconnecting and flexible for installing.

Scale and interconnect using Analog or Digital I/Os placing Local or remote stations according to your requirements. Since an S800 I/O station can accommodate 12 I/O modules, this means up to 192 digitals or 96 analogs per station or any mix between the two extremes.

S800 I/O permits virtually infinite number of installation arrangements, small or large, indoors or outdoors, wall mounting or floor standing, coming in three different mechanical designs: Three mechanical designs are available:

- Compact (plug-in modules with a basic I/O signal termination area).
- Extended (plug in modules with ample space for I/O cable termination, fuses, jumpering and field power distribution).
- S800L (all-in-one modules and bases with detachable screw terminal blocks for I/O signals) for installations not requiring hot-swap capability.

Reliable
S800 I/O complies with the most demanding industral standards in regards of availability, reliability and harsh environments. It includes features as:

- Input/Output Set as Predefined (ISP/OSP). Each input/output can be set individually to default to a predefined value or freeze in case of communication loss.
- Hot swap of modules. A faulty I/O module can be replaced live, i.e. without powering the station down and without the rest of the station being affected. A hardware key ensures that only modules of the right type can be inserted.
- Hot configuration in run (HCIR). An S800 I/O station can be reconfigured while in full normal operation, i.e. without having to switch it over to configuration mode.
- Redundancy options in all areas: power supply, fieldbus media, fieldbus interfaces and I/O modules.
- To withstand harsh environments, all S800 modules are compliant to G3 severity level of ISA-S71.04, Environmental Conditions for Process Measurement and Control Systems.

Outline

Find below a outline of software and hardware components, for more detailed information please visit our Compact Product Suite hardware selector tool: **compacthardwareselector.com**

Compact Control Builder

CCB 6.2.0-0 features	
Windows operating systems	Windows 11 Pro 64-bit and Windows 10 Pro 64-bit. Windows 10 LTSC 2021 and LTSC 2019 Enterprise & IOT versions. Windows Server 2022 and 2019 Standard/Datacenter
Signal Concept	Supported
Bulk Data Manager 2 (BDM2)	Supported
S800 I/O on Ethernet	Supported

AC 800M Controllers

Features / CPUs	**PM851A**	**PM856A**	**PM857**	**PM858**	**PM860A**	**PM862**
Processor Unit	**PM851AK01 incl:** 1 PM851 CPU and required optional items	**PM856AK01 incl:** 1 PM856 CPU and required optional items	**PM857K01 incl:** 1 PM857 CPU and required optional items **PM857K02 incl:** 2 PM857K01	**PM858K01 incl:** 1 PM858 CPU and required optional items **PM858K02 incl:** 2 PM858K01	**PM860AK01 incl:** 1 PM860 CPU and required optional items	**PM862K01 incl:** 1 PM862 CPU and required optional items. **PM862K02 incl:** 2 PM862K01
Clock Frequency / Memory	24 MHz / 12 MB	24 MHz / 16 MB	96 MHz / 32 MB	33 MHz/ 16 MB	48 MHz / 16 MB	67 MHz / 32 MB

Features / CPUs	**PM863**	**PM866A**	**PM867**	**PM891**	**SM812 (for HI controllers)**
Processor Unit	**PM863K01 incl:** 1 PM863 CPU and required optional items **PM863K02 incl:** 2 PM863K01	**PM866AK01 incl:** 1 PM866A CPU and required optional items **PM866K02 incl:** 2 PM866K01	**PM867K01 incl:** 1 PM867 CPU and required optional items **PM867K02 incl:** 2 PM867K01	**PM891K01 incl:** 1 PM891 CPU and required optional items **PM891K02 incl:** 2 PM891K01	Provides supervision of the PM857, PM863 and PM867 controller during SIL1-2 operations and together with the PM857, PM863 and PM867 forms a 1oo2 diverse architecture for SIL3 applications.
Clock Frequency / Memory	96 MHz / 32 MB	133 MHz / 64 MB	133 MHz / 64 MB	450 MHz / 256 MB	133 MHz / 64 MB

