

CATALOG

# Compact Product Suite

## Product Catalog



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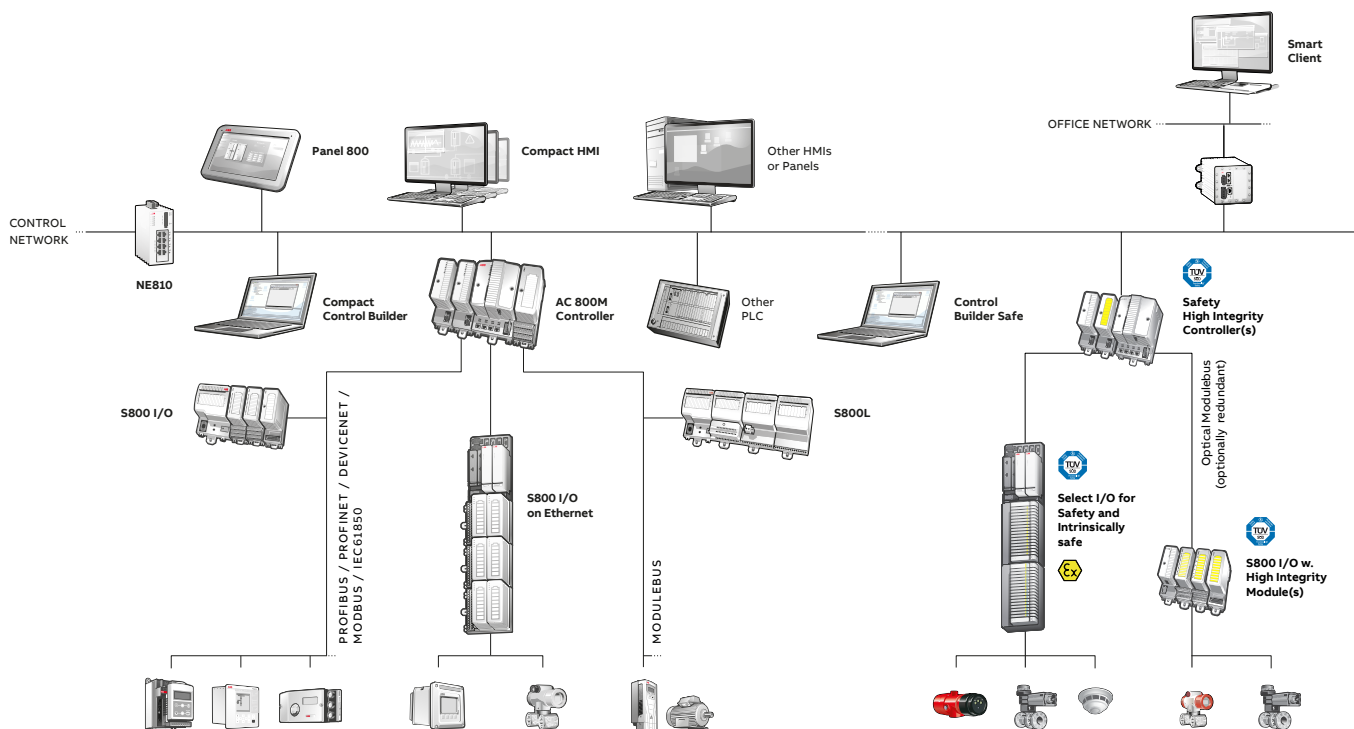
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# Compact Product Suite



**The Compact Product Suite is a comprehensive family of process automation and control products for your system integration and OEM business. It is the keystone to any automation task in the process industry where engineering efficiency matters.**

**These products can be combined as a tailored solution or, as standalones to complement an existing solution. However you use them, they will ensure high availability and enable increased productivity.**

The Compact Product Suite is a set of automation building blocks that help you achieve the quality and productivity your production site deserves. It helps you focus on the missing block/component to add value to the production facility.

Whether it's process controllers, field interfaces or HMIs, our comprehensive suite of products enables automation with seamless perfection. When it comes to finding the best solution for your process, ABB's Compact Product Suite is your answer.

Every product in the Compact Product Suite portfolio provides the highest level of performance, security, connectivity and reliability in its class. This is the result of ABB's 50 plus years of proven expertise in automation control and technologies in the process industry. From the process field, to panels, to your central operator room, Compact Product Suite will fulfill all your automation needs.

# Compact HMI 6.1.1-1

Compact HMI is an easy-to-use and fully equipped PC-based SCADA system for real-time operation of your plant. It offers the latest ergonomic design based on high performance graphics to take a full control of your process and data.

Based on the premium technology of ABB's System 800xA DCS with its leading object oriented engineering platform, it can be used in a variety of diverse industries, ranging from a single operator workstation, with 50 signals and scale up to applications with several thousand signals and multiple workplaces.

Designed with Microsoft Windows® standard of interaction, Compact HMI 6.1.1 supports Windows 10 2019 LTSC, Windows Server 2016 and Windows Server 2019. This provides exceptional ease of use, unmatched performance and cost savings.

Virtualization using VMWare ESXi as well as Hyper-V is supported. Another feature is the high performance pre-fabricated, re-usable graphics library that is based on the industry best-practice principles to help quick creation and utilization of graphic displays.

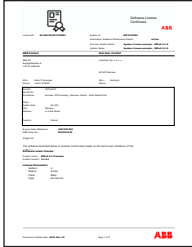
Not only can Compact HMI directly interface to a large number of OPC-compliant controllers but also it comes with built in drivers to connect to major PLCs.

Compact HMI 6.1.1 and 6.1.1-1 also supports the 800xA Publisher, a system extension to easily and securely publish process data and alarms to the edge and to the cloud using ABB Ability™ Edgenius.



## Control System Lifecycle Management Program

### Control System Lifecycle Management Program



This product is covered by ABB's Control System Lifecycle Management program. To get more information, please contact your local ABB representative.

## Compact HMI Base System

Compact HMI Base System	Article no.
<p><b>Compact HMI 6.1.1 Base License</b>            Compact HMI 6.1.1 Base System License for one combined HMI Operator and Engineering Workplace Server. Plant Explorer, Aspect Server and Softpoint Server, Scheduler, Primary History Logs, PLC Connect, PLC Connect Dial-Up, Compact HMI Alarm Operations, SMS &amp; Email Messaging, Audit trail, Advanced Access Control, Digital Signature, Graphics Builder &amp; Symbol factory.</p> <p>No media is included.</p>	7PAA001709R1

## Compact HMI Base System

### Signal Additions

Signal Additions	Article no.
Compact HMI 6.1.1 Base System signals.	
<b>50 Signals</b>	7PAA001710R1
<b>500 Signals</b>	7PAA001720R1
<b>2500 Signals</b>	7PAA001726R1

## Compact HMI Base System

### HMI Clients

HMI Operator Workplace Clients	Article no.	
Additional clients to a Compact HMI base system, need to have an equal number of signals as the base system use.		
<b>Operator Workplace Client – 200 Signals</b> One additional Compact HMI 6.1.1 Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	7PAA001716R1	
<b>Operator Workplace Client – 500 Signals</b> One additional Compact HMI 6.1.1 Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	7PAA001719R1	
<b>Operator Workplace Client – 1000 Signals</b> One additional Compact HMI 6.1.1 Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	7PAA001722R1	
<b>Operator Workplace Client – 2000 Signals</b> One additional Compact HMI 6.1.1 Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	7PAA001723R1	
<b>Operator Workplace Client – 5000 Signals</b> One additional Compact HMI 6.1.1 Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	7PAA001724R1	
<b>Operator Workplace Client – 10000 Signals</b> One additional Compact HMI 6.1.1 Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	7PAA001725R1	

## Compact HMI Base System

### Office Workplaces

Office Workplaces	Article no.	
<b>C HMI Smart Client Workplace</b> Compact HMI 6.1.1 Smart Client Workplace. Includes access to system information from the office network.	7PAA001713R1	

## Compact HMI Base System

### OPC UA

OPC UA	Article no.	
<b>Compact HMI 6.1.1-1 OPC UA Client Connection</b> This enables third party OPC UA clients to connect to Compact HMI via the OPC server, includes OPC UA DA. One per external access.	7PAA006971R1	
<b>Compact HMI 6.1.1-1 OPC UA Connect</b> This enables Compact HMI to connect to third party servers via the OPC Client, includes OPC UA DA. One per system.	7PAA006972R1	

# Compact HMI 6.1.1-1 Expansion

## Compact HMI Base System

### Signal Additions

Compact HMI Base System signals	Article no.	
<b>Compact HMI Base System signals, 50</b> 50 Signals for Compact HMI 6.1.1 Base System.	7PAA001710R1	
<b>Compact HMI Base System signals, 500</b> 500 Signals for Compact HMI 6.1.1 Base System.	7PAA001720R1	
<b>Compact HMI Base System signals, 2500</b> 2500 Signals for Compact HMI 6.1.1 Base System.	7PAA001726R1	

## Compact HMI Base System

### Symbol Factory for PG2

Symbol Factory for PG2	Article no.	
<b>Compact HMI 6.1.1 Symbol factory for PG2</b> Support for Symbol Factory process graphics 2 items in graphics displays.  Symbol factory is included in new Compact HMI 6.1.1 base systems. This is only available for systems which has been upgraded to Compact HMI 6.1.1 and does not have a license for Symbol Factory.	7PAA001717R1	

## Compact HMI Base System

### HMI Clients

HMI Operator Workplace Clients	Article no.	
HMI Operator Workplace Clients. 200 to 10 000 signals.		
<b>Operator Workplace Client – 200 Signals</b> One additional Compact HMI 6.1.1 Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	7PAA001716R1	
<b>Operator Workplace Client – 500 Signals</b> One additional Compact HMI 6.1.1 Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	7PAA001719R1	
<b>Operator Workplace Client – 1000 Signals</b> One additional Compact HMI 6.1.1 Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	7PAA001722R1	
<b>Operator Workplace Client – 2000 Signals</b> One additional Compact HMI 6.1.1 Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	7PAA001723R1	
<b>Operator Workplace Client – 5000 Signals</b> One additional Compact HMI 6.1.1 Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	7PAA001724R1	
<b>Operator Workplace Client – 10000 Signals</b> One additional Compact HMI 6.1.1 Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	7PAA001725R1	

## Compact HMI Base System

### Office Workplaces

Office Workplaces	Article no.
<b>C HMI Smart Client Workplace</b> Compact HMI 6.1.1 Smart Client Workplace. Includes access to system information from the office network.	7PAA001713R1

## Compact HMI Base System

### Client Signal Expansions

Client Signal Expansions	Article no.
<b>Client Signal Expansion 200 to 500</b> Compact HMI 6.1.1 Operator Workplace Client Signal Expansion from 200 to 500 signals.	7PAA001711R1
<b>Client Signal Expansion 500 to 1000</b> Compact HMI 6.1.1 Operator Workplace Client Signal Expansion from 500 to 1000 signals.	7PAA001715R1
<b>Client Signal Expansion 1000 to 2000</b> Compact HMI 6.1.1 Operator Workplace Client Signal Expansion from 1000 to 2000 signals.	7PAA001714R1
<b>Client Signal Expansion 2000 to 5000</b> Compact HMI 6.1.1 Operator Workplace Client Signal Expansion from 2000 to 5000 signals.	7PAA001712R1
<b>Client Signal Expansion 5000 to 10000</b> Compact HMI 6.1.1 Operator Workplace Client Signal Expansion from 5000 to 10000 signals.	7PAA001718R1

## Compact HMI Base System

### OPC UA

OPC UA	Article no.
<b>Compact HMI 6.1.1-1 OPC UA Client Connection</b> This enables third party OPC UA clients to connect to Compact HMI via the OPC server, includes OPC UA DA. One per external access.	7PAA006971R1
<b>Compact HMI 6.1.1-1 OPC UA Connect</b> This enables Compact HMI to connect to third party servers via the OPC Client, includes OPC UA DA. One per system.	7PAA006972R1

# Compact HMI 6.1.1 Expansion

## Compact HMI Base System

### Signal Additions

Compact HMI Base System signals	Article no.	
<b>Compact HMI Base System signals, 50</b> 50 Signals for Compact HMI 6.1.1 Base System.	7PAA001710R1	
<b>Compact HMI Base System signals, 500</b> 500 Signals for Compact HMI 6.1.1 Base System.	7PAA001720R1	
<b>Compact HMI Base System signals, 2500</b> 2500 Signals for Compact HMI 6.1.1 Base System.	7PAA001726R1	

## Compact HMI Base System

### Symbol Factory for PG2

Symbol Factory for PG2	Article no.	
<b>Compact HMI 6.1.1 Symbol factory for PG2</b> Support for Symbol Factory process graphics 2 items in graphics displays.  Symbol factory is included in new Compact HMI 6.1.1 base systems. This is only available for systems which has been upgraded to Compact HMI 6.1.1 and does not have a license for Symbol Factory.	7PAA001717R1	

## Compact HMI Base System

### HMI Clients

HMI Operator Workplace Clients	Article no.	
HMI Operator Workplace Clients. 200 to 10 000 signals.		
<b>Operator Workplace Client – 200 Signals</b> One additional Compact HMI 6.1.1 Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	7PAA001716R1	
<b>Operator Workplace Client – 500 Signals</b> One additional Compact HMI 6.1.1 Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	7PAA001719R1	
<b>Operator Workplace Client – 1000 Signals</b> One additional Compact HMI 6.1.1 Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	7PAA001722R1	
<b>Operator Workplace Client – 2000 Signals</b> One additional Compact HMI 6.1.1 Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	7PAA001723R1	
<b>Operator Workplace Client – 5000 Signals</b> One additional Compact HMI 6.1.1 Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	7PAA001724R1	
<b>Operator Workplace Client – 10000 Signals</b> One additional Compact HMI 6.1.1 Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	7PAA001725R1	



## Compact HMI Base System

### Office Workplaces

Office Workplaces	Article no.
<b>C HMI Smart Client Workplace</b> Compact HMI 6.1.1 Smart Client Workplace. Includes access to system information from the office network.	7PAA001713R1

## Compact HMI Base System

### Client Signal Expansions

Client Signal Expansions	Article no.
<b>Client Signal Expansion 200 to 500</b> Compact HMI 6.1.1 Operator Workplace Client Signal Expansion from 200 to 500 signals.	7PAA001711R1
<b>Client Signal Expansion 500 to 1000</b> Compact HMI 6.1.1 Operator Workplace Client Signal Expansion from 500 to 1000 signals.	7PAA001715R1
<b>Client Signal Expansion 1000 to 2000</b> Compact HMI 6.1.1 Operator Workplace Client Signal Expansion from 1000 to 2000 signals.	7PAA001714R1
<b>Client Signal Expansion 2000 to 5000</b> Compact HMI 6.1.1 Operator Workplace Client Signal Expansion from 2000 to 5000 signals.	7PAA001712R1
<b>Client Signal Expansion 5000 to 10000</b> Compact HMI 6.1.1 Operator Workplace Client Signal Expansion from 5000 to 10000 signals.	7PAA001718R1

# Compact HMI 6.0.3 Expansion

## Compact HMI Base System

### Signal Additions

Signal Additions	Article no.
Signals additions for Compact HMI 6.0.3 Base System.	
<b>50 Signals</b>	3BSE091828R1
<b>500 Signals</b>	3BSE091829R1
<b>2500 Signals</b>	3BSE091830R1

## Compact HMI Base System

### Symbol Factory for PG2

Symbol Factory for PG2	Article no.
<p><b>Compact HMI 6.0.3 Symbol Factory for PG2</b> Support for Symbol Factory process graphics 2 items in graphics displays.</p> <p>Symbol factory is included in new Compact HMI 6.0.3 base systems. This is only available for systems which has been upgraded to Compact HMI 6.0.3 and does not have a license for Symbol Factory.</p>	3BSE091832R1

## Compact HMI Base System

### HMI Clients

HMI Operator Workplace Clients	Article no.
Additional clients to a Compact HMI base system need to have an equal number of signals as the base system use.	
<p><b>Operator Workplace Client – 200 Signals</b> One additional Compact HMI 6.0.3 Operator Workplace Client. Process Graphics, Alarm &amp; events, Trends, Reports.</p>	3BSE091833R1
<p><b>Operator Workplace Client – 500 Signals</b> One additional Compact HMI 6.0.3 Operator Workplace Client. Process Graphics, Alarm &amp; events, Trends, Reports.</p>	3BSE091834R1
<p><b>Operator Workplace Client – 1000 Signals</b> One additional Compact HMI 6.0.3 Operator Workplace Client. Process Graphics, Alarm &amp; events, Trends, Reports.</p>	3BSE091835R1
<p><b>Operator Workplace Client – 2000 Signals</b> One additional Compact HMI 6.0.3 Operator Workplace Client. Process Graphics, Alarm &amp; events, Trends, Reports.</p>	3BSE091836R1
<p><b>Operator Workplace Client – 5000 Signals</b> One additional Compact HMI 6.0.3 Operator Workplace Client. Process Graphics, Alarm &amp; events, Trends, Reports.</p>	3BSE091837R1
<p><b>Operator Workplace Client – 10000 Signals</b> One additional Compact HMI 6.0.3 Operator Workplace Client. Process Graphics, Alarm &amp; events, Trends, Reports.</p>	3BSE091838R1

## Compact HMI Base System

### Office Workplaces

C HMI Smart Client Workplace	Article no.	
<b>Compact HMI 6.0.3 Smart Client Workplace.</b> Includes access to system information from the office network. Possibility to view Process Graphics 2 displays, trend displays, build/view business graphics, historic data.	3BSE091839R1	

## Compact HMI Base System

### Client Signal Expansions

Client Signal Expansions	Article no.	
Compact HMI 6.0.3. Operator Workplace Client Signal Expansions from 200 to 10 000 signals.		
<b>Client Signal Expansion 200 to 500 signals</b>	3BSE091840R1	
<b>Client Signal Expansion 500 to 1000 signals</b>	3BSE091841R1	
<b>Client Signal Expansion 1000 to 2000 signals</b>	3BSE091842R1	
<b>Client Signal Expansion 2000 to 5000 signals</b>	3BSE091843R1	
<b>Client Signal Expansion 5000 to 10000 signals</b>	3BSE091844R1	