Features	**BC810**	**BC820**
Article number	3BSE031155R1	3BSE071500R1
Redundancy	Yes	Yes
High Integrity	Yes	No
Description	CEX-Bus Interconnection unit	CEX-Bus Interconnection unit

AC 800M Communication

Module	**CI853**	**CI854B**	**CI855**	**CI856**	**CI857**	**CI858**
Article number	3BSE 018103R1	3BSE069449R1	3BSE018106R1	3BSE026055R1	3BSE018144R1	3BSE018135R1
Protocol	COMLI and MODBUS RTU	PROFIBUS DP-V1	ABB's MasterBus 300	ABB's S100 I/O	ABB's INSUM	ABB's DriveBus

Module	**CI865**	**CI867A**	**CI868A**	**CI869**	**CI871A**	**CI873A**	**CI874**
Article number	3BSE040795R1	3BSE092689R1 (CI867A)	3BSE092691R1 (CI868A)	3BSE049110R1	3BSE092693R1 (CI871A)	3BSE092695R1 (CI873A)	3BSE090784R1
Protocol	ABB's Satt I/O	MODBUS TCP Interface	IEC 61850	ABB's Advant Fieldbus 100	PROFINET IO	EtherNet IP / DeviceNet	OPC UA

S800 I/O Modules

Digital input modules	
DI810	16 channels, 2 groups of 8 channels, 24 V d.c., current sink.
DI811	16 channels, 2 groups of 8 channels, 48 V d.c., current sink.
DI814	16 channels, 2 groups of 8 channels, 24 V d.c., current source.
DI818	32 channels, 2 groups of 16 channels, 24 V d.c., current sink.
DI820	8 channels, separate returns, 110 V d.c., 120 V a.c.
DI821	8 channels, separate returns, 220 V d.c., 230 V a.c.
DI825	With time tagging, 8 channels, separate returns, 125 V d.c.
DI828	16 channels, separate returns, 110 V d.c., 120 V a.c / d.c.
DI830	With time tagging. 16 channels, 2 groups of 8 channels, 24 V d.c., current sink. Resolution: < 0.5 ms.
DI831	With time tagging. 16 channels, 2 groups of 8 channels, 48 V d.c., current sink. Resolution: < 0.5 ms.
Pulse input module	
DP820	2 channels, separate returns, 0.25 Hz - 1.5 MHz, signal voltage: 5 / 12 V d.c.
DP840	8 channels, extended diagnostics, wire-fault detection, current limited sensor supply, 0.5-20 kHz, 12/24 V d.c or NAMUR, common return
Digital output modules	
DO810	16 channels, 2 groups of 8 channels, 24 V d.c., max 0.5 A d.c., transistor, current source, short-circuit-proof.
DO814	16 channels, 2 groups of 8 channels, 24 V d.c., max 0.5 A, transistor, current sink, short-circuit-proof.
DO815	8 channels, 2 groups of 4 channels, 24 V d.c., max 2 A, transistor, current source, short-circuit-proof, wire-fault detection.
DO818	32 channels, 2 groups of 16 channels, 24 V, max 0.5 A d.c., transistor, current source, short-circuit-proof
DO820	8 channels, separate returns, 5-250 V, max 3 A a.c./d.c., relay (N.O.).
DO821	8 channels, separate returns, 5-250 V, max 3 A a.c./d.c., relay (N.C.).
DO828	16 channels, separate returns, 5-250V a.c. / 5-125V d.c. max 2A a.c./d.c., relay (N.O.).
Analog input modules	
AI810	8 channels, single-ended, 0(4)-20 mA, 0(2)-10 V, 12 bits.
AI815	8 channels with HART. 0(4)..20 mA, 0(1)..5 V, 12 bit, single ended, current limited transmitter supply.
AI820	Differential inputs, 4 channels, 0(1)-5 V, ±0(2)-10 V, ±0(4)-20 mA, 14 bits + sign.
AI825	Individually galvanically isolated channels, 4 channels, ±0(2)-10 V, ±0(4)- 20 mA, 14 bits + sign.
AI830A	RTD inputs, 8 channels, Pt100, Ni100, Ni120, Cu10, resistor 0-400 ohms, 14 bits, 3-wire.