# Compact HMI 6.0.1 Expansion

## Compact HMI Base System

### Signal Additions

Signal Additions	Article no.	
Signals additions for Compact HMI base system.		
<b>Compact HMI Base System signals, 50</b> 50 Signals for Compact HMI 6.0.1 Base System.	3BSE084257R50	
<b>Compact HMI Base System signals, 500</b> 500 Signals for Compact HMI 6.0.1 Base System.	3BSE084257R500	
<b>Compact HMI Base System signals, 2500</b> 2500 Signals for Compact HMI 6.0.1 Base System.	3BSE084257R2500	

## Compact HMI Base System

### HMI Clients

HMI Operator Workplace Clients	Article no.	
<b>Operator Workplace Client, 200 signals</b> One additional Compact HMI 6.0.1 Operator Workplace Client. Process Graphics, Alarm and events, Trends, Reports. Additional clients to a Compact HMI base system need to have an equal number of signals as the base system use.	3BSE084259R200	
<b>Operator Workplace Client, 500 signals</b> One additional Compact HMI 6.0.1 Operator Workplace Client. Process Graphics, Alarm and events, Trends, Reports. Additional clients to a Compact HMI base system need to have an equal number of signals as the base system use.	3BSE084259R500	
<b>Operator Workplace Client, 1000 signals</b> One additional Compact HMI 6.0.1 Operator Workplace Client. Process Graphics, Alarm and events, Trends, Reports. Additional clients to a Compact HMI base system need to have an equal number of signals as the base system use.	3BSE084259R1000	
<b>Operator Workplace Client, 2000 signals</b> One additional Compact HMI 6.0.1 Operator Workplace Client. Process Graphics, Alarm and events, Trends, Reports. Additional clients to a Compact HMI base system need to have an equal number of signals as the base system use.	3BSE084259R2000	
<b>Operator Workplace Client, 5000 signals</b> One additional Compact HMI 6.0.1 Operator Workplace Client. Process Graphics, Alarm and events, Trends, Reports. Additional clients to a Compact HMI base system need to have an equal number of signals as the base system use.	3BSE084259R5000	
<b>Operator Workplace Client, 10000 signals</b> One additional Compact HMI Operator Workplace Client. Process Graphics, Alarm and events, Trends, Reports. Additional clients to a Compact HMI base system need to have an equal number of signals as the base system use.	3BSE084259R5001	

## Compact HMI Base System

### Office Workplaces

C HMI Smart Client Workplace	Article no.
<b>Compact HMI 6.0.1 Smart Client Workplace.</b> Includes access to system information from the office network. Possibility to view Process Graphics 2 displays, trend displays, build/view business graphics and historic data.	3BSE084261R1

## Compact HMI Base System

### Client Signal Expansions

Client Signal Expansions	Article no.
<b>Client Signal Expansion, 200 to 500</b> Compact HMI 6.0.1 Operator Workplace Client Signal Expansion from 200 to 500 Signals	3BSE084258R200
<b>Client Signal Expansion, 500 to 1000</b> Compact HMI 6.0.1 Operator Workplace Client Signal Expansion from 500 to 1000 Signals	3BSE084258R500
<b>Client Signal Expansion, 1000 to 2000</b> Compact HMI 6.0.1 Operator Workplace Client Signal Expansion from 1000 to 2000 Signals	3BSE084258R1000
<b>Client Signal Expansion, 2000 to 5000</b> Compact HMI 6.0.1 Operator Workplace Client Signal Expansion from 2000 to 5000 Signals	3BSE084258R2000
<b>Client Signal Expansion, 5000 to 10000</b> Compact HMI 6.0.1 Operator Workplace Client Signal Expansion from 5000 to 10000 Signals	3BSE084258R5000

# Compact HMI 5.1 Expansion

## Compact HMI Base System

### Signal Additions

Signal Additions	Article no.	
Signal additions for Compact HMI 5.1 Base System. (Total max 10 000)		
<b>50 Signals</b>	3BSE064066R50	
<b>500 Signals</b>	3BSE064066R500	
<b>2500 Signals</b>	3BSE064066R2500	

## Compact HMI Base System

### HMI System Options

HMI System Options	Article no.	
<b>Compact HMI Alarm Management</b> Alarm Analysis and Alarm Shelving.	3BSE064069R1	

## Compact HMI Base System

### HMI Operator Workplace Clients

HMI Operator Workplace Clients	Article no.	
Note: It is possible to have up to 10 workplaces of any type in total. Additional clients to a Compact HMI base system need to have a equal number of signals as the base system use.		
<b>Operator Workplace Client – 200 Signals</b> One additional Compact HMI Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	3BSE064068R200	
<b>Operator Workplace Client – 500 Signals</b> One additional Compact HMI Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	3BSE064068R500	
<b>Operator Workplace Client – 1000 Signals</b> One additional Compact HMI Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	3BSE064068R1000	
<b>Operator Workplace Client – 2000 Signals</b> One additional Compact HMI Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	3BSE064068R2000	
<b>Operator Workplace Client – 5000 Signals</b> One additional Compact HMI Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	3BSE064068R5000	
<b>Operator Workplace Client – 10000 Signals</b> One additional Compact HMI Operator Workplace Client, Process Graphics, Alarm and events, Trends, Reports.	3BSE064068R5001	

## Compact HMI Base System

### HMI Operator Workplace Remote Clients

HMI Operator Workplace Remote Clients	Article no.	
Note: It is possible to have up to 10 workplaces of any type in total. Additional clients to a Compact HMI base system need to have a equal number of signals as the base system use.		
<b>HMI Operator Workplace Remote Client - 200 Signals</b> One additional Remote Compact HMI Operator Workplace Client. Process Graphics, Alarm and events, Trends, Reports.	3BSE064070R200	
<b>HMI Operator Workplace Remote Client - 500 Signals</b> One additional Remote Compact HMI Operator Workplace Client. Process Graphics, Alarm and events, Trends, Reports.	3BSE064070R500	
<b>HMI Operator Workplace Remote Client - 1000 Signals</b> One additional Remote Compact HMI Operator Workplace Client. Process Graphics, Alarm and events, Trends, Reports.	3BSE064070R1000	
<b>HMI Operator Workplace Remote Client - 2000 Signals</b> One additional Remote Compact HMI Operator Workplace Client. Process Graphics, Alarm and events, Trends, Reports.	3BSE064070R2000	
<b>HMI Operator Workplace Remote Client - 5000 Signals</b> One additional Remote Compact HMI Operator Workplace Client. Process Graphics, Alarm and events, Trends, Reports.	3BSE064070R5000	
<b>HMI Operator Workplace Remote Client - 10000 Signals</b> One additional Remote Compact HMI Operator Workplace Client. Process Graphics, Alarm and events, Trends, Reports.	3BSE064070R5001	

## Compact HMI Base System

### Office Workplaces

Office Workplaces	Article no.	
<b>C HMI Smart Client Workplace</b> Includes access to system information from the office network.  Possibility to view Process Graphics 2 displays, Trend displays, Build/view business graphics, historic data.	3BSE079194R10	

## Compact HMI Base System

### Client Signal Expansions

Client Signal Expansions	Article no.	
Compact HMI Operator Workplace Client Signal Expansion from 200 to 10 000 signals.		
<b>Client Signal Expansion from 200 to 500 Signals</b>	3BSE064067R200	
<b>Client Signal Expansion from 500 to 1000 Signals</b>	3BSE064067R500	
<b>Client Signal Expansion from 1000 to 2000 Signals</b>	3BSE064067R1000	
<b>Client Signal Expansion from 2000 to 5000 Signals</b>	3BSE064067R2000	
<b>Client Signal Expansion from 5000 to 10000 Signals</b>	3BSE064067R5000	

# Panel 800 version 6.2

Panel 800 is a user-friendly, intuitive and ergonomic operator panel that combines slim, space saving dimensions with a comprehensive range of advanced functions.

Panel 800 family comprises of user-friendly, intuitive and ergonomic operator panels that combine slim, space-saving dimensions with a comprehensive range of advanced functions.

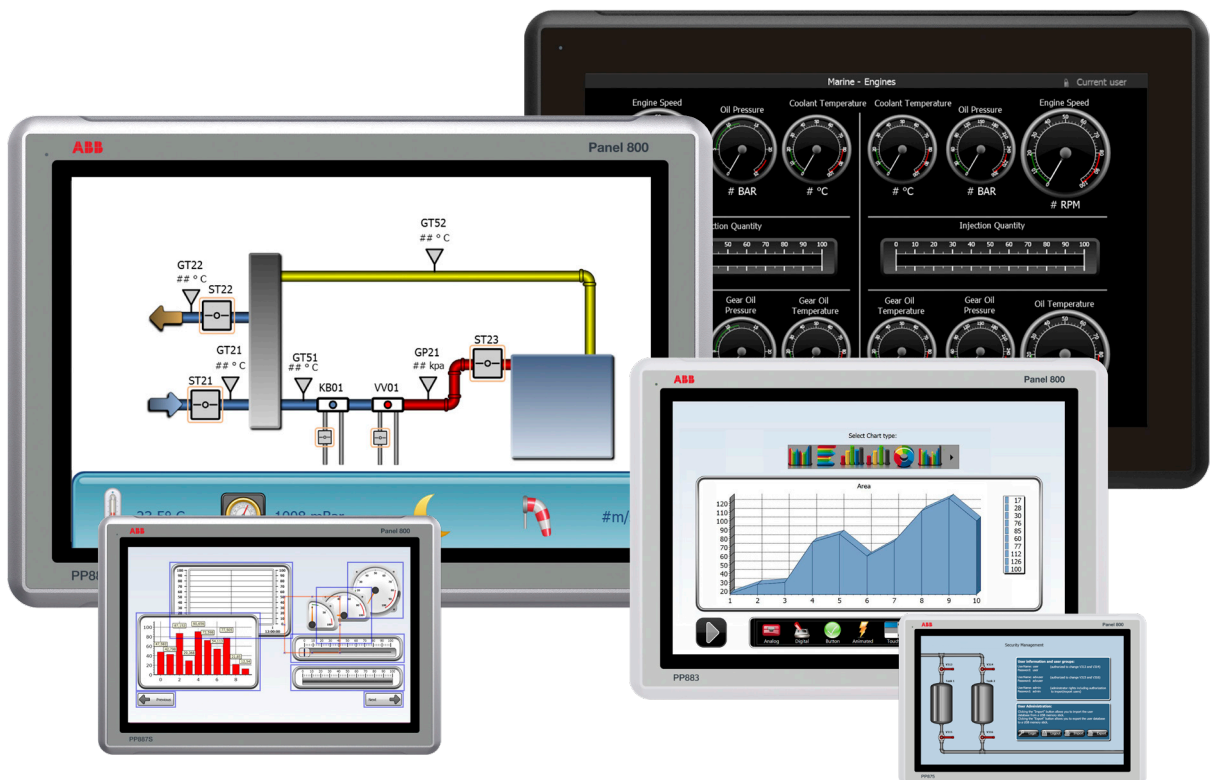
Adding to the already well established feature rich Panel 800 version 6.2 our new Rugged and Black panels are designed to perform in challenging harsh environments.

Whether it is heavy outdoor use, usage in areas with explosion risk, or ship bridge use in marine applications, they are ready to provide you with the information needed.

Designed to make process automation easy, all panels are equipped with advanced functionality for process and equipment control, maneuvered by touching the LCD display.

Combined with market-leading performance and stunning graphical ability, Panel 800 erodes the line between ordinary Operator Panels and PC-based HMIs.

Panels are configured using ABB's Panel Builder tool that contains a wide range of advanced functions. The functions are tested and developed with customer needs and preferences in focus.





## Specifications Panel 800 version 6.2

### Standard panels



Panel	PP875	PP881	PP883	PP886	PP895
Display size	7"	10.4"	12.1"	15.4"	21.5"
Display resolution, ratio	800 × 480 (16:9)	1024 × 600 (16:9)	1280 × 800 (16:10)	1280 × 800 (16:10)	1920 × 1080 (16:9)
Processor	ARM9 (1 GHz)				
Main memory	512 MB	1.0 GB	1.0 GB	1.0 GB	2.0 GB
External storage media	1 × SD card slot (or SDHC with latest image loaded).				
Dimension WxHxD (mm)	204 x 243 x 50	292 × 194 × 52	340 × 242 × 37	410 × 286 × 61	556 × 347 × 65
Net weight (kg)	0.8	1.65	2.6	3.85	7.38
Power supply	+24 VDC (18-32 VDC)				
Operating temperature	-10 to +60 °C				0 °C to +50 °C
<b>Certification</b>					
CE	CE, FCC, KCC				
UL	UL610-2-201				
Marine	DNV, KR, GL, LR, ABS, CCS				-
RoHS compliance	DIRECTIVE/2011/65/EU				
WEEE compliance	DIRECTIVE/2012/19/EU				

For more information about Panel 800 6.2 please visit: [compacthardwareselector.com](http://compacthardwareselector.com)

## Specifications Panel 800 version 6.2

### Black panels



Panel	PP875M	PP875H	PP886M
Display size	7"	7"	15.4"
Display resolution, ratio	800 × 480 (16:9)	800 × 480 (16:9)	1280 × 800 (16:10)
Processor	ARM9 (1 GHz)		
Main memory	512 MB	2 GB	1 GB
External storage media	1 × SD card slot (or SDHC with latest image loaded)		
Dimension WxHxD (mm)	204 × 143 × 50		410 × 286 × 61
Net weight (kg)	0.8	0.8	3.85
Power supply	24 VDC (18-32 VDC)		
Operating temperature	-10 to +60 °C		
<b>Certification</b>			
CE	CE, FCC, KCC		
UL	UL61010-2-201		
Marine	DNV, KR, GL, LR, ABS, CCS		
RoHS compliance	DIRECTIVE/2011/65/EU		
WEEE compliance	DIRECTIVE/2012/19/EU		

For more information about Panel 800 6.2 please visit: [compacthardwareselector.com](http://compacthardwareselector.com)

## Specifications Panel 800 version 6.2

Rugged panels



Panel	PP886R	PP887H	PP887S
Display size	15.4"		
Display resolution, ratio	1280 x 800 (16:10)		
Processor	ARM9 (800 MHz)	ARM9 (1 GHz)	ARM9 (1 GHz)
Main memory	1 GB		
External storage media	1 x SD card slot (or SDHC with latest image loaded)		
Dimension WxHxD (mm)	410 x 286 x 73		
Net weight (kg)	4.1	4.1	4.8
Power supply	24 VDC (18-32 VDC)		
Operating temperature	-30 to +70 °C		
<b>Certification</b>			
CE	CE, FCC, KCC		
UL	UL-61010-2-201		
Marine	DNV, KR, GL, LR, ABS, CCS		
Hazardous	UL/cUL C1D2, ATEX (Zone 2, Zone 22), IECEx (Zone 2, Zone 22)		
RoHS compliance	DIRECTIVE/2011/65/EU		
WEEE compliance	DIRECTIVE/2012/19/EU		


For more information about Panel 800 6.2 please visit: [compacthardwareselector.com](http://compacthardwareselector.com)

## Panel 800 version 6.2

Lifecycle Management Program


### Lifecycle Management Program

This product is covered by ABB's Control System Lifecycle Management program. To get more information, please contact your local ABB representative.

Upgrade Orders	Article no.
 <p>Panel Builder 800 Version 6, upgrade Media USB with Panel Builder 800 Version 6 containing the latest version of:</p> <ul style="list-style-type: none"> <li>• Panel Builder 800 Version 6</li> <li>• Panel 800 Runtime</li> <li>• Firmware for panels</li> <li>• Manuals as pdf-files</li> <li>• Release Notes</li> <li>• Renewed license</li> </ul> <p>This item can be ordered by users with a valid Automation Software Maintenance agreement for Panel Builder 800.</p>	3BSE069301R1




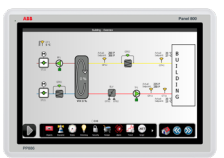

## Panel 800 version 6.2-0



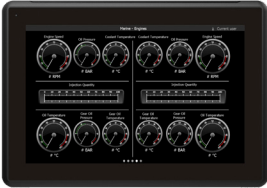
### Panel Builder 800

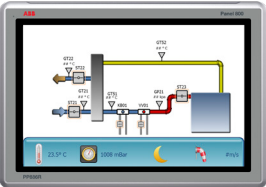

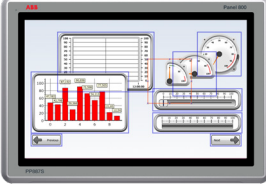
Panel Builder 800	Article no.
 <p><b>Panel Builder 800 Version 6.2-0</b> Media USB with Panel Builder 800 Version 6 containing the latest version of:</p> <ul style="list-style-type: none"> <li>• Panel Builder 800 Version 6</li> <li>• Panel 800 Runtime</li> <li>• Firmware for panels</li> <li>• Manuals as pdf-files</li> <li>• Release Notes</li> <li>• License for one Panel Builder 800 Version 6</li> </ul>	3BSE069300R1

## Panel 800 Version 6.2

### Operator Panels


Standard Panels.	All panels have TFT LCD touch screen. Requires Panel Builder 800 Version 6.2 for configuration.	Article no.
	<p><b>PP875 Standard panel 7"</b> 800x480 widescreen (16:9). Requires Panel Builder 800 Version 6.2 for configuration.</p> <p>To protect the front, it's recommended to use the RX874 Touch cover. Replaces PP874.</p>	3BSE092977R1
	<p><b>PP881 Standard panel 10"</b> 1024x600 widescreen (16:9). Requires Panel Builder 800 Version 6.2 for configuration.</p> <p>To protect the front, it's recommended to use the RX881 Touch cover. Replaces PP877. For mounting in the same cut-out as PP877, RX800 Adapter plate is required.</p>	3BSE092978R1
	<p><b>PP883 Standard panel 12"</b> 1280x800 widescreen (16:10). Requires Panel Builder 800 Version 6.2 for configuration.</p> <p>To protect the front, it's recommended to use the RX883 Touch cover. Replaces PP882.</p>	3BSE092979R1
	<p><b>PP886 Standard panel 15"</b> TFT 1280x800 widescreen (16:10). Requires Panel Builder 800 Version 6.2 for configuration.</p> <p>To protect the front, it's recommended to use the RX886 Touch cover. Replaces PP885.</p>	3BSE092980R1
	<p><b>PP895 Standard panel 21"</b> TFT 1920x1080 widescreen (16:9). Requires Panel Builder 800 Version 6.2 for configuration.</p> <p>To protect the front, it's recommended to use the RX895 Touch cover.</p>	3BSE092981R1

Black Panels		Article no.
	<p><b>PP875M Black Panel 7"</b> 800x480 widescreen (16:9). Requires Panel Builder 800 Version 6.2 for configuration.</p> <p>To protect the front, it's recommended to use the RX874 Touch cover. Replaces PP874M.</p>	<p>3BSE092982R1</p>
	<p><b>PP875H Black Panel, High Brightness 7"</b> 800x480 widescreen (16:9) Brightness 1000 cd/m<sup>2</sup>. Requires Panel Builder 800 Version 6.2 for configuration.</p> <p>To protect the front, it's recommended to use the RX874 Touch cover.</p>	<p>3BSE092983R1</p>
	<p><b>PP886M Black Panel 15"</b> High Brightness 1000 cd/m<sup>2</sup> 1280x800 widescreen (16:10). Requires Panel Builder 800 Version 6.2 for configuration.</p> <p>To protect the front, it's recommended to use the RX886 Touch cover. Replaces PP885M.</p>	<p>3BSE092984R1</p>

Rugged Panels		Article no.
	<p><b>PP886R Rugged Panel 15"</b> 1280x800 widescreen (16:10). Requires Panel Builder 800 Version 6.2 for configuration.</p> <p>To protect the front, it's recommended to use the RX886 Touch cover. Replaces PP885R. One Ethernet port.</p>	<p>3BSE092985R1</p>
	<p><b>PP887H Rugged Panel, High Brightness 15"</b> 1280x800 widescreen (16:10) Brightness 1000 cd/m<sup>2</sup>. Requires Panel Builder 800 Version 6.2 for configuration.</p> <p>To protect the front, it's recommended to use the RX886 Touch cover. Replaces PP886H.</p>	<p>3BSE092986R1</p>
	<p><b>PP887S Rugged Panel, Sealed 15"</b> 1280x800 widescreen (16:10) Brightness 1000 cd/m<sup>2</sup>. Sealed on all sides, can be mounted directly on an arm.</p> <p>Requires Panel Builder 800 Version 6.2 for configuration. To protect the front, it's recommended to use the RX886 Touch cover.</p> <p>PP887S is a fully sealed version with M12 connectors with IP66 ingress protection rating and ATEX/IECEX Zone 2 and Zone 22 (IP65) certification.</p>	<p>3BSE092987R1</p>



## Panel 800 Version 6.2







### Dongles

Dongles	Article no.	
<p>Requires Panel 800 Runtime Version 6.2 to be installed on the PC. The USB dongle enables the runtime and the amount of signals.</p>		
 <p><b>Panel 800 Version 6.2 dongle 250 tags.</b> USB dongle for 250 signals (tags).</p>	3BSE093564R1	
<p><b>Panel 800 Version 6.2 dongle 2000 tags.</b> USB dongle for 2000 signals (tags).</p>	3BSE093565R1	
<p><b>Panel 800 Version 6.2 dongle 4000 tags.</b> USB dongle for 4000 signals (tags).</p>	3BSE093566R1	


## Panel 800 Version 6.2


### Accessories

Communication Interface for Panel 800	Article no.	
 <p><b>CB802 Profibus DP Interface</b> PROFIBUS DP slave expansion module for Panel 800 Version 6 panels. Not possible to use for PP880R, PP885H, PP885M, PP885R, PP886H, PP887H and PP887S. Not marine certified.</p>	3BSE069285R1	
 <p><b>CB820 USB to Ethernet adapter for programming</b> USB to Ethernet adapter with software. Cross over Ethernet patch cable included.</p>	7PAA002012R1	

Connection Cables for Panel 800	Article no.	
 <p><b>TK858V002 Adapter cable (CAB 107)</b> Adapter cable RS232 - RS485 0.2 m 9 pin D-Sub to 25 pin D-Sub. For using version 5 RS422/485 cables on Version 6 panels.</p>	3BSE069474R1	
 <p><b>TK859V000 Gender changer (CAB 108)</b> Gender changer 9 pin D-Sub male/male.</p>	3BSE069475R1	
 <p><b>TK860V001 Splitter cable (CAB 109)</b> Splitter cable Version 6 panel. Y-split for use with one RS232 and one RS422 connection. Not possible to use with PP887S.</p>	3BSE069476R1	
 <p><b>TK868V002 Splitter 3 way (CAB150)</b> Splitter cable. Used when two serial RS485 connections are needed (1xRS232 + 2xRS485). Not possible to use with PP887S.</p>	3BSE093567R1	
 <p><b>TK865V030 Cable m. 8p to blank 3m (COM)</b> Cable M12 male 8 pin to blank, 3 m (COM). Only for PP887S with M12 contacts.</p>	3BSE092988R1	
 <p><b>TK865V100 Cable m. 8p to blank 10m (COM)</b> Cable M12 male 8 pin to blank, 10 m (COM). Only for PP887S with M12 contacts.</p>	3BSE092989R1	

Connection Cables for Panel 800		Article no.
	<b>TK866V030 Cable m. 4p to blank 3m (LAN)</b> Cable M12 male 4 pin to blank, 3 m (LAN). Only for PP887S with M12 contacts.	3BSE092990R1
	<b>TK866V100 Cable m. 4p to blank 10m (LAN)</b> Cable M12 male 4 pin to blank, 10 m (LAN). Only for PP887S with M12 contacts.	3BSE092991R1
	<b>TK867V030 Cable f. 4p to blank 3m (POW)</b> Cable M12 female 4 pin to blank, 3 m (POWER). Only for PP887S with M12 contacts.	3BSE092992R1
	<b>TK867V100 Cable f. 4p to blank 10m (POW)</b> Cable M12 female 4 pin to blank, 10 m (POWER). Only for PP887S with M12 contacts.	3BSE092993R1
	<b>TK865V000 Conn. 8p male 5.5-7.5mm (COM)</b> Connector M12 male 8 pin 5.5 - 7.5 mm, Gland (COM) Only for PP887S with M12 contacts.	3BSE092994R1
	<b>TK866V000 Conn. 4p male 5.5-7.5mm (LAN)</b> Connector M12 male 4 pin 5.5 - 7.5 mm, Gland (LAN) Only for PP887S with M12 contacts.	3BSE092995R1
	<b>TK867V000 Conn. 4p fem. 5.5-7.5mm (POW)</b> Connector M12 female 4 pin 5.5 - 7.5 mm, Gland (POWER) Only for PP887S with M12 contacts.	3BSE092996R1

Front Protections		Article no.
	<b>RX874 Touch cover 7"</b> Plastic cover for protection. Possible to use for PP880R, PP874, PP874M, PP875, PP875M and PP875H.	3BSE069287R1
	<b>RX881 Touch cover 10"</b> Plastic cover for protection. Possible to use for PP881.	3BSE093559R1
	<b>RX883 Touch cover 12"</b> Plastic cover for protection. Possible to use for PP883.	3BSE093560R1
	<b>RX886 Touch cover 15"</b> Plastic cover for protection. Possible to use for PP886, PP886M, PP886R, PP887H and PP887S.	3BSE093561R1
	<b>RX895 Touch cover 21"</b> Plastic cover for protection. Possible to use for PP895.	3BSE093562R1

Adapter Plates		Article no.
	<b>RX800 Adapter plate for PP877 to PP881</b> Adapter plate for installing the replacement panel PP881 on a PP877 mounting.	3BSE093563R1

Miscellaneous		Article no.
	<b>Compact Flash Card 4 GB</b> Secure Digital memory card 4 GB, Industrial grade.	2PAA121688R1

# AC 800M Processor Units

## CPU Modules

Several CPU modules are available that vary in terms of processing power, memory size, and redundancy support. Each CPU module is equipped with built in Ethernet port(s) for communication with other controllers and for interaction with operators, engineers, managers, and higher level applications.

These ports can be configured for redundancy for those cases where availability is of paramount importance. It is also equipped with two RS-232C ports that can be used for point-to-point communication with programming/debugging tools and with third-party systems and devices.

The AC 800M HI controllers are SIL3-rated, IEC 61508-certified, TÜV and ISASecure certified.

The AC 800M controllers can be configured with Compact Control Builder and with Compact Control Builder Safe.

## Communication & I/O Modules

To each CPU module, a number of communication and I/O modules can be added, for example:

- Additional RS-232C ports
- PROFIBUS DP, PROFINET IO
- DeviceNet
- IEC 61850
- Ethernet IP
- MasterBus 300
- MODBUS TCP
- OPC UA
- S100 I/O
- S800 I/O
- S800L I/O
- S800 on Ethernet
- Select I/O



AC 800M PM891 controller



AC 800M controller



AC 800M High Integrity controller

## AC 800M Controllers selection guide

Features / CPUs	PM851A	PM856A	PM857	PM858	PM860A	PM862	PM863
Processor Unit	<b>PM851AK01 incl:</b> 1 PM851A CPU and required optional items	<b>PM856AK01 incl:</b> 1 PM856A CPU and required optional items	<b>PM857K01 incl:</b> 1 PM857 CPU and required optional items <b>PM857K02 incl:</b> 2 PM857K01	<b>PM858K01 incl:</b> 1 PM858 CPU and required optional items <b>PM858K02 incl:</b> 2 PM858K01	<b>PM860AK01 incl:</b> 1 PM860A CPU and required optional items	<b>PM862K01 incl:</b> 1 PM862 CPU and required optional items. <b>PM862K02 incl:</b> 2 PM862K01	<b>PM863K01 incl:</b> 1 PM863 CPU and required optional items <b>PM863K02 incl:</b> 2 PM863K01
Optional items (partly included in Processor Units, see Price List)	TP830 Baseplate, TP850 CEX-bus term., TK850 CEX-bus cable, TB807, Modulebus term, Battery RAM backup, TB852/TB853 RCU-link term, TB851/TB855/TB856 RCU-link cable, SB822 External Battery Unit, TK212A Tool cable, TC562 Short Distance Modem, TK853V020 Modem cable, BC810K02, BC820K02, CEX-bus Interconnection unit; TK851V010 Connection cable, SD831/SD832/SD833, SD853/SD854 Power Supply, SS832 Voting Unit, Mains Breaker Kit, SM811 Supervisory Module and SM812 Supervisory Module.						
High Integrity Controller	No	No	Yes	No	No	No	Yes
Clock frequency	24 MHz	24 MHz	96 Mhz	33 MHz	48 MHz	67 MHz	96 Mhz
Memory (RAM)	8 MB	8 MB	32 MB	16 MB	8 MB	32 MB	32 MB
From 5.1 FP4	12 MB	16 MB			16 MB		
RAM available for application	2.282 MB	2.282 MB	22.184 MB	7.147 MB	2.282 MB	23.521 MB	22.184 MB
From 5.1 FP4	6.253 MB	10.337 MB			10.346 MB		
Processor type	MPC860	MPC860	MPC866	MPC866	MPC860	MPC866	MPC866
Flash memory for storage of application and data	Yes	Yes	No	Yes	Yes	Yes	No
CPU redundancy support	No	No	Yes	Yes	No	Yes	Yes
Switch over time in red. conf.	-	-	Max 10 ms	Max 10 ms	-	Max 10 ms	Max 10 ms
Performance, 1000 boolean operations (a:=b and c)	0.46 ms	0.46 ms	0.17 ms	0.36 ms	0.23 ms	0.18 ms	0.17 ms
No. controllers per control projects	32						
No. of applications per control project	1024						
No. of applications per controller	32						
No. of programs per application	64						
No. of tasks per controller	32						
Number of different cycle times	32						
Cycle time per application programs	Down to 1 ms (HI Integrity controllers 10 ms)						
Flash PROM for firmware storage	2 MB	2 MB	18 MB	4 MB	2 MB	4 MB	18 MB
Power supply	24 V DC (19.2-30 V DC) max 5 % ripple acc. to IEC 61131-2						
Power consumption +24 V	typ/max 180/300 mA	typ/max 180/300 mA	typ/max 210/360 mA	typ/max 210/360 mA	typ/max 180/300 mA	typ/max 210/360 mA	typ/max 210/360 mA
Power dissipation typ.	4.32 W	4.32 W	5.1 W	5.1 W	4.32 W	5.1 W	5.1 W
Power Reservoir	Internal 5 ms power reservoir, sufficient for the CPU to make a controlled power down						
Power supply connector	Detachable 4-pole screw terminal block						
Redundant power supply status inputs	Yes: 2 inputs designated SA, SB (Max 30 V, high level >15 V, low level < 8 V)						
Built-in back-up battery	Type: Lithium, 3.6 V, 0.95 Ah, size 1/2 AA, 0.3 g Lithium content						
Real-time clock stability	100 ppm (approx. 1 h/year)						
Clock synchronization	1 ms between AC 800M controllers by CNCP protocol						
Comm. modules on CEX bus	1	12 single CEX bus modules	12	12	12 single CEX bus modules	12	12



## AC 800M Controllers selection guide

Features / CPUs	PM851A	PM856A	PM857	PM858	PM860A	PM862	PM863
Supply current on CEX bus	Supply current: Max 24 V - 2.4 A (fuse 3.15 A fast, PM891 has an embedded auto fuse)						
I/O clusters on Modulebus with non-redundant CPU	1 el. + 1 opt.	1 el. + 7 opt.	1 el. + 7 opt.	1 el. + 7 opt.	1 el. + 7 opt.	1 el. + 7 opt.	1 el. + 7 opt.
I/O clusters on Modulebus with redundant CPU	NA	NA	0 el. + 7 opt.	7 optical	NA	7 optical	0 el. + 7 opt.
I/O capacity on Modulebus with non-redundant/redundant CPU	Max 24/NA I/O modules	Max 96/NA I/O modules	Max 96/84 I/O modules and <b>max 128 I/O channels</b>	Max 96/84 I/O modules	Max 96/NA I/O modules	Max 96/84 I/O modules	Max 96/84 I/O modules
Modulebus scan rate	0 - 100 ms (actual time depending on number of I/O modules)						
Supply current on Electrical Modulebus	Supply current: Max 24 V - 1.0 A (short circuit proof, fuse 2.0 A), Max 5 V - 1.5 A (short circuit proof)						
I/O capacity on PROFIBUS (remote I/O)	Max 99 I/O stations (max 62 redundant I/O stations), max 24 I/O modules per I/O station (max 12 redundant I/O pairs)						
Ethernet channels	1	2	2	2	2	2	2
Ethernet interface	Ethernet (IEEE 802.3), 10 Mbit/s, RJ-45, female (8-pole)						
Control Network protocol	MMS (Manufacturing Message Service) and IAC (Inter Application Communication)						
Recommended Control Network backbone	100 Mbit/s switched Ethernet						
No. of controllers on Control Network	Max 50						
RS-232C interface	2 (one general, 1 for service tool)						
RS-232C interface (COM3) (non red.conf. only)	RS-232C, 75-19 200 baud, RJ-45 female (8-pole), not opto isolated, full RTS-CTS support						
RS-232C interface (COM4) (non red.conf. only)	RS-232C, 9 600 baud, RJ-45 female (8-pole), opto isolated, no RTS-CTS support						
Temperature	<ul style="list-style-type: none"> <li>• Operating +5 to +55 °C (+41 to +131 °F)</li> <li>• Storage -40 to +70 °C (-40 to +158 °F)</li> </ul>						
Temperature changes	3 °C/minutes according to IEC/EN 61131-2						
Altitude	2000 m according to IEC/EN 61131-2						
Pollution degree	Degree 2 according to IEC/EN 61131-2						
Corrosion protection	G3 compliant to ISA 71.04						
Vibration	10 < f < 50 Hz: 0.0375 mm amplitude, 50 < f < 150 Hz: 0.5 g acceleration, 5 < f < 500 Hz: 0.2 g acceleration						
Emitted noise	< 55 dB (A)						
Shock, no package	150 m/s <sup>2</sup> in 11 ms, 20 g in 3 ms						
Relative humidity	5 to 95 %, non-condensing						
Isolation voltage	Type test voltage: 500 V AC (corresponding to 700 V DC)						
Environmental conditions	Industrial						
Protection class	IP20 according to EN 60529, IEC 529						
Certificates and Standards *	CE- marking: Meets EMC directive 2004/108/EC acc. to EN 61000-6-4, EN 61000-6-2 and Low Voltage Directive acc. to EN 61131-2 Electrical Safety: EN 50178, IEC 61131-2, UL 508 Hazardous location: UL 60079-15, cULus Class 1, Zone 2, AEx nA IIC T4, ExnA IIC T4Gc X RoHS compliance: EN 50581:2012 WEEE compliance: DIRECTIVE/2012/19/EU						
ISASecure certified			Yes	Yes		Yes	Yes
TÜV Approval	No	No	IEC 61508 SIL3	No	No	No	IEC 61508 SIL3
Emission	Tested according to EN 61000-6-4 EMC – Generic Emission Standard, Part 2 – Industrial Environment						
Immunity	Tested according to EN 61000-6-2 EMC – Generic Immunity Standard, Part 2 – Industrial Environment						
Dimensions	Width 119 x Height 186 x Depth 135 mm (4.7 x 7.3 x 5.3 in.)						
Weight (including base)	1100 g (2.4 lbs)	1100 g (2.4 lbs)	1200 g (2.6 lbs)	1200 g (2.6 lbs)	1100 g (2.4 lbs)	1200 g (2.6 lbs)	1200 g (2.6 lbs)

\* For detailed information on each module, please visit: [compacthardwareselector.com](http://compacthardwareselector.com)