AI835A	TC inputs, 8 channels, (7+ ref. junction), separate returns. TC types B, C, D, E, J, K, L, N, R, S, T, U, - 30…75 mV, 15 bits.
Analog output modules	
AO810V2	8 channels, common return, 0(4)-20 mA, 14 bits, load: 850 ohms (short-circuit-proof).
AO815	8 channels with HART. 4..20 mA, 12 bit, load: 750 ohms, common return, short-circuit-proof.
AO820	4 channels, individually galvanically isolated, separate returns, measuring range: ±0(2)-10 V, ±0(4)-20 mA, resolution: 12 bits + sign, load: 500 ohms (current) / 5 kohms (voltage), short-circuit-proof.
Intrinsic-safety modules	
DI890	8 channels, separate returns, proximity sensors (NAMUR) or voltage-free contact., current sink, wire-fault detection.
DO890	4 channels, separate returns, load 150-5000 ohms, 11 V @ 40 mA, current source, wire-fault detection, short circuit-proof.
AI890	8 channels, single-ended, 0(4)-20 mA, 12 bits, transmitter power supply.
AI893	8 channels, TC: 7 + ref. junction, sep. returns. TC types B, C, E, J, K, L, N, R, S, T, U, -10…80 mV. RTD: Pt50-1000, Ni100-500, Cu10-100, resistor 0-4000 W, 3-wire. 15 bits + sign.
AI895	8 channels, single-ended, 4-20 mA, 12 bits, transmitter power supply, HART pass-through.
AO890	8 channels, common return, 0(4)-20 mA, 12 bits, load: 725 ohms short-circuit-proof.
AO895	8 channels, common return, 4-20 mA, 12 bits, load: 725 ohms short-circuit-proof, HART pass-through.
Redundant modules	
DI840	16 channels, common return, 24 V d.c., current sink, extended diagnostics, time-tagging, current limited sensor supply.
DP840	8 channels, common return, 0.5-20 kHz, 12/24 V d.c or NAMUR, extended diagnostics, wire-fault detection.
DO840	16 channels, common return, 24 V d.c., max. 0,5 A, transistor, current source, short-circuit-proof, extended diagnostics.
AI843	TC input, 8 channels + ref. junction. TC types: B, C, E, J, K, L, N, R, S, T, U, -30…75 mV, 16 bits, extended diagnostics.
AI845	8 channels, 12 bits, 0(4)-20 mA 0(1)-5 V, extended diagnostics, HART pass-through, current limited transmitter supply, single ended.
AO845A	8 channels, 12 bits, common return, 4-20 mA, extended diagnostics, HART pass-through, 750 ohms.
Redundant modules - High Integrity	
AI880A	8 channels with HART, 0(4)-20 mA, 12 bits, SIL3, current limited transmitter power.
DI880	16 channels, 24V d.c, SIL3, current limited sensor power, time-tagging.
DO880	16 channel, 24 V d.c., 0.5 A, SIL3, Current sourcing, current limiting

S800L I/O Modules

S800L modules	
DI801	16 channels, 1 group, 24 V d.c., current sink.
DI802	8 channels, 110 V d.c., 150 V a.c.
DI803	8 channels, 220 V d.c., 230 V a.c.
DO801	16 channels, common return, 24 V, max 0.5 A d.c., transistor, current source, short-circuit-proof.
DO802	8 channels, 5-250 V, max 2 A a.c./d.c., relay (N.O.).
AI801	8 channels, single-ended, 0(4)-20 mA, 12 bits.
AO801	8 channels, common return, 0(4)-20 mA, 12 bits, load: less than 750 ohms.
Accessories	
TU805K01	For DI801 & DO801. With field power distribution screw terminals. For two or three wire connection.