## AC 800M Controllers selection guide

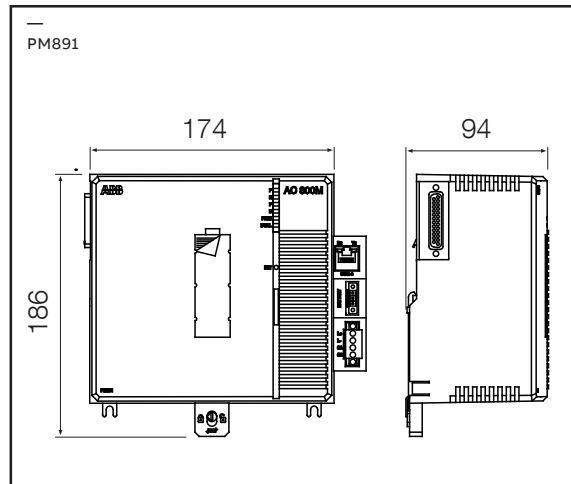
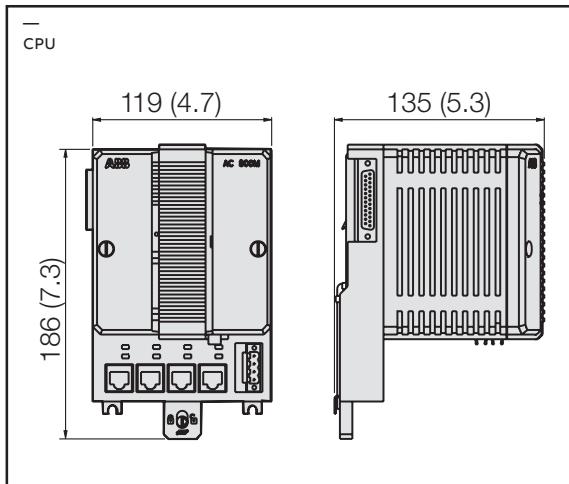
Features / CPUs	PM866A	PM867	SM812	PM891
Processor Unit	<b>PM866AK01 incl:</b> 1 PM866A CPU and required optional items <b>PM866AK02 incl:</b> 2 PM866AK01	<b>PM867K01 incl:</b> 1 PM867 CPU and required optional items <b>PM867K02 incl:</b> 2 PM867K01	<b>SM812K01 incl:</b> 1 SM812	<b>PM891K01 incl:</b> 1 PM891 CPU and required optional items <b>PM891K02 incl:</b> 2 PM891K01
Optional items (partly included in Processor Units, see Price List)	TP830 Baseplate, TP850 CEX-bus term., TK850 CEX-bus cable, TB807, Modulebus term, Battery RAM backup, TB852/TB853 RCU-link term, TB851/TB855/TB856 RCU-link cable, SB822 External Battery Unit, TK212A Tool cable, TC562 Short Distance Modem, TK853V020 Modem cable, BC810K02, BC820K02, CEX-bus Interconnection unit; TK851V010 Connection cable, SD831/SD832/SD833, SD853/SD854 Power Supply, SS832 Voting Unit, Mains Breaker Kit, SM811 Supervisory Module and SM812 Supervisory Module.			
High Integrity Controller	No	Yes	Yes	No
Clock frequency	133 MHz	133 MHz	133 MHz	450 MHz
Memory (RAM) From 5.1 FP4	64 MB	64 MB	64 MB	256 MB
RAM available for application	51.389 MB	46.559 MB	-	208.985 MB
Processor type	MPC866	MPC866	MPC866	MPC8270
Flash memory for storage of application and data	Yes	No	No	Yes
CPU redundancy support	Yes	Yes	Yes	Yes
Switch over time in red. conf.	Max 10 ms	Max 10 ms	Max 10 ms	Max 10 ms
Performance, 1000 boolean operations (a=b and c)	0.09 ms	0.09 ms	-	0.043 ms
No. controllers per control projects	32			
No. of applications per control project	1024			
No. of applications per controller	32			
No. of programs per application	64			
No. of tasks per controller	32			
Number of different cycle times	32			
Cycle time per application programs	Down to 1 ms (HI Integrity controllers 10 ms)			
Flash PROM for firmware storage	4 MB	18 MB	4 MB	16 MB
Power supply	24 V DC (19.2-30 V DC) max 5 % ripple acc. to IEC 61131-2			
Power consumption +24 V (typ/max)	210/360 mA	210/360 mA	160/250 mA	660/750 mA
Power dissipation typ.	5.1 W	5.1 W	3.8 W	15.8 W
Power Reservoir	Internal 5 ms power reservoir, sufficient for the CPU to make a controlled power down			
Power supply connector	Detachable 4-pole screw terminal block			
Redundant power supply status inputs	Yes: 2 inputs designated SA, SB (Max 30 V, high level >15 V, low level < 8 V)			
Built-in back-up battery	Type: Lithium, 3.6 V, 0.95 Ah, size 1/2 AA, 0.3 g Lithium content	No		No
Real-time clock stability	100 ppm (approx. 1 h/year)			50 ppm
Clock synchronization	1 ms between AC 800M controllers by CNCP protocol			
Comm. modules on CEX bus	12	12	12	12
Supply current on CEX bus	Supply current: Max 24 V - 2.4 A (fuse 3.15 A fast, PM891 has an embedded auto fuse)			
I/O clusters on Modulebus with non-redundant CPU	1 el. + 7 opt.	N/A	1 el. + 7 opt.	1 el. + 7 opt. N/A
I/O clusters on Modulebus with redundant CPU	0 el. + 7 opt.	N/A	0 el. + 7 opt.	0 el. + 7 opt. N/A

## AC 800M Controllers selection guide continued...

Features / CPUs	PM866A	PM867	SM812	PM891
I/O capacity on Modulebus with non-redundant/redundant CPU	Max 96/84 I/O modules	Max 96/84 I/O modules	N/A	Max 84/84 I/O modules
Modulebus scan rate	0 - 100 ms (actual time depending on number of I/O modules), 0 - 300 for PM865 and PM867			
Supply current on Electrical Modulebus	24 V : max 1.0 A 5 V : max 1.5 A			Not supported
I/O capacity on PROFIBUS (remote I/O)	Max 99 I/O stations (max 62 redundant I/O stations), max 24 I/O modules per I/O station (max 12 redundant I/O pairs)			
Ethernet channels	2	2	N/A	2
Ethernet interface	Ethernet (IEEE 802.3), 10 Mbit/s, RJ-45, female (8-pole)			10/100 Mbit/s
Control Network protocol	MMS (Manufacturing Message Service) and IAC (Inter Application Communication)			
Recommended Control Network backbone	100 Mbit/s switched Ethernet			
No of controllers on Control Network	Max 50			
RS-232C interface	2 (one general, 1 for service tool)		N/A	1 for service tool (COM 4)
RS-232C interface (COM3) (non red.conf. only)	RS-232C, 75-19 200 baud, RJ-45 female (8-pole), not opto isolated, full RTS-CTS support		N/A	Not supported
RS-232C interface (COM4) (non red.conf. only)	RS-232C, 9 600 baud, RJ-45 female (8-pole), opto isolated, no RTS-CTS support			
Temperature • Operating • Storage	+5 to +55 °C (+41 to +131 °F) -40 to +70 °C (-40 to +158 °F)			
Temperature changes	3 °C/minutes according to IEC/EN 61131-2			
Altitude	2000 m according to IEC/EN 61131-2			
Pollution degree	Degree 2 according to IEC/EN 61131-2			
Corrosion protection	G3 compliant to ISA 71.04			
Vibration	10 < f < 50 Hz: 0.0375 mm amplitude, 50 < f < 150 Hz: 0.5 g acceleration, 5 < f < 500 Hz: 0.2 g acceleration			
Emitted noise	< 55 dB (A)			
Shock, no package	150 m/s <sup>2</sup> in 11 ms, 20 g in 3 ms			
Relative humidity	5 to 95 %, non-condensing			
Isolation voltage	Type test voltage: 500 V AC (corresponding to 700 V DC)			
Environmental conditions	Industrial			
Protection class	IP20 according to EN 60529, IEC 529			
Certificates and Standards *	CE- marking: Meets EMC directive 2004/108/EC acc. to EN 61000-6-4, EN 61000-6-2 and Low Voltage Directive acc. to EN 61131-2 Electrical Safety: EN 50178, IEC 61131-2, UL 508 Hazardous location: UL 60079-15, cULus Class 1, Zone 2, AEx nA IIC T4, ExnA IIC T4Gc X RoHS compliance: EN 50581:2012 WEEE compliance: DIRECTIVE/2012/19/EU			
ISASecure certified	Yes	Yes		
TÜV Apparoval	No	IEC 61508 SIL3	IEC 61508 SIL3	No
Emission	Tested according to EN 61000-6-4 EMC – Generic Emission Standard, Part 2 – Industrial Environment			
Immunity	Tested according to EN 61000-6-2 EMC – Generic Immunity Standard, Part 2 – Industrial Environment			
Height	186 mm (7.3 in.)	186 mm (7.3 in.)	186 mm (7.3 in.)	186 mm (7.3 in.)
Width	119 mm (4.7 in.)	119 mm (4.7 in.)	59 mm (2.9 in.)	174 mm (6.9 in.)
Depth	135 mm (5.3 in.)	135 mm (5.3 in.)	127.5 (5.0 in.)	94 mm (3.7 in.)
Weight (including base)	1200 g (2.6 lbs)	1200 g (2.6 lbs)	700 g (1.5 lbs)	1600 g (3.5 lbs)

\* For detailed information on each module, please visit: [compacthardwareselector.com](http://compacthardwareselector.com)

## Measurements



Dimensions in mm (in.)

# AC 800M Hardware

## AC 800M used for Compact Control 6.0


08 ISA-S71.04 level G3 Compliance

### 08 ISA-S71.04 level G3 Compliance



Modules are compliant to ISA-S71.04 level G3, unless explicitly stated differently.

## AC 800M Hardware

AC 800M Processor Units

AC 800M Processor Units	Article no.	
 <p><b>PM851AK01 Processor Unit</b> 24 Mhz and 12 MB. Package including:</p> <ul style="list-style-type: none"> <li>• PM851A, CPU</li> <li>• TP830, Baseplate, width=115 mm</li> <li>• TB850, CEX-bus terminator</li> <li>• TB807, ModuleBus terminator</li> <li>• Battery for memory backup (4943013-6)</li> <li>• No license included</li> </ul>	3BSE066485R1	
<p><b>PM856AK01 Processor Unit</b> 24 Mhz and 16 MB. Package including:</p> <ul style="list-style-type: none"> <li>• PM856A, CPU</li> <li>• TP830, Baseplate, width=115 mm</li> <li>• TB850, CEX-bus terminator</li> <li>• TB807, ModuleBus terminator</li> <li>• Battery for memory backup (4943013-6)</li> <li>• No license included</li> </ul>	3BSE066490R1	
<p><b>PM858K01 Processor Unit</b> 33 Mhz and 16 MB. Package including:</p> <ul style="list-style-type: none"> <li>• PM858, CPU</li> <li>• TP830, Baseplate, width =115mm</li> <li>• TB850, CEX-bus terminator</li> <li>• TB807, ModuleBus terminator</li> <li>• TB852, RCU-Link terminator</li> <li>• Battery for memory backup (4943013-6)</li> <li>• No license included</li> </ul> <p>Only compatible with 800xA 6.0.2, Compact Control Builder 6.0.0-1 and onwards. Please see Product Update for more information.</p>	3BSE082895R1	

800M Processor Units	Article no.	
 <p><b>PM858K02 Redundant Processor Unit</b> 33 Mhz and 16 MB. Package including:</p> <ul style="list-style-type: none"> <li>• 2 pcs PM858, CPU</li> <li>• 2 pcs TP830, Baseplate, width =115mm</li> <li>• 2 pcs TB807, ModuleBus terminator</li> <li>• 1 pcs TK850, CEX-bus expansion cable</li> <li>• 1 pcs TK851, RCU-Link cable</li> <li>• 2 pcs Battery for memory backup (4943013-6)</li> <li>• No license included</li> </ul> <p>Only compatible with 800xA 6.0.2, Compact Control Builder 6.0.0-1 and onwards. Please see Product Update for more information.</p>	3BSE082896R1	
 <p><b>PM860AK01 Processor Unit</b> 48 Mhz and 16 MB. Package including:</p> <ul style="list-style-type: none"> <li>• PM860A, CPU</li> <li>• TP830, Baseplate, width=115 mm</li> <li>• TB850, CEX-bus terminator</li> <li>• TB807, ModuleBus terminator</li> <li>• Battery for memory backup (4943013-6)</li> <li>• No license included</li> </ul>	3BSE066495R1	
<p><b>PM862K01 Processor Unit</b> 67 Mhz and 32 MB. Package including:</p> <ul style="list-style-type: none"> <li>• PM862, CPU</li> <li>• TP830, Baseplate, width =115mm</li> <li>• TB850, CEX-bus terminator</li> <li>• TB807, ModuleBus terminator</li> <li>• TB852, RCU-Link terminator</li> <li>• Battery for memory backup (4943013-6)</li> <li>• No license included</li> </ul> <p>Only compatible with 800xA 6.0.2, Compact Control Builder 6.0.0-1 and onwards. Please see Product Update for more information.</p>	3BSE076940R1	
<p><b>PM862K02 Redundant Processor Units</b> Package including:</p> <ul style="list-style-type: none"> <li>• 2 pcs PM862, CPU</li> <li>• 2 pcs TP830, Baseplate, width =115mm</li> <li>• 2 pcs TB807, ModuleBus terminator</li> <li>• 1 pcs TK850, CEX-bus expansion cable</li> <li>• 1 pcs TB851, RCU-Link cable</li> <li>• 2 pcs Battery for memory backup (4943013-6)</li> <li>• No license included</li> </ul> <p>Only compatible with 800xA 6.0.2, Compact Control Builder 6.0.0-1 and onwards. Please see Product Update for more information.</p>	3BSE081636R1	
<p><b>PM866AK01 Processor Unit</b> 133 Mhz and 64 MB. Package including:</p> <ul style="list-style-type: none"> <li>• PM866A, CPU</li> <li>• TP830, Baseplate, width =115mm</li> <li>• TB850, CEX-bus terminator</li> <li>• TB807, ModuleBus terminator</li> <li>• TB852, RCU-Link terminator</li> <li>• Battery for memory backup (4943013-6)</li> <li>• No license included</li> </ul>	3BSE076939R1	
<p><b>PM866AK02 Redundant Processor Unit</b> 133 Mhz and 64 MB. Package including:</p> <ul style="list-style-type: none"> <li>• 2 pcs PM866A, CPU</li> <li>• 2 pcs TP830, Baseplate, width =115mm</li> <li>• 2 pcs TB807, ModuleBus terminator</li> <li>• 1 pcs TK850, CEX-bus expansion cable</li> <li>• 1 pcs TB851, RCU-Link cable</li> <li>• 2 pcs Battery for memory backup (4943013-6)</li> <li>• No license included</li> </ul>	3BSE081637R1	
 <p><b>PM891K01 Processor Unit</b> 450 Mhz and 256 MB. Package including:</p> <ul style="list-style-type: none"> <li>• PM891 CPU Module</li> <li>• TB850, CEX-bus terminator</li> <li>• TB853, RCU Control Link Terminator</li> <li>• No license included</li> </ul>	3BSE053241R1	

800M Processor Units	Article no.	
 <p><b>PM891K02 Redundant Processor Unit</b> 450 Mhz and 256 MB. Package including:</p> <ul style="list-style-type: none"> <li>• 2 pcs PM891K01 Processor Unit</li> <li>• 1 pcs TK850V007 CEX-bus Extension Cable</li> <li>• 1 pcs TK855 RCU Data Link Cable</li> <li>• 1 pcs TK856 RCU Control Link Cable</li> <li>• No license included</li> </ul> <p>Please note: The BC810K02 is not included in the PM891K02 Redundant Processor Unit kit. In order to make hot replacement of the PM891 CPU, the BC810K02 is required to be ordered separately.</p>	3BSE053242R1	
 <p><b>SB822 Rechargeable Battery Unit</b> External DIN-rail mounted rechargeable battery unit including lithium-ion battery, 24V DC connector and connection cable TK821V020. Width=85 mm. Equivalent amount of Lithium metal=0,8 g (0,03 oz)</p>	3BSE018172R1	
<p><b>Compact Flash Card 4GB</b> Compact Flash memory for AC 800M controllers. 4GB.</p>	2PAA121688R1	

## System Units

### Extra Batteries

#### Extra batteries



For extra Lithium batteries (4943013-6), please refer to Business Online (BOL).





## Control Network

#### Control Network

No articles, such as cables, switches, routers, etc, for Control Network are included here. Recommended network components are available in the NE800 chapter further back.

## Communication

### Serial Interfaces on TP830

Serial Interfaces on TP830	Article no.	
 <p>RS232-C interfaces for protocols COMLI, MODBUS, Siemens 3964R, the free-programmable serial protocol etc. Also for connection of engineering tool.</p>		
 <p><b>TK212A Tool cable RJ45 8P8C plug</b> Used to connect a PC to CI801, CI840 or CI840A for download of software. Download to CI801 requires a TK527V030 in addition. RJ45 (male) to D-sub 9 (female). RJ45 8P8C plug (with shell). Cable : UL2464 26 AWG x 8C. Length 3 m.</p>	3BSC630197R1	
 <p><b>TC562 Short Distance Modem</b> Length &lt; 10 km. Point-to-point up to 1 km at 19 200 bps. G1 compliant. Power 24V d.c. To be used with CI531, CI532Vxx, CI534Vxx and CI853. Width = 55 mm Note! This part is exempted from the scope of 2011/65/EU (RoHS) as provided in Article 2 (4)(c), (e), (f) and (j) therein (ref.: 3BSE088609 - EU DECLARATION OF CONFORMITY - ABB Advant MAsTer Process Control System)</p>	3BSC630049R1	
 <p><b>TK853V020 Modem Cable, 2 m</b> Modem cable for serial interfaces on TP830. Cable for connection between modem TC562 and TP830. Length 2 m</p>	3BSC950201R1	

## AC 800M Communications selection guide

Supported Communication modules	PROFIBUS DP	RS-232 C	MB300	INSUM	Drivebus	S100 I/O	Satt I/O	MODBUS TCP	IEC 61850
Module	CI854B	CI853	CI855	CI857	CI858	CI856	CI865	CI867/ CI867A	CI868/ CI868A
Protocol	DP-V1 (PA via Linking Device)	MODBUS RTU master, COMLI master/ slave, Siemens 3964R master, User defined protocols	MasterBus 300	IEEE 802.3	ABB's DriveBus	ABB's S100 I/O	ABB's Satt I/O	MODBUS TCP	IEC 61850

Supported Communication modules	PROFIBUS DP	RS-232 C	MB300	INSUM	Drivebus	S100 I/O	Satt I/O	MODBUS TCP	IEC 61850
Master or slave	Master	Master/slave	Master/slave	Master	Master	Master	Master	Master/slave	
Number of channels	2	2	2	1	1 main, 2 aux	1	1	2	1
Max units on CEX bus	12	12	12	6	2	12	4	12	12
Transmission speed	9.6 - 12,000 kbit/s	75 - 19 200 b/s	10 Mbit/s, 200 Datasets/s	10 Mbit/s	4 Mbit/s	-	-	10/100 Mbit/s (Ch1), 10 Mbit/s (Ch2)	10/100 Mbit/s
Cable redundancy	Yes	No	Yes	No	No	No	No	No	No
Module redundancy	Yes	No	No	No	No	No	No	Yes	No
Hot Swap	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Used together with High Integrity Controller	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes
Connectors	DB female (9-pin)	RJ-45 female (8-pin)	RJ-45 female (8-pin)	RJ-45 female (8-pin)	Fiber optic	Miniribbon (36-pin)	BNC	RJ-45 female (8-pin)	RJ-45 female (8-pin)
24 V current consumption	typ 190 mA	typ 100 mA	typ 150 mA	typ 150 mA	typ 200 mA	typ 200 mA	typ 120 mA	typ 160 mA	typ 160 mA
Protection class	IP20 according to EN60529, IEC 529								
Certification									
CE-marked	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
UL 508	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
UL 60079-15 (Class 1 Zone 2)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RoHS compliance	EN 50581:2012								
WEEE compliance	DIRECTIVE/2012/19/EU								
Dimensions	Width 58 x Height 186 x Depth 135 mm (2.3 x 7.3 x 5.3 in.)								
Weight (including base)	700 g (1.5 lbs)	520 g (1.2 lbs)	700 g (1.5 lbs)	600 g (1.3 lbs)	700 g (1.5 lbs)	600 g (1.3 lbs)	600 g (1.3 lbs)	700 g (1.5 lbs)	700 g (1.5 lbs)



## AC 800M Communications selection guide continued...


Supported Communication modules	AF100	PROFINET IO	EtherNet IP / DeviceNet	OPC UA Client Interface
Module	CI869	CI871A	CI873A	CI874
Protocol	Advant Fieldbus 100	PROFINET IO	EtherNet IP / DeviceNet (via LD800DN)	EtherNet IP / DeviceNet
Master or slave	Slave	Master	Master	Master
Number of channels	2	1	1	1
Max units on CEX bus	4	12	4	4
Transmission speed	Up to 500 Kbit/s	10/100 Mbit/s	10/100 Mbit/s	10/100 Mbit/s
Cable redundancy	Yes	No	No	No
Module redundancy	Yes	Yes	No	No
Hot Swap	Yes	Yes	Yes	Yes
Used together with High Integrity Controller	Yes	Yes	Yes	Yes
Connectors	Phoenix (4-pin)	RJ-45 female (8-pin)	RJ-45 female (8-pin)	RJ-45 female (8-pin)
24 V current consumption	Typ 160 mA	Typ 160 mA	Typ 160 mA	Typ 160 mA
Protection class	IP20 according to EN60529, IEC 529			
UL 508	Yes	Yes	Yes	Yes
UL 60079-15 (Class 1 Zone 2)	Yes	Yes	Yes	Yes
Hazardous location	-	UL 60079-15, cULus Class 1, Zone 2, AEx nA IIC T4, ExnA IIC T4Gc X (UL pending)	UL 60079-15, cULus Class 1, Zone 2, AEx nA IIC T4, ExnA IIC T4Gc X (UL pending)	UL 60079-15, cULus Class 1, Zone 2, AEx nA IIC T4, ExnA IIC T4Gc X (UL pending)
Dimensions	Width 58 x Height 186 x Depth 135 mm (2.3 x 7.3 x 5.3 in.)			
Weight (including base)	700 g (1.5 lbs)	700 g (1.5 lbs)	700 g (1.5 lbs)	700 g (1.5 lbs) Features

For detailed information on each module, please visit: [compacthardwareselector.com](http://compacthardwareselector.com)

Features	BC810	BC820
Article number	3BSE031155R1	3BSE071500R1
Redundancy	Yes	Yes
High Integrity	Yes	No
Performance	Hot swap supported	Hot swap supported
Power supply	Inputs designated L+ and L- 24 V nominal, variation between 19.2 V DC and 30 V DC.	
Power consumption +24 V typ/max	50 mA typical (70 mA max)	120 mA typical (200 mA max)
Power dissipation typ.	1.2 W typical	2.9 W typical
Temperature, Operating	+5 to +55 °C (+41 to +131 °F)	
Temperature, Storage	-40 to +70 °C (-40 to +158 °F)	
Relative humidity	5 to 95 %, non-condensing	
Protection class	IP20 according to EN60529, IEC 529	
CE- marking	Yes	
Electrical Safety	UL508	UL508
Hazardous location	cULus Class 1, Zone 2, AEx nA IIC T4, ExnA IIC T4Gc X	
Marine certificates	ABS, BV, DNV-GL, LR	ABS, BV, DNV-GL, LR
RoHS compliance	DIRECTIVE/2011/65/EU (EN 50581:2012)	
WEEE compliance	DIRECTIVE/2012/19/EU	
Height	185 mm (7.3 in.)	185 mm (7.3 in.)
Width	59 mm (2.9 in.)	59 mm (2.9 in.)
Depth	127.5 (5.0 in.)	127.5 (5.0 in.)
Weight	1.5 kg (3.31 lbs) (BC810K02 package)	1.4 kg (3.1 lbs) (BC820K02 package)


## Communication

### Serial Communication Interface

Serial Communication Interface	Article no.	
 <p>RS232-C interfaces for protocols COMLI, MODBUS, Siemens 3964R, the free-programmable serial protocol etc.</p> <p><b>CI853K01 Dual RS232-C Interface</b>            Package including:</p> <ul style="list-style-type: none"> <li>• CI853, Communication Interface</li> <li>• TP853, Baseplate, width = 60 mm</li> </ul>	3BSE018103R1	


## Communication

### MODBUS TCP

MODBUS TCP	Article no.	
 <p><b>CI867AK01 Modbus TCP Interface</b></p> <p>Package including:</p> <ul style="list-style-type: none"> <li>• CI867, Communication Interface</li> <li>• TP867, Baseplate, width = 60 mm</li> </ul> <p>Only compatible with 800xA 6.0.3.3 and 6.1.1, Compact Control Builder 6.0.0-3 and 6.1.1, and onwards</p>	3BSE092689R1	


## Communication

### PROFIBUS DP

PROFIBUS DP	Article no.	
 <p>The required PROFIBUS network components (Linking Devices, etc) must be ordered from price list 3BDD013232, PROFIBUS Network Components.</p> <p><b>CI854BK01 PROFIBUS-DP/V1 Interface</b>            Package including:</p> <ul style="list-style-type: none"> <li>• CI854B, Communication Interface</li> <li>• TP854, Baseplate, width = 60 mm</li> </ul>	3BSE069449R1	


## Communication

### PROFINET IO

PROFINET IO	Article no.	
 <p><b>CI871AK01 PROFINET IO Interface</b></p> <p>Package including:</p> <ul style="list-style-type: none"> <li>• CI871A, Communication Interface</li> <li>• TP867, Baseplate, width = 60 mm</li> </ul> <p>Only compatible with 800xA 6.0.3.3 and 6.1.1, Compact Control Builder 6.0.0-3 and 6.1.1, and onwards.</p>	3BSE092693R1	


## Communication

### IEC 61850

IEC 61850	Article no.	
 <p><b>CI868AK01 IEC 61850 Interface</b></p> <p>Package including:</p> <ul style="list-style-type: none"> <li>• CI868A, Communication Interface</li> <li>• TP867, Baseplate, width=60mm</li> </ul> <p>Only compatible with 800xA6.0.3.3 and 6.1.1, Compact Control Builder 6.0.0-3 and 6.1.1, and onwards.</p>	3BSE092691R1	


## Communication

### Ethernet/IP

Ethernet/IP	Article no.	
 <p><b>CI873AK01 Ethernet/IP Interface</b></p> <p>Packaging including:</p> <ul style="list-style-type: none"> <li>• CI873A, Communication Interface</li> <li>• TP867, Baseplate. Width=60mm</li> </ul> <p>Only compatible with 800xA 6.0.3.3 and 6.1.1, Compact Control Builder 6.0.0-3 and 6.1.1, and onwards.</p>	3BSE092695R1	


## Communication

### OPC UA

OPC UA	Article no.	
 <p><b>CI874K01 OPC UA Client Interface</b>            OPC UA Communication Interface Package including:</p> <ul style="list-style-type: none"> <li>• CI874, Communication Interface -</li> <li>• TP867, Baseplate</li> </ul>	3BSE090784R1	


## Communication

### Advant Fieldbus 100

Advant Fieldbus 100	Article no.	
 <p><b>CI869K01 AF 100 Interface</b>            Package including:</p> <ul style="list-style-type: none"> <li>• CI869, Communication Interface</li> <li>• TP869, Baseplate, width=60 mm</li> </ul> <p>Note! This part is exempted from the scope of 2011/65/EU (RoHS) as provided in Article 2(4)(c), (e), (f) and (j) therein (Ref.: 3BSE087241 – Technical Overview - ABB Advant Master Process Control System).</p>	3BSE049110R1	


## Communication

### MasterBus 300

MasterBus 300	Article no.	
 <p><b>CI855K01 MB 300 Interface</b>            Package including:</p> <ul style="list-style-type: none"> <li>• CI855, MB300 Interface Module</li> <li>• TP853, Base plate</li> </ul>	3BSE018106R1	


## Communication

### S100 I/O Bus

S100 I/O Bus		Article no.
	<b>CI856K01 S100 I/O Interface</b> Communication between AC 800M and S100 system. Package including: <ul style="list-style-type: none"> <li>• CI856, Communication Interface</li> <li>• TP856, Baseplate, width = 60mm</li> </ul>	3BSE026055R1


## Communication

### Satt I/O

S100 I/O Bus		Article no.
	<b>CI865K01 SATT I/O Interface</b> Package including: <ul style="list-style-type: none"> <li>• CI865, Communication Interface</li> <li>• TP865, Baseplate, width = 60 mm</li> </ul> For SATT 19" rack I/O and S200 I/O via ControlNet. For additional Satt 19" rack I/O components, please refer to Business Online (BOL)	3BSE040795R1


## Communication

### INSUM

INSUM		Article no.
	<b>CI857K01 INSUM Ethernet Interface</b> Package including: <ul style="list-style-type: none"> <li>• CI857, Communication Interface</li> <li>• TP853, Baseplate, width = 60 mm</li> </ul>	3BSE018144R1

## Communication

### DriveBus


DriveBus		Article no.
	<b>CI858K01 DriveBus Interface</b> Package including: <ul style="list-style-type: none"> <li>• CI858, Communication Interface</li> <li>• TP858, Baseplate, width = 60 mm</li> </ul>	3BSE018135R1

## Communication

### Bus Accessories

Bus Accessories	Article no.	
	<b>TK850V007 CEX-Bus Extension Cable</b> Length = 0.7 m Use of TK850V007 needs TK851 as CEX-bus terminator.	3BSC950192R1
	<b>TB850 CEX-Bus Terminator</b> With 25-pin DB25P male connector. With screw fixing. A TB850 CEX-Bus terminator must always be installed on the last unit on the CEX bus.	3BSC950193R1
	<b>TB851 CEX-Bus Terminator</b> When Communication Interface units are mounted on adjacent DIN rails, they are connected by means of a CEX-Bus extension cable (TK850) and terminated using a TB851 CEX-Bus terminator. With 25-pin DB25S female connector. With screw fixing.	3BSC950194R1
	<b>BC810K02 CEX-bus Interconnection Unit</b> Including: <ul style="list-style-type: none"> <li>• 2 pcs BC810, Interconnection Unit</li> <li>• 2 pcs TP857, Baseplate</li> <li>• TK851, Interconnection Cable</li> <li>• 2 pcs TB850, CEX-Bus Terminator</li> </ul>	3BSE031155R1
	<b>BC820K02 CEX-Bus Interconnection Unit</b> Allows AC 800M redundant PM858, PM862 or PM866(A) pair to be up to 200 m apart, cables not included. Including: <ul style="list-style-type: none"> <li>• 2 pcs BC820, CEX-Bus Interconnection Unit</li> <li>• 2 pcs TP850 Baseplate</li> <li>• 2 pcs TK857 RCU-Link Cable</li> <li>• 2 pcs TB850, CEX-Bus Terminator</li> </ul>	3BSE071500R1
	<b>TK851V010 Connection Cable</b> Length = 1.0 m. Used as: <ul style="list-style-type: none"> <li>• RCU Link Cable</li> <li>• BC810 Interconnection Cable</li> </ul>	3BSC950262R1
	<b>TB852 RCU Link Terminator</b> Terminator for RCU Link	3BSC950263R1
	<b>TB853 RCU Control Link Terminator</b> Terminator for RCU Control Link	3BSE057022R1
	<b>TK855 RCU Data Link Cable</b> Length = 1.0 m. Used as: RCU Data Link Cable with PM891.	3BSC950356R1
	<b>TK856 RCU Control Link Cable</b> Length = 1.0 m. Used as: RCU Control Link Cable with PM891.	3BSE057021R1
	<b>TK857V003 RCU Link Cable</b> Length = 0.3 m. Used with BC820.	3BSC950375R1

## Mounting Rails

Mounting Rails	Article no.	
	<b>AI-profile with DIN rail and Cable Duct</b> <b>Mounting 719 mm (28,3")</b> DIN rail length 683 mm (26,9") For RE820.	3BSE022257R1
	<b>AI-profile with DIN Rail and Cable Duct</b> <b>Mounting 592 mm (24")</b> DIN rail length 556 mm (21,9")	3BSE022256R1
	<b>AI-profile with DIN Rail and Cable Duct</b> <b>Mounting 465 mm (19")</b> DIN rail length 429 mm (16,9")	3BSE022255R1

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# Compact Control Builder

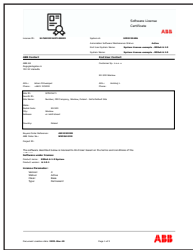


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The Compact Control Builder, is a powerful tool based on the windows environment for creating control solutions and reusable control libraries for the AC 800M Process PLC. From binary logic to advanced regulatory control, from discrete process signals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

## Control System Lifecycle Support Program

### Control System Lifecycle Support Program



Automation Software Maintenance is the ABB Control System Lifecycle management program. Please contact your local ABB representative for more information.

## Compact Control Builder AC 800M

Upgrade Orders	Article no.
<p><b>Compact Control Builder AC 800M 6.1.1</b></p> <p>License for one Compact Control Builder AC 800M, one OPC Server for AC 800M, and one SoftController.</p>	7PAA001118R1
<p><b>OPC Server for AC 800M 6.1.1</b></p> <p>Licenses for one OPC Server for AC 800M.</p>	7PAA001119R1

## Control System Lifecycle Management Program

Automation Software Maintenance is the ABB Control System Lifecycle management program. Please contact your local ABB representative for more information.

AC 500 Connect License	Article no.
<p><b>AC 500 Connect</b></p> <p>License for integration of AC 500 PLC with DCS/HMI system via PLC Connect. One license per DCS/HMI system.</p>	3BSE093893R1



# Control Builder Safe

## Control System Lifecycle Support Program

### Control System Lifecycle Support Program

Automation Software Maintenance is the ABB Control System Lifecycle management program. Please contact your local ABB representative for more information.

## Control Builder Safe

Control Builder Safe, License	Article no.
<p><b>Control Builder Safe 3.0</b> Control Builder Safe 3.0 Includes Engineering Workplace with Control Builder Safe for AC 800M.</p> <p>The Control Builder Safe is limited to max 10 AC 800M HI controllers and 2 500 single tags in total.</p> <p>Please note that the license included in the Control Builder Safe Price List may not be combined with licenses from other Price Lists. Note that software licenses for the hardware is included in the Control Builder Safe license.</p>	3BSE094024R1



## Control Builder Safe - Libraries

Libraries	Article no.
<p><b>PM857 Burner Mgt Library License 6.1.1</b> Control functions for burner management applications. One license is needed for each PM857 using the library.</p>	2PAA122452R1
<p><b>PM863 Burner Mgt Library License 6.1.1</b> Control functions for burner management applications. One license is needed for each PM863 using the library.</p>	2PAA122451R1
<p><b>PM867 Burner Mgt Library License 6.1.1</b> Control functions for burner management applications. One license is needed for each PM867 using the library.</p>	2PAA122420R1

## Enabler for combined PA control and Certified Safety software

License	Article no.
<p><b>AC 800M HI Process license 6.1.1</b> One fixed license feature per AC 800M controller running both non-SIL and SIL applications in the same controller.</p>	2PAA122394R1

## Control Builder Safe - Media

Media and dongles	Article no.
 <p><b>Control Builder Safe 3.0 Media</b> Control Builder Safe 3.0 USB Media</p>	3BSE094025R1
 <p><b>License dongle for USB Port</b> For use in 800xA or Compact HMI systems. To be used with 800xA 5.1 Rev A and later.</p>	3BSE064644R1

## Control Builder Safe 3.0 Expansion

### Control System Lifecycle Support Program

#### Control System Lifecycle Support Program

Automation Software Maintenance is the ABB Control System Lifecycle management program. Please contact your local ABB representative for more information.

## 3.0 Expansion - Libraries

Libraries	Article no.
<p><b>PM857 Burner Mgt Library License 6.1.1</b> Control functions for burner management applications. One license is needed for each PM857 using the library.</p>	2PAA122452R1
<p><b>PM863 Burner Mgt Library License 6.1.1</b> Control functions for burner management applications. One license is needed for each PM863 using the library.</p>	2PAA122451R1
<p><b>PM865 Burner Mgt Library License 6.1.1</b> Control functions for burner management applications. One license is needed for each PM865 using the library.</p>	2PAA122419R1
<p><b>PM867 Burner Mgt Library License 6.1.1</b> Control functions for burner management applications. One license is needed for each PM867 using the library.</p>	2PAA122420R1

## Enabler for combined PA control and Certified Safety software

License	Article no.
<p><b>AC 800M HI Process license 6.1.1</b> One fixed license feature per AC 800M controller running both non-SIL and SIL applications in the same controller.</p>	2PAA122394R1

## Control Builder Safe 2.0 Expansion

## Control System Lifecycle Support Program

### Control System Lifecycle Support Program

Automation Software Maintenance is the ABB Control System Lifecycle management program. Please contact your local ABB representative for more information.

## 2.0 Expansion - Libraries

Libraries	Article no.
<b>PM865 Burner Management Library License</b> Control functions for burner management applications. One license is needed for each PM865 using the library.	3BSE086362R1
<b>PM867 Burner Management Library License</b> Control functions for burner management applications. One license is needed for each PM867 using the library.	3BSE086363R1

## Enabler for combined PA control and Certified Safety software

License	Article no.
<b>AC 800M High Integrity and Process license</b> One fixed license feature per AC 800M controller running both non-SIL and SIL applications in the same controller.	3BSE078759R1

# S800 I/O Modules

**S800 I/O is a comprehensive and modular process I/O system that communicates with parent controllers either direct connected using the Modulebus or over industry-standard field buses. Thanks to its broad connectivity it fits a wide range of process controllers from ABB and others.**

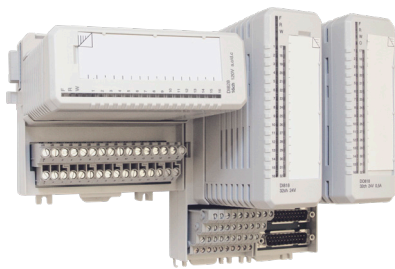
By permitting installation in the field, close to sensors and actuators, S800 I/O reduces the installation cost by reducing the cost of cabling. And thanks to features such as hot swap of modules, on-line reconfiguration and redundancy options, it contributes to keeping production – and thereby profits up.

Through the FCI (Field communication Interfaces) different methods for connecting the S800 I/O family to a controller are available: Modulebus, Profibus DP and Ethernet.

S800 I/O features include:

- Comprehensive coverage
- Flexible configuration and installation
- Ease of set up
- Reliability and accuracy
- HART pass-through
- Redundancy also on I/O module level
- High accuracy time tagging
- Defined outputs at communication errors
- I/O modules with Intrinsic Safety interfaces

With its cost-effective design and just 59 mm depth installation, S800L I/O modules are the perfect choice for PLC applications. Robust mechanics, one-piece handling, easy mounting and smart connections save your time in all phases of installation. The comprehensive S800 I/O system consists of more than 40 different module types to respond to every need. Classification of corrosive protection, electrical safety, hazardous location and marine certification brings the possibility to install S800 I/O in a wide variety of applications. S800 I/O is installed with more than 30 million channels worldwide.



S800 I/O



S800 I/O



S800L I/O



S800 HI I/O

## S800 I/O Modules

<b>Digital input modules</b>	
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.
<b>Pulse input module</b>	
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.
<b>Digital output modules</b>	
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.).
<b>Analog input modules</b>	
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, $\pm 0(2)$ -10 V, $\pm 0(4)$ -20 mA, 14 bits + sign.
AI825	Individually galvanically isolated channels, 4 channels, $\pm 0(2)$ -10 V, $\pm 0(4)$ -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.
<b>Analog output modules</b>	
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: $\pm 0(2)$ -10 V, $\pm 0(4)$ -20 mA, resolution: 12 bits + sign, load: 500 ohms (current) / 5 kohms (voltage), short-circuit-proof.
<b>Intrinsic-safety modules</b>	
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.
<b>Redundant modules</b>	
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.
<b>Redundant modules - HI Integrity</b>	
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

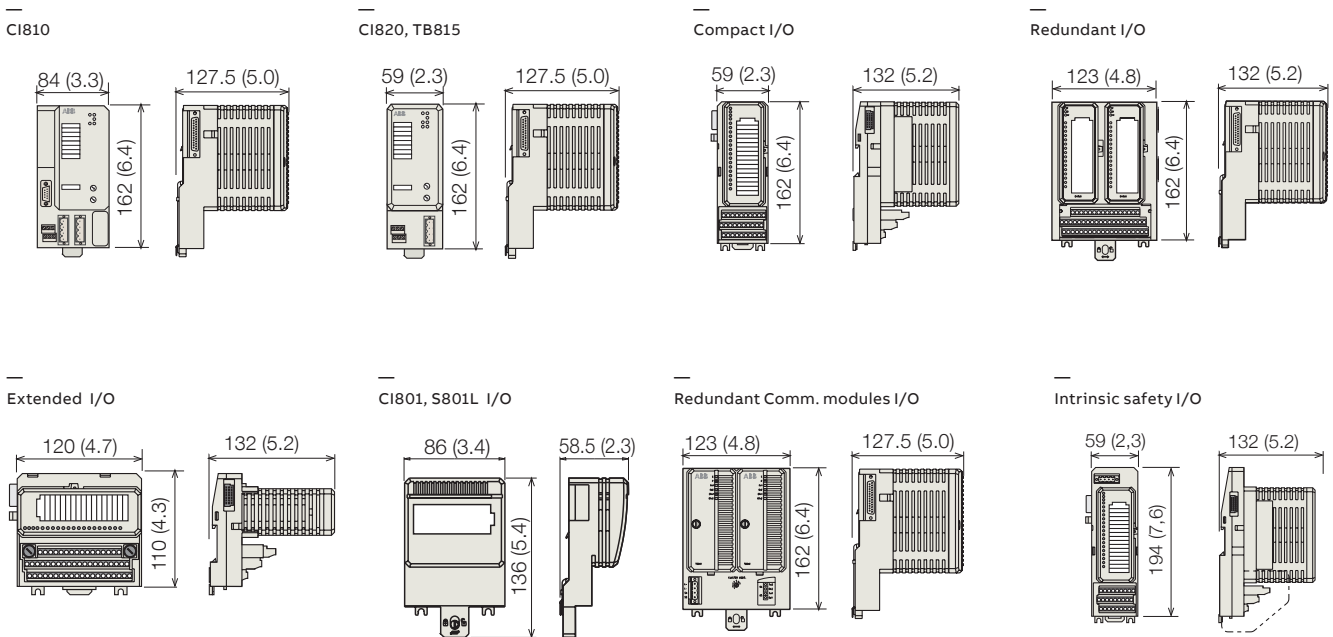
## S800L I/O Modules

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](http://compacthardwareselector.com)

## Measurements



Dimensions in mm (in.)



## S800 I/O

### Communication interfaces

Feature	CI801	CI840A	CI845	TC810
Article number	3BSE022366R1	3BSE041882R1	3BSE075853R1	3BSE076220R1
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. Supervisory functions of I/O ModuleBus. Isolated power supply to I/O modules. OSP handling and configuration. Single/redundant 24V power supply with built-in voting and power supply supervision. Hot Configuration In Run. HART pass-through and Sequence of Events. Use as single or redundant, together with TC810 and TU860.	Ethernet Adapter for copper media with built in 2-port switch. Hosts two RJ45 ports. Use as single or redundant, together with CI845 and TU860.
Redundant	No	Yes	Yes	Yes
Power Input	24 V d.c. (19.2 - 30)	24 V d.c. (19.2 - 30)	24 V d.c. (19.2 - 30)	24 V d.c. (19.2 - 30)
Power Input Fuse	2 AF	2 AF	2 AF	2 AF
Power Consumption at 24 V d.c.	140 mA	190 mA	150 mA	60 mA
Power Supply Monitoring Inputs	N/A	Max. input voltage: 30 V Min. input voltage for high level: 15 V Max. input voltage for low level: 8 V		
Power Dissipation	5.4 W	7.7 W	5 W	1.1 W
Maximum Ambient Temperature	55°C (131°F) Horizontal mounted 40°C (104°F) Vertical mounted	55°C (131°F) Horizontal mounted 40°C (104°F) Vertical mounted	-40°C (-40°F) to +70°C (158°F)	-40°C (-40°F) to +70°C (158°F)
Electrical ModuleBus	Maximum of 12 I/O modules	Maximum of 12 single I/O modules or 6 pairs of redundant I/O modules	Maximum of 12 single I/O modules or 12 pairs of redundant I/O modules	N/A
Optical ModuleBus	Maximum of 7 I/O clusters via TB842	Maximum of 7 I/O clusters via TB842	N/A	N/A
Max optical cable length	N/A	N/A	N/A	N/A
Power Output - ModuleBus	24 V max. = 1.5 A fused <sup>(1)</sup> . 5 V max. = 1.5 A current lim.	24 V max. = 1.5 A current lim. 5 V max. = 1.5 A current lim.	24 V max. = 2x 1.5 A current lim. 5 V max. = 2x 1.5 A current lim.	N/A
Module termination units	N/A	TU846 or TU847	TU860 or TU865	TU860 or TU865
MTU Keying code	N/A	AA	A	A
Dielectric test voltage	500 V a.c.	500 V a.c.	500 V a.c.	500 V a.c.
Rated insulation voltage	50 V	50 V	50 V	50 V
Width	85.8 mm (3.38 in.)	54 mm (2.13 in.)	33 mm (1.18 in.)	110 mm (4.33 in.)
Depth	58.5 mm (2.30 in.)	96 mm (3.78 in.)	121.7 mm (4.79 in.)	76.3 mm (3.0 in.)
Height	136 mm (5.35 in.)	119 mm (4.69 in.)	135 mm (5.31 in.)	24.5 mm (0.96 in.)
Weight	300 g (0.66 lbs.)	200 g (0.44 lbs.)	225 g (0.49 lbs.)	105 g (0.23 lbs.)
Climatic operating conditions	0 to +55 °C (Storage -25 to +70 °C), RH=5 to 95 % no condensation, IEC/EN 61131-2 <sup>(2)</sup>		-40 to +70 °C (Storage -40 to +85 °C), RH=5 to 95 % no condensation, IEC/EN 61131-2	
Certificates and standards <sup>(3)</sup>	CE mark: Yes Electrical safety: IEC 61131-2, UL 508 Hazardous Location: C1 Div 2 cULus, C1 Zone 2 cULus, ATEX Zone 2 <sup>(*)</sup> Marine certification: ABS, BV, DNV-GL, LR <sup>(*)</sup> Corrosive atmosphere ISA-S71.04: G3 Pollution degree: Degree 2, IEC 60664-1 Mechanical operating conditions: IEC/EN 61131-2 EMC: EN 61000-6-4 and EN 61000-6-2 Overvoltage categories: IEC/EN 60664-1, EN 50178 Equipment class: Class I according to IEC 61140; (earth protected) RoHS compliance: DIRECTIVE/2011/65/EU (EN 50581:2012) WEEE compliance: DIRECTIVE/2012/19/EU			

(1) Fuse type: Subminiature fuse 3.15 A

- LT-5 Fast-Acting 622 series according to Littelfuse
- TR5-F Fuse-link No. 370 according to Wickmann
- MSF 250 according to Schurter

(2) 0 to +40 °C compact MTUs on vertical DIN-rail. Approvals are issued for +5 to +55 °C.

(3) For detailed information on each module, please visit: [compacthardwareselector.com](http://compacthardwareselector.com)

(\*)Pending for CI845/TC810



## S800 I/O

### Extended warranty for S800 I/O Hardware

#### Extended warranty for S800 I/O Hardware

We can offer an extended warranty for one, two, or three years in addition to normal warranty conditions for S800 I/O Hardware. See price list Extended Warranty 3BSE049908.

## S800 I/O






### ISA-S71.04 level G3 Compliance

#### ISA-S71.04 level G3 Compliance

Modules are compliant to ISA-S71.04 level G3, unless explicitly stated differently.

## Communication







### Field Communication Interface

Field Communication Interface	Article no.
 <p><b>CI801 PROFIBUS FCI S800 Interface</b> Including:</p> <ul style="list-style-type: none"> <li>• 1 pce Power Supply Connector</li> <li>• 1 pce TB807 Modulebus Terminator</li> </ul> <p>The basic system software loaded in CI801 does not support the following I/O modules: DI825, DI830, DI831, DI885, AI880, DI880 and DO880.</p>	3BSE022366R1
 <p><b>CI840A PROFIBUS DP-V1 Interface</b></p> <p>For redundant communication interface two CI840A, and one TU847 or one TU846 must be ordered.</p>	3BSE041882R1
 <p><b>CI845 EthernetFCI module</b> 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. For Select I/O High Integrity SIL3 one HI880 is needed.</p>	3BSE075853R1
 <p><b>TU846 MTU for CI840</b> For 1+1 CI840 Supporting redundant I/O. Vertical mounting of modules. Including:</p> <ul style="list-style-type: none"> <li>• 1 pcs Power Supply Connector</li> <li>• 2 pcs TB807 Modulebus Terminator</li> </ul>	3BSE022460R1
 <p><b>TU847 MTU for CI840</b> For 1+1 CI840 Supporting non-redundant I/O. Vertical mounting of modules. Supporting non-redundant I/O. Including:</p> <ul style="list-style-type: none"> <li>• 1 pcs Power Supply Connector</li> <li>• 1 pcs TB807 Modulebus Terminator</li> </ul>	3BSE022462R1

## Communication

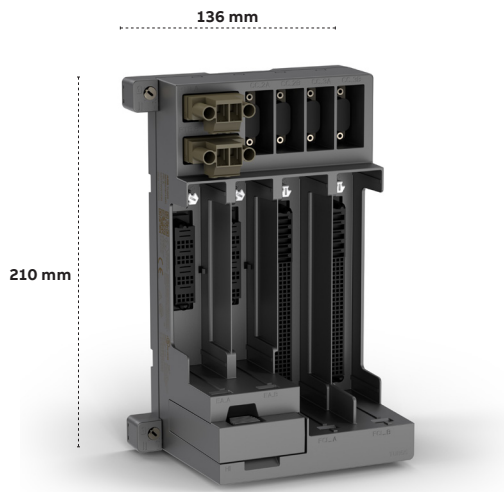
### Field Communication Interface

Field Communication Interface	Article no.
 <p><b>TU860 MTU for Ethernet FCI and S800</b> Ethernet Fieldbus Communication Interface Module Termination Unit for connection of single or redundant S800 I/O. Supports single or redundant Ethernet Fieldbus Communication Interface Module and single or redundant Ethernet Adapter. Mounting on vertical DIN-rail. Including: - 1 pcs TL814K01 Empty slot protector HI Module - 2 pcs TB807 Modulebus Terminator</p>	3BSE078710R1
 <p><b>TC810 Ethernet Adapter for Ethernet FCI</b> Ethernet Adapter for copper media with built in 2-port switch. Hosts two RJ45 ports. Use as single or redundant.</p>	3BSE076220R1
 <p><b>TC811 Ethernet Adapter for Ethernet FCI</b> Ethernet Adapter for fiber optic media with 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.</p>	3BSE078714R1
 <p><b>TS810K01 Screw Lugs</b> Screw lugs for TU860/TU865 and TUS810. 100 units.</p>	3BSE090351R1
 <p><b>TL810K01 Empty slot protector for FCI</b> Empty slot protector for a Fieldbus Communication Interface slot on the Ethernet FCI Module Termination Unit. 10 pieces per package.</p>	3BSE088170R1
 <p><b>TL811K01 Empty slot protector for EA</b> Empty slot protector for a Ethernet Adapter slot on the Ethernet FCI MTU. 10 pieces per package.</p>	3BSE088171R1

Field Communication Interface	Article no.
 <p><b>Extra, Front label set FCI</b> Sheet with 12 labels. For TB820</p>	3BSC970089R1
 <p><b>Extra, Label set, item design. FCI</b> Sheet with 40 labels. For TB820</p>	3BSC970091R1
 <p><b>Mounting kit, vertical CI801/CI840/TN840</b> For vertical mounting of CI801, CI840, and TB840 on a vertical DIN rail.</p>	3BSE040749R1
 <p><b>Mounting profile kit DIN rails and duct</b> DIN rail length: 1650 mm + 210 mm (65") + (8.3")</p>	3BSE049768R1
 <p><b>Al-profile with DIN Rail, Cable Duct, 19"</b> Mounting 465 mm (19") DIN rail length 429 mm (16,9")</p>	3BSE022255R1
 <p><b>Al-profile with DIN Rail, Cable Duct, 24"</b> Mounting 592 mm (24") DIN rail length 556 mm (21,9")</p>	3BSE022256R1

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## TU860 Measurements



**TU860 Ethernet FCI MTU**


## Communication

### Upgrade Kit and Tool Cables

Upgrade Kit and Tool Cables	Article no.	
 <p><b>TK212A Tool cable RJ45 8P8C plug</b> Used to connect a PC to CI801, CI840 or CI840A for download of software. Download to CI801 requires a TK527V030 in addition. RJ45 (male) to Dsub-9 (female), length 3 m. RJ45 8P8C plug (with shell). Cable : UL2464 26 AWG x 8C.</p>	3BSC630197R1	
 <p><b>FS801K01 Service adapter kit</b> Including: • 1 pcs Service adapter FS801 • 1 pcs cable TK802</p> <p>For connection of CI801 to PC a cable TK212A, is also needed.</p>	3BSE038407R1	

## S800 I/O

### S800 I/O Modules

Analog Input Modules	Article no.	
 <p><b>AI810 Analog input 8 ch.</b> 0(4)..20mA, 0..10V, 12Bit, single ended. Use Module Termination Unit TU810, TU812, TU814, TU818, TU830, TU833, TU835, TU838, TU850.</p>	3BSE008516R1	
<p><b>AI815 Analog Input HART 8 ch.</b> 0(4)..20mA, 0(1)..5V, 12bit, single ended. Current limited transmitter power distribution. Use Module Termination Unit TU810, TU812, TU814, TU818, TU830, TU833, TU835, TU838.</p>	3BSE052604R1	
<p><b>AI820 Analog input 4 ch.</b> +-20mA, 0(4)...20mA, +-10V, +-5V, 0(1)...5V, diff., 50V CMV., Rin(curr)250 Ohms, 14bit + sign. Individually galvanic isolated channels. Use Module Termination Unit TU810, TU812, TU814, TU830, TU833.</p>	3BSE008544R1	
<p><b>AI825 Analog Input 4 ch.</b> -20..20mA, -10..10V, 14bit + sign. Individually galvanic isolated channels. Use Module Termination Unit TU811, TU813, TU831.</p>	3BSE036456R1	
<p><b>AI830A Analog input RTD 8 ch.</b> Pt100, Ni100/120, Cu10, R. Use Module Termination Unit TU810, TU812, TU814, TU830, TU833.</p>	3BSE040662R1	
<p><b>AI835A Thermocouple/mV Input 8 ch.</b> Use Module Termination Unit TU810, TU812, TU814, TU818, TU830, TU833.</p>	3BSE051306R1	
<p><b>AI843 Termocouple/mV Input S/R 8 ch.</b> Single or redundant. 16bit. Use Module Termination Unit TU818, TU830, TU833, TU842, TU843, TU852.</p>	3BSE028925R1	

## S800 I/O

### S800 I/O Modules

Analog Input Modules	Article no.	
<b>AI845 Analog Input S/R HART 8 ch.</b> 0(4)..20mA, 0(1)..5V, 12bit, single ended. Current limited transmitter power distribution. Advanced on-board diagnostics. HART support. Use Module Termination Unit TU810, TU812, TU814, TU818, TU830, TU833, TU835, TU838, TU844, TU845, TU854.	3BSE023675R1	
<b>AI890 Analog Input IS 8 ch.</b> 0 (4)...20mA single ended. Intrinsic Safety Interface. Use Module Termination Unit TU890 or TU891.	3BSC690071R1	
<b>AI893 Analog Input TC/RTD IS 8 ch.</b> For TC and RTD sensors. Intrinsic Safety Interface. Use Module Termination Unit TU890 or TU891.	3BSC690141R1	
<b>AI895 Analog Input IS HART 8 ch.</b> 4...20mA single ended. Intrinsic Safety Interface and HART. Use Module Termination Unit TU890 or TU891.	3BSC690086R1	

## S800 I/O

### S800 I/O Modules



Analog Output Modules	Article no.	
<b>AO810V2 Analog Output 8 ch.</b> 0(4)..20mA, 14bit RLmax 500/850 Ohms. Use module Termination Unit TU810, TU812, TU814, TU830 or TU833.	3BSE038415R1	
<b>AO815 Analog Output HART 8 ch.</b> 1x8 ch. 4..20mA, 12bit, RLmax 750 ohm. Use Module Termination Unit TU810, TU812, TU814, TU830 or TU833.	3BSE052605R1	
<b>AO820 Analog Output 4 ch.</b> +-20mA, 0(4)..20mA, +-10V, 12bit+sign. Individually galvanic isol. channels. RL max 500 Ohms. Use Module Termination Unit TU810, TU812, TU814, TU830, TU833.	3BSE008546R1	
<b>AO845A Analog Output S/R HART 8 ch.</b> (0) 4..20mA, 12bit, RLmax 750 ohm. Single or redundant. Loop supervised DI function. Use Module Termination Unit TU810, TU812, TU814, TU830, TU833, TU842, TU843, TU852.	3BSE045584R1	
<b>AO890 Analog Output IS 8 ch.</b> 0 (4)...20mA. RL max 750 ohm. Intrinsic Safety Interface. Use Module Termination Unit TU890 or TU891.	3BSC690072R1	
<b>AO895 Analog Output IS HART 8 ch.</b> 0(4)..20mA. RL max 750 ohm. Intrinsic Safety Interface and HART. Use Module Termination Unit TU890 or TU891.	3BSC690087R1	

## S800 I/O

### S800 I/O Modules

Digital Input Modules	Article no.	
 <p><b>DI810 Digital Input 24V 16 ch.</b> Isolated in two groups of 8 channels. Use Module Termination Unit TU810, TU812, TU814, TU818, TU830, TU833, TU838, TU850.</p>	3BSE008508R1	
<p><b>DI811 Digital input 48V 16 ch.</b> Isolated in two groups of 8 channels. Use Module Termination Unit TU810, TU812, TU814, TU818, TU830, TU833, TU838, TU850.</p>	3BSE008552R1	
<p><b>DI814 Digital Input 24V Current 16 ch.</b> Isolated in two groups of 8 channels. Current sourcing. Use Module Termination Unit TU810, TU812, TU814, TU830, TU833, TU838.</p>	3BUR001454R1	
<p><b>DI818 Digital Input 24V 32 ch.</b> Isolated in two groups of 16 channels. Use Module Termination Unit TU818, TU819, TU830.</p>	3BSE069052R1	
<p><b>DI820 Digital Input 120V a.c. 8 ch.</b> Individually galvanic isolated channels. Use Module Termination Unit TU811, TU813, TU831, TU839, TU851.</p>	3BSE008512R1	
<p><b>DI821 Digital Input 230V 8 ch.</b> Individually galvanic isolated channels. Use Module Termination Unit TU811, TU813, TU831, TU839, TU851.</p>	3BSE008550R1	
<p><b>DI825 Digital Input 125V SOE 8 ch.</b> Individually Isolated channels. Use Module Termination Unit TU811, TU813, TU831.</p>	3BSE036373R1	
<p><b>DI828 Digital Input, 120V 16 ch.</b> Individually galvanic isolated channels. Use Module Termination Unit TU851.</p>	3BSE069054R1	
<p><b>DI830 Digital Input 24V SOE 16 ch.</b> Isolated in two groups of 8 channels. Use Module Termination Unit TU810, TU812, TU814, TU818, TU830, TU833, TU838, TU850.</p>	3BSE013210R1	
<p><b>DI831 Digital Input 48V SOE 16 ch.</b> Isolated in two groups of 8 channels. Use Module Termination Unit TU810, TU812, TU814, TU818, TU830, TU833, TU838, TU850.</p>	3BSE013212R1	
<p><b>DI840 Digital Input 24V S/R 16 ch.</b> Single or redundant. Advanced On-Board diagnostics. Use Module Termination Unit TU810, TU812, TU814, TU818, TU830, TU833, TU838, TU842, TU843, TU852.</p>	3BSE020836R1	
<p><b>DI890 Digital Input IS 8 ch.</b> Intrinsic Safety Interface. Individually galvanic isolated. Use Module Termination Unit TU890 or TU891.</p>	3BSC690073R1	


## S800 I/O

### S800 I/O Modules

Digital Output Modules	Article no.	
	<p><b>DO810 Digital Output 24 V 16 ch.</b> Isolated in two groups of 8 channels. 0.5A, Short circuit proof. Use Module Termination Unit TU810, TU812, TU814, TU830, TU833.</p>	3BSE008510R1
	<p><b>DO814 Digital Output Current 16 ch.</b> Isolated in two groups of 8 channels. 0,5A , shortcut circuit proof. Current sinking. Use Module Termination Unit TU810, TU812, TU814, TU830, TU833, TU838.</p>	3BUR001455R1
	<p><b>DO815 Digital Output 24V 8 ch.</b> Isolated in two groups of 4 channels. 2.0A short circuit proof. Use Module Termination Unit TU810, TU812, TU814, TU830, TU833.</p>	3BSE013258R1
	<p><b>DO818 Digital Output 24V 32 ch.</b> Isolated in two groups of 16 channels. 0.5A, Short circuit proof. Use Module Termination Unit TU818, TU819, TU830.</p>	3BSE069053R1
	<p><b>DO820 Digital Output Relay 8 ch.</b> 24-230V a.c./d.c. 3A, <math>\cos \phi &gt; 0.4</math>, d.c. 42W. Individually galvanic isolated channels. Use Module Termination Unit TU811, TU813, TU831, TU836, TU837, TU851.</p>	3BSE008514R1
	<p><b>DO821 Digital Output Relay 8 ch.</b> 24-230V a.c./d.c.. 3A, <math>\cos \phi &gt; 0.4</math>, d.c. 42W, normal closed. Individually galvanic isolated channels. Use Module Termination Unit TU811, TU813, TU831, TU836, TU837, TU851.</p>	3BSE013250R1
	<p><b>DO828 Digital Output 16 ch.</b> Individually galvanic isolated channels. 5-250V a.c and 5-125V d.c, max 2A. Use Module Termination Unit TU851.</p>	3BSE069055R1
	<p><b>DO840 Digital Output 24V S/R 16 ch.</b> Isolated in two groups of 8 channels. Single or redundant. 0.5A. Advanced On-board diagnostics. Use Module Termination Unit TU810, TU812, TU814, TU830, TU833, TU842, TU843, TU852.</p>	3BSE020838R1
	<p><b>DO890 Digital Output IS 4 ch.</b> Intrinsic Safety Interface. Individually galvanic isolated channels. Use Module Termination Unit TU890 or TU891.</p>	3BSC690074R1


## S800 I/O

### Pulse Counting Modules

Pulse Counting Modules	Article no.	
	<p><b>DP820 Pulse Counter RS-422</b> 2 ch bidirectional pulse counters and frequency measurement, current, 5V, (12v), 24V. 1,5MHz Rated isol 50V Use Module Termination Unit TU810, TU812, TU814, TU830, TU833.</p>	3BSE013228R1
	<p><b>DP840 Pulse Counter S/R 8 ch.</b> Pulse Counter or Frequency Measurement Module. Redundant or single. 0.5Hz - 20kHz. Use Module Termination Unit TU810, TU812, TU814, TU818, TU830, TU833, TU842, TU843, TU844, TU845, TU852, TU854.</p>	3BSE028926R1



## S800 I/O

### Label sets for I/O Modules

Label sets for I/O Modules	Article no.
 <p><b>Transparent film fronts</b> Set of 12 transparent plastic film fronts. To be used with ordinary paper quality.</p>	3BSE072159R1
<p><b>White colored plastic coated paper</b> One sheet of size A4. Original paper quality. No need to use transparent films.</p>	3BSE072160R1

## S800 I/O

### High Integrity I/O Modules

High Integrity I/O Modules	Article no.
<p>The modules can only be connected to a AC800M controller PM857, PM863, PM865 or PM867. Direct connection to the modulebus and via the optical modulebus via TB840 (not TB820).</p>	
 <p><b>AI880A Analog Input HI S/R HART 8 ch</b> (0) 4..20mA. 12bit. HART communication. Single or redundant. High integrity, certified for SIL3. Requires configuration according to Safety Manual. Loop supervised DI function. Use Module Termination Unit TU834, TU844, TU845, TU854.</p>	3BSE039293R1
<p><b>DI880 Digital Input HI S/R 16 ch</b> 24V d.c. inputs. High integrity, certified for SIL3. Single or redundant. Requires configuration according to Safety Manual. Use Module Termination Unit TU810, TU812, TU814, TU818, TU830, TU833, TU838, TU842, TU843, TU852.</p>	3BSE028586R1
<p><b>DO880 Digital Output HI S/R 16 ch</b> 24V d.c., 0,5A Outputs. High integrity, certified for SIL3. Single or redundant. Requires configuration according to Safety Manual. Use Module Termination Unit TU810, TU812, TU814, TU830, TU833, TU842, TU843, TU852.</p>	3BSE028602R1
 <p><b>SS823 Voter and Over Voltage Protection</b> Required in a High Integrity 800xA system. One per power supply unit, also at redundant configurations. Input d.c. 24 V. Dual 24 V to single 24 V, 20A. Certified for SIL3 according to IEC 61508 DIN rail mounted.</p>	3BSE038226R1



## S800 I/O

### Communication interfaces - TB and TUs

Feature	TB820V2	TB825	TB826	TB840A	TB842
Article number	3BSE013208R1	3BSE036634R1	3BSE061637R1	3BSE037760R1	3BSE022464R1
Function	2 fiber optic ports to optical ModuleBus ModuleBus (electrical) to the I/O Modules Supervisory functions of I/O ModuleBus and power supply Isolated power supply to I/O modules Input power fused.	ModuleBus optical media converter from plastic or HCS fibre with versatile link connector to glass fibre with ST connector. Allows distribution of the optical ModuleBus up to 1000 m per cluster in star configurations.	ModuleBus optical media converter from plastic or HCS fibre with versatile link connector to glass fibre with SC connector. Allows distribution of the optical ModuleBus up to 5000 m per cluster in star configurations.	2 fiber optic ports to optical ModuleBus ModuleBus (electrical) to the I/O Modules Supervisory functions of I/O ModuleBus and power supply Isolated power supply to I/O modules Input power fused.	Communication interface between the CI801 or CI840/CI840A FCI and the TB820/TB820V2/TB840/TB840A ModuleBus Modem of an I/O cluster or ABB drives units via the Optical ModuleBus. TB842 connects to CI801 via TB806 and to CI840/CI840A via TU847 and TB806 for single I/O or via TU846 and TB846 for redundant I/O.
Redundant	No	No	No	Yes	Yes
Power Input	24 V d.c. (19.2 - 30)	24 V d.c. (19.2 - 30)	24 V d.c. (19.2 - 30)	24 V d.c. (19.2 - 30)	N/A
Power Input Fuse	2 AF	2 AF	2 AF	2 AF	
Power Consumption at 24 V d.c.	100 mA	96 mA	96 mA	120 mA	20 mA
Power Supply Monitoring	Max. input voltage: 30 V Min. input voltage for high level: 15 V Max. input voltage for low level: 8 V	N/A	N/A	Max. input voltage: 30 V Min. input voltage for high level: 15 V Max. input voltage for low level: 8 V	N/A
Power Dissipation	6 W	2.3 W	2.3 W	6 W	0.5 W
Maximum Ambient Temperature	55°C (131°F) Horizontal mounted 40°C (104°F) Vertical mounted	55°C (131°F) Horizontal mounted 40°C (104°F) Vertical mounted	55°C (131°F) Horizontal mounted 40°C (104°F) Vertical mounted	55°C (131°F) Horizontal mounted 40°C (104°F) Vertical mounted	55° C (131° F) horizontal mounted. 40° C (104° F) vertical mounted
Electrical ModuleBus	Maximum of 12 I/O modules	N/A	N/A	Maximum of 12 single I/O modules or 6 pairs of redundant I/O modules	N/A
Optical ModuleBus	Maximum of 7 I/O clusters, Wavelength 650 nm	Local optical ModuleBus 1 and 2 with versatile link contacts, plastic or HCS. Field optical ModuleBus with ST bayonet contacts.	Local optical ModuleBus 1 and 2 with versatile link contacts, plastic or HCS. Field optical ModuleBus with SC contacts.	Maximum of 7 I/O clusters, Wavelength 650 nm.	Fiber optic interface, one transmit and one receive connection for max. 10 Mbit/s. Wavelength 650 nm
Max optical cable length	Local cable: Plastic Optical Fiber (POF): Max 15 m. Hard Clad Silica (HCS): Max 200 m.	Local cable: Plastic Optical Fiber (POF): Max 15 m. Hard Clad Silica (HCS): Max 200 m. Field cable: Glass Optical fiber, multimode, 62.5/125 µm: Max 1 000 m. Glass Optical fiber, multimode, 50/125 µm: Max 100 m.	Local cable: Plastic Optical Fiber (POF): Max 15 m. Hard Clad Silica (HCS): Max 200 m. Field cable: Glass Optical fiber, single mode, 9/125 µm: Max 5 000 m.	Local cable: Plastic Optical Fiber (POF): Max 15 m. Hard Clad Silica (HCS): Max 200 m.	The module is equipped with Transmitter/Receiver for up to 10 Mbit/s. Both plastic and HCS (Hard Clad Silica) optic fiber with connectors (Agilent's, former Hewlett-Packard, Versatile Link) can be used with the TB842.
Power Output - ModuleBus	24 V max. = 1.4 A 5 V max. = 1.5 A	N/A	N/A	24 V max. = 1.4 A 5 V max. = 1.5 A	
Module termination units	N/A	N/A	N/A	TU807, TU840, TU841, TU847, TU848 or TU849	TB806, TU846 and TU847
MTU Keying code	N/A	N/A	N/A	AB	N/A
Dielectric test voltage	500 V a.c.	500 V a.c.	500 V a.c.	500 V a.c.	N/A
Rated insulation voltage	50 V	50 V	50 V	50 V	N/A

Feature	TB820V2	TB825	TB826	TB840A	TB842
Width	58 mm (2.39 in.)	85.6 mm (3.37 in.)	85.6 mm (3.37 in.)	54 mm (2.13 in.)	17.6 mm (0.69 in.)
Depth	122 mm (4.8 in.)	58.5 mm (2.30 in.)	58.5 mm (2.30 in.)	96 mm (3.78 in.)	42.3 mm (1.67 in.)
Height	170 mm (6.7 in.)	136 mm (5.35 in.)	136 mm (5.35 in.)	119 mm (4.69 in.)	56.7 mm (2.23 in.)
Weight	300 g (0.66 lbs.)	210 g (0.46 lbs.)	210 g (0.46 lbs.)	200 g (0.44 lbs.)	90g (0.20 lbs.)
Climatic operating conditions	0 to +55 °C (Storage -25 to +70 °C), RH=5 to 95 % no condensation, IEC/EN 61131-2 <sup>(2)</sup>				
Certificates and standards <sup>(3)</sup>	CE mark: Yes Electrical safety: IEC 61131-2, UL 508 Hazardous Location: C1 Div 2 cULus, C1 Zone 2 cULus, ATEX Zone 2 Marine certification: ABS, BV, DNV-GL, LR (*) Corrosive atmosphere ISA-S71.04: G3 Pollution degree: Degree 2, IEC 60664-1		Mechanical operating conditions: IEC/EN 61131-2 EMC: EN 61000-6-4 and EN 61000-6-2 Overvoltage categories: IEC/EN 60664-1, EN 50178 Equipment class: Class I according to IEC 61140; (Earth protected) RoHS compliance: EN 50581:2012 WEEE compliance: DIRECTIVE/2012/19/EU		

(2) 0 +40 °C compact MTUs on vertical DIN-rail. Approvals are issued for +5 to +55 °C.

(3) For detailed information on each module, please visit: [compacthardwareselector.com](http://compacthardwareselector.com)

(\*) No Marine cert. for TB826

Feature	TU807	TU840	TU841	TU846
Article number	3BSE039025R1	3BSE020846R1	3BSE020848R11	3BSE022460R1
Function	Module termination unit (MTU) for single configuration of Optical ModuleBus Modem TB840/TB840A. The MTU is a passive unit having connections for power supply, a single electrical ModuleBus, one TB840/TB840A and a rotary switch for cluster address (1 to 7) setting.	Module termination unit (MTU) for redundant configuration of Optical ModuleBus Modem TB840/TB840A. The MTU is a passive unit having connections for power supply, double electrical ModuleBus, two TB840/TB840A and a rotary switch for cluster address (1 to 7) setting.	Module termination unit (MTU) for redundant configuration of Optical ModuleBus Modem TB840/TB840A, for use with non-redundant I/O. The MTU is a passive unit having connections for power supply, a single electrical ModuleBus, two TB840/TB840A and a rotary switch for cluster address (1 to 7) setting.	Module termination unit (MTU) for redundant configuration of the field communication interface CI840/CI840A and redundant I/O. The MTU is a passive unit having connections for power supply, two electrical ModuleBuses, two CI840/CI840A and two rotary switches for station address (0 to 99) settings.
Cable redundancy	No	No	No	No
Module redundancy	No	Yes	Yes	Yes
Type	Single TB810/TB840A, Single I/O, Single Power	Redundant TB840/TB840A, Redundant I/O, Single Power	Redundant TB840/TB840A, Single I/O, Single Power	Redundant CI840/CI840A, Redundant I/O
Power Input	24 V d.c. (19.2 - 30 V)	24 V d.c (19.2 -30 V)	24 V d.c (19.2 - 30 V)	24 V d.c. (19.2 - 30 V)
Hot Swap	No	No	No	No
Mounting	Vertical or Horizontal			
Power Consumption at 24 V d.c.	N/A	N/A	N/A	N/A
Connector	N/A	N/A	N/A	PROFIBUS: DSUB9 connector Service ports: RJ45 connector
Acceptable wire sizes	Solid: 0.2 - 2.5 mm <sup>2</sup> Stranded: 0.2 - 2.5 mm <sup>2</sup> , 24 - 12 AWG Recommended torque: 0.5 Nm	Solid: 0.2 - 2.5 mm <sup>2</sup> Stranded: 0.2 -2.5 mm <sup>2</sup> , 24 -12 AWG Recommended torque: 0.5 Nm	Solid: 0.2 - 2.5 mm <sup>2</sup> Stranded: 0.2 -2.5 mm <sup>2</sup> , 24 -12 AWG Recommended torque: 0.5 Nm	Solid: 0.2 - 2.5 mm <sup>2</sup> Stranded: 0.2 -2.5 mm <sup>2</sup> , 24 -12 AWG Recommended torque: 0.5 Nm
Dielectric test voltage	500 V a.c.	500 V a.c	500 V a.c	500 V a.c
Rated insulation voltage	50 V	50 V	50 V	50 V
Power Dissipation	N/A	N/A	N/A	N/A
Width	59 mm (1.57 in.)	124 mm (4.88 in.)	124 mm (4.88 in.)	124 mm (4.88 in.)
Depth	47 mm (1.85 in.)	47 mm (1.85 in.)	47 mm (1.85 in.)	47 mm (1.85 in.)
Height	186.5 mm (7.34 in.)	186.5 mm (7.34 in.)	186.5 mm (7.34 in.)	186.5 mm (7.34 in.)
Weight	450 g (0.99 lbs.)	450 g (0.99 lbs.)	450 g (0.99 lbs.)	500 g (1.1 lbs.)
Climatic operating conditions	0 to +55 °C (Storage -25 to +70 °C), RH=5 to 95 % no condensation, IEC/EN 61131-2 <sup>(2)</sup>			
Certificates and standards <sup>(3)</sup>				
Equipment class	Class I according to IEC 60536; (earth protected)	Class 1 according to IEC 60536; (earth protected)	Class 1 according to IEC 60536; (earth protected)	Class 1 according to IEC 60536; (earth protected)
Protection rating	IP20 according to IEC 60529	IP20 according to IEC 60529	IP20 according to IEC 60529	IP20 according to IEC 60529
CE- marking	Yes			
Electrical Safety	cULus	cULus	cULus	cULus
Hazardous location	cULus Hazardous Location Class 1 Zone 2, ATEX Zone 2	cULus Hazardous Location Class 1 Zone 2, ATEX Zone 2	cULus Hazardous Location Class 1 Zone 2, ATEX Zone 2	cULus Hazardous Location Class 1 Zone 2, ATEX Zone 2
Marine certificates	N/A	ABS, BV, DNV-GL, LR	ABS, BV, DNV-GL, LR	N/A
RoHS compliance	DIRECTIVE/2011/65/EU (EN 50581:2012)			
WEEE compliance	DIRECTIVE/2012/19/EU			











(3) For detailed information on each module, please visit: [compacthardwareselector.com](http://compacthardwareselector.com)

Feature	TU847	TU848	TU849	TU860
Article number	3BSE022462R1	3BSE042558R1	3BSE042560R1	3BSE078710R1
Function	Module termination unit (MTU) for redundant configuration of the field communication interface CI840/CI840A. The MTU is a passive unit having connections for power supply, electrical ModuleBus, two CI840/CI840A and two rotary switches for station address (0 to 99) settings. A ModuleBus Optical Port TB842 can be connected to TU847 via TB806.	Module termination unit (MTU) for redundant configuration of Optical ModuleBus Modem TB840/TB840A. The MTU is a passive unit having connections for two power supply (one for each modem), double electrical ModuleBus, two TB840/TB840A and a rotary switch for cluster address (1 to 7) setting.	Module termination unit (MTU) for redundant configuration of Optical ModuleBus Modem TB840/TB840A. The MTU is a passive unit having connections for two power supply, one for each modem, a single electrical ModuleBus, two TB840/TB840A and a rotary switch for cluster address (1 to 7) setting.	Module termination unit (MTU) only for connecting S800 I/O modules to the Modulebus connector. Two mounting slots for redundant CI845 Ethernet FCI modules. Two mounting slots for redundant Ethernet Adapters. Not intended for functional safety applications. Also suitable for installation in hazardous areas classified as Zone 2 or Class 1, Division 2.
Cable redundancy	No	Yes	Yes	
Module redundancy	Yes	Yes	Yes	
Type	Redundant CI840/CI840A, Single I/O	Redundant TB840/TB840A, Redundant I/O, Dual Power	Redundant TB840/TB840A, Single I/O, Dual Power	Redundant MTU for CI845, TC810 and S800 I/O Modules
Power Input	24 V d.c. (19.2 - 30 V)	24 V d.c (19.2 -30 V)	24 V d.c (19.2 -30 V)	24 V d.c (19.2 -30 V)
Hot Swap	No	No	No	No
Mounting	Vertical or Horizontal			Vertical mounting
Power Consumption at 24 V d.c.	N/A	N/A	N/A	N/A
Connector	PROFIBUS: DSUB9 connector Service ports: RJ45 connector	N/A	N/A	Maximum 2 FCI modules. Maximum 2 Ethernet Adapters. Inlet and connector for I/O cluster.
Acceptable wire sizes	Solid: 0.2 - 2.5 mm <sup>2</sup> Stranded: 0.2 -2.5 mm <sup>2</sup> , 24 -12 AWG Recommended torque: 0.5 Nm	Solid: 0.2 - 2.5 mm <sup>2</sup> Stranded: 0.2 -2.5 mm <sup>2</sup> , 24 -12 AWG Recommended torque: 0.5 Nm	Solid: 0.2 - 2.5 mm <sup>2</sup> Stranded: 0.2 -2.5 mm <sup>2</sup> , 24 -12 AWG Recommended torque: 0.5 Nm	
Dielectric test voltage	500 V a.c	500 V a.c	500 V a.c	
Rated insulation voltage	50 V	50 V	50 V	
Power Dissipation	N/A	N/A	N/A	N/A
Width	124 mm (4.88 in.)	124 mm (4.88 in.)	124 mm (4.88 in.)	135 mm (5.31 in.)
Depth	47 mm (1.85 in.)	47 mm (1.85 in.)	47 mm (1.85 in.)	95.5 mm (3.76 in.)
Height	186.5 mm (7.34 in.)	186.5 mm (7.34 in.)	186.5 mm (7.34 in.)	210 mm (8.26 in.)
Weight	500 g (1.1 lbs.)	450 g (0.99 lbs.)	450 g (0.99 lbs.)	500 g (1.1 lbs.)
Climatic operating conditions	0 to +55 °C (Storage -25 to +70 °C), RH=5 to 95 % no condensation, IEC/EN 61131-2 <sup>(2)</sup>			-40°C (-40°F) to +70°C (158°F) (Storage -40°C (-40°F) to +85°C (185°F)) RH=5 to 95 % no condensation
Certificates and standards <sup>(3)</sup>				
Equipment class	Class 1 according to IEC 60536; (earth protected)	Class 1 according to IEC 60536; (earth protected)	Class 1 according to IEC 60536; (earth protected)	
Protection rating	IP20 according to IEC 60529	IP20 according to IEC 60529	IP20 according to IEC 60529	IP20 according to IEC 60529
CE- marking	Yes			
Electrical Safety	cULus	cULus	cULus	IEC/EN 61010-1, IEC 61010-2-201, UL 61010-2-201, CSA C22.2 No. 61010-2-201
Hazardous location	cULus Hazardous Location Class 1 Zone 2, ATEX Zone 2	cULus Hazardous Location Class 1 Zone 2, ATEX Zone 2	cULus Hazardous Location Class 1 Zone 2, ATEX Zone 2	EN 60079-0, EN60079-7, EN60079-15, UL 12.12.01/CSA C22.2 No. 213-17
Marine certificates	ABS, BV, DNV-GL, LR	ABS, BV, DNV-GL, LR	ABS, BV, DNV-GL, LR	–
RoHS compliance	DIRECTIVE/2011/65/EU (EN 50581:2012)			
WEEE compliance	DIRECTIVE/2012/19/EU			

(3) For detailed information on each module, please visit: [compacthardwareselector.com](http://compacthardwareselector.com)












## S800 I/O

### Module Termination Units

Module Termination Units		Article no.
	<b>TU805K01 Termination Units 2- or 3-wire</b> Includes 10 pcs of Termination Unit TU805 for DI801 and DO801.	3BSE035990R1
	<b>TU810V1 Compact MTU, 50V.</b> Compact Module Termination Unit 2x8 signal terminals.	3BSE013230R1
	<b>TU811V1 Compact MTU 250V.</b> Compact Module Termination Unit 1x8 signal terminals.	3BSE013231R1
	<b>TU812V1 Compact MTU, 50V, D-sub.</b> Compact Module Termination Unit with 25 pin D-sub connector, rated isol. 50V. D-sub (female) connector is not enclosed.	3BSE013232R1
	<b>TU813 Compact MTU, 250V.</b> Crimped snap-in connectors.	3BSE036714R1
	<b>TU814V1 Compact MTU, 50V, snap-in con.</b> Compact Module Termination Unit 2x8 Signal terminals for crimped snap-in connectors. Detachable (pluggable) connectors are enclosed.	3BSE013233R1
	<b>TU818 Compact MTU, 50V.</b> Compact Module Termination Unit with 1x32 (and 2x16) signal terminals.	3BSE069209R1
	<b>TU819 Compact MTU, 50V.</b> Compact Module Termination Unit with 2x25 pin D-sub connector, D-sub (female) connector is not enclosed.	3BSE068891R1
	<b>TU830V1 Extended MTU, 50V.</b> Extended Module Termination Unit 2x16 signal terminals.	3BSE013234R1
	<b>TU831V1 Extended MTU, 250V.</b> Extended Module Termination Unit 2x8 signal terminals.	3BSE013235R1
	<b>TU833 Extended MTU, 50V.</b> 2x16 signal terminals, Spring-cage terminals.	3BSE038726R1
	<b>TU835V1 Extended MTU, 50V, Fused.</b> Extended Module Termination Unit. 8 fused power outlets, 8 signal terminals.	3BSE013236R1
	<b>TU836V1 Extended MTU, 250V, Fused.</b> Extended Module Termination Unit 2x4 fused signals, 2x4 return terminals, 2x2 L terminals, 2x2 N terminals.	3BSE013237R1
	<b>TU837V1 Extended MTU, 250V, Fused.</b> Extended Module Termination Unit 8x1 fused isol. signals, 8x1 L terminals, 2x6 N terminals.	3BSE013238R1
	<b>TU838 Extended MTU, 50V.</b> Extended Module Termination Unit 2x4 fused transducer power outlets, 16 signal terminals, 2x4 return terminals, 2x2 L+, 2x2 L- terminals. Module is mounted horizontally.	3BSE008572R1
	<b>TU839 Extended MTU, 250V.</b> Extended Module Termination Unit, 2x8 signal terminals, 2x4 fused sensor power.	3BSE046966R1
	<b>TU842 Redundant MTU, 50V.</b> Used with redundant I/O. Horizontal DIN rail mounting.	3BSE020850R1
	<b>TU843 Redundant MTU, 50V.</b> Used with redundant I/O. Vertical DIN rail mounting.	3BSE021443R1


## S800 I/O and S800L I/O

### Module Termination Units

Module Termination Units	Article no.	
 <p><b>TU844 Redundant MTU, 50V.</b> Used with redundant I/O. Horizontal DIN rail mounting. Shunt Sticks not included.</p>	3BSE021445R1	
 <p><b>TU845 Redundant MTU, 50V.</b> Used with redundant I/O. Vertical DIN rail mounting. Shunt Sticks not included.</p>	3BSE021447R1	
 <p><b>TU850 Extended MTU, 50V.</b> 2x8 signal terminals and 2x8 disconnectable current limited sensor/transmitter outlet power terminals.</p>	3BSE050930R1	
 <p><b>TU851 Extended MTU, 250V.</b> Extended Module Termination Unit with 2x16 signal terminals.</p>	3BSE068782R1	
 <p><b>TU852 MTU, Redundant, 50V.</b> Used with redundant I/O. Horizontal DIN rail mounting. With 2x25 pin D-sub connector.</p>	3BSE069964R1	
 <p><b>TU854 MTU, Redundant, 50V.</b> Used with redundant I/O. Horizontal DIN rail mounting. With 1x25 pin D-sub connector. Shunt Stick not included.</p>	3BSE069966R1	
 <p><b>TU890 Intrinsic Safety MTU</b> Module Termination Unit with Intrinsic Safety Interface, 3x9 signal terminals. Including wiring separator.</p>	3BSC690075R1	
  <p><b>TU891 non-Intrinsic Safety MTU</b> Module Termination Unit for 3x9 signal terminals. For non Intrinsic Safety.</p>	3BSC840157R1	
 <p><b>TY801K01 8 pcs Shunt Sticks</b> 125 + 125 ohms shunt. Used for AI845 and AI880A on TU834, TU844, TU845, TU854.</p>	3BSE023607R1	
 <p><b>TY804K01 8 pcs Shunt Sticks</b> 1000 ohms shunt. Used for DP840 on TU844, TU845, TU854</p>	3BSE033670R1	
<p><b>TY805K01 8 pcs Shunt Sticks</b> 125 + 125 ohms shunt with current limitation on transmitter power. Used for AI845 and AI880A on TU834, TU844, TU845, TU854.</p>	3BSE081160R1	
<p><b>TY820K01 10 pcs Temperature Sensor</b> TY820 is a temperature sensor with a PT 100 element. Used with AI835/AI835A and AI843 to measure cold junction Temperature.</p>	3BSE056980R1	


## S800L I/O

### S800L I/O Modules

Analog Input Modules		Article no.
	<b>AI801 Analog input 8 ch.</b> 0(4)...20mA, 12bit, single ended.	3BSE020512R1
Analog Output Modules		Article no.
<b>AO801 Analog output 8 ch.</b> 0(4)...20mA, 12 bit, RL max 850 Ohm.		3BSE020514R1
Digital Input Modules		Article no.
<b>DI801 Digital Input 24V 16 ch.</b> Current sink.		3BSE020508R1
<b>DI802 Digital Input 120V 8 ch.</b> Individually galvanic isolated channels		3BSE022360R1
<b>DI803 Digital Input 230V 8 ch.</b> Individually galvanic isolated channels		3BSE022362R1
Digital Output Modules		Article no.
<b>DO801 Digital Output 24V 16 ch. 0.5A</b> Isolated in one group. Short circuit proof.		3BSE020510R1
<b>DO802 Digital Output Relay 8 ch</b> 24-230V, a.c./d.c. Individually galvanic isolated channels.		3BSE022364R1














## S800L I/O

### Label sets for S800L I/O Modules

Label sets for S800L I/O Modules		Article no.
	<b>Label Set S800L, 16 ch</b> Text colour: Black, Text style: Helv. reg., Text height: 2 mm, Material: Polyesterfilm Xeroperm t=0,12. Sheet with 12 labels for 16 channels I/O modules.	3BSE019419R1
	<b>Label Set S800L, 8 ch</b> Text colour: Black, Text style: Helv. reg., Text height: 2 mm, Material: Polyesterfilm Xeroperm t=0,12. Sheet with 12 labels for 8 channels I/O modules.	3BSE019419R2

## S800 I/O and S800L I/O





### ModuleBus Communication Parts

ModuleBus Communication Parts	Article no.	
	<b>TB805 Bus Outlet</b> Modulebus extension cable adaptor D-sub 25, female. One required per extension cable TK801.	3BSE008534R1
	<b>TB845, Dual Modulebus outlet</b> Modulebus extension cable adaptor two D-sub, female. Two TK801 cables for redundancy.	3BSE021437R1
	<b>TB806 Bus Inlet</b> Modulebus extension cable adaptor D-sub 25, male. One required per extension cable TK801.	3BSE008536R1
	<b>TB846, Dual Modulebus inlet</b> Modulebus extension cable adaptor two D-sub, male. Two TK801 cables for redundancy.	3BSE021439R1
	<b>TK801V003 Cable, 0.3 m</b> Modulebus Extension Shielded Cable 0.3 m D-sub 25, male-female.	3BSC950089R1
	<b>TK801V006 Cable, 0.6 m</b> Modulebus Extension Shielded Cable 0.6 m D-sub 25, male-female.	3BSC950089R2
	<b>TK801V012 Cable, 1.2 m</b> Modulebus Extension Shielded Cable 1.2 m D-sub 25, male-female.	3BSC950089R3
	<b>TB807 Modulebus terminator</b> Terminator for Modulebus	3BSE008538R1
	<b>TB820V2 Modulebus Cluster Modem</b> Optical cluster modem for non redundant operation. Including: 1 pce Power Supply Connector 1 pce TB807 Modulebus Terminator	3BSE013208R1
	<b>TB825 Optical Media Converter Multi Mode</b> Short to long distance optical fiber conversion. For Modulebus communication up to 1000 m.	3BSE036634R1
	<b>TB826 Optical Media Converter Single Mode</b> Short to long distance optical fiber conversion. For Modulebus communication up to 5000 m, for S800 I/O HI up to 20 000 m.	3BSE061637R1
	<b>TB840A Modulebus Cluster Modem</b> Optical cluster modem for 1+1 redundant operation.	3BSE037760R1
	<b>TB842 Modulebus Optical Port</b> Used together with CI801 and CI840, connected via TB806 or TB846.	3BSE022464R1
	<b>TU807 Termination Unit for TB840/TB840A</b> For single modulebus I/O. Including: 1 pcs TB807	3BSE039025R1
	<b>TU840 Termination Unit for 1+1 TB840</b> Support for redundant I/O Including: 1 pce Power Supply Connector 2 pcs TB807 Modulebus Terminator	3BSE020846R1
	<b>TU841 Termination unit for 1+1 TB840</b> Support for non-redundant I/O. Including: 1 pce Power Supply Connector 1 pce TB807 Modulebus Terminator	3BSE020848R1



## S800 I/O and S800L I/O

### ModuleBus Communication Parts

ModuleBus Communication Parts	Article no.
 <p><b>TU848 Termination Unit for 1+1 TB840</b> MTU with individual power supply. Support for redundant I/O. Including: - 1 pcs Power Supply Connector - 2 pcs TB