Environmental Data for S800 I/O	
Climatic Operating Conditions	+5 to +55 °C (Storage -40 to +70 °C, RH = 5 to 95 % no condensation, IEC/EN 61131-2
Protection class	IP20 according to EN 60529, IEC 529
Corrosive protection	G3 compliant according to ISA-71.04
Electromagnetic Compatibility and CE-mark	Meets EMC directive 2014/30/EU according to EN 61000-6-2 and EN 61000-6-4
Electromagnetic Emission	Tested according to EN 61000-6-4 EMC – Generic Emission Standard, Part 2 – Industrial Environment
Electromagnetic Immunity	Tested according to EN 61000-6-2 EMC – Generic Immunity Standard, Part 2 – Industrial Environment
Electrical Safety *	UL508, EN 61010-1, EN 61010-2-201
Hazardous Classified Locations *	C1 Div 2 cULus, C1 Zone 2 cULus, ATEX Zone 2
Safety Integrity (IEC 61508)	PM857, PM863, PM867/SM812, AI880A, DI880, DO880: IEC 61508 up to SIL3
RoHS compliance	EN 63000:2018
WEEE compliance	DIRECTIVE/2012/19/EU

*For detailed information on each module, please visit: compacthardwareselector.com

S800 I/O

Communication interfaces

Feature	CI801	CI840A	CI845	TC810	TC811
Article number	3BSE022366R1	3BSE041882R1	3BSE075853R1	3BSE076220R1	3BSE078714R1
Function	PROFIBUS-DPV1 fieldbus communication interface. Supervisory functions of I/O ModuleBus. Isolated power supply to I/O modules. OSP handling and configuration. Input power fused. Hot Configuration In Run. HART pass-through.	PROFIBUS-DPV1 fieldbus communication interface. Supervisory functions of I/O ModuleBus. Isolated power supply to I/O modules. OSP handling and configuration. Input power fused. Power supply supervision. Hot Configuration In Run. HART pass-through.	Ethernet Fieldbus Communication Interface Module for connection of S800 I/O or Select I/O to Ethernet. For redundant configuration two Fieldbus Communication Interfaces CI845, two Ethernet Adapters TC810 and one TU860 or one TU865 are needed.	TC810 is an Ethernet Adapter for copper media with a built-in 2 port (RJ45) switch. For redundant config-urations, two Ethernet Adapters TC810s are required to be installed in the TU860 or TU865 Ethernet Field Communications Interface MTUs. Supports both Select I/O and S800 on Ethernet	TC811 is an Ethernet Adapter for fiber optic media with a built-in 2-port switch. Hosts two LC ports. For redundant configuration two Fieldbus Communication Interfaces CI845, two Ethernet Adapters TC811, and one TU860 or one TU865 are needed. Supports both Select I/O and S800 on Ethernet.
Redundant	No	Yes	Yes	Yes	Yes

Feature	TU860	TU865
Article number	3BSE078710R1	3BSE041882R1
Function	The TU860 is an MTU for S800 I/O on Ethernet and connects up to 12 single or redundant S 800I/O Modules and Module Termination Units and hosts single or redundant Ethernet Adapters (TC810, TC811) and Ethernet FCI Communications Interface Modules (CI845s) for reliable communications with the AC 800M process controllers.	The TU865 is an Ethernet Fieldbus Communication Interface Module Termination Unit (MTU) for connection to up to 12 Select I/O MTUs and hosts single and redundant Ethernet Adapters (TC810, TC811) and Ethernet FCI Communications Interface Modules (CI845s) for reliable communications with the AC 800M controllers. The TU865 also hosts an optional High Integrity Module (HI880) for use in SIL 3 safety applications and mounting is on a vertical DIN rail. One TL814K01 cover plate is included with every TU865.

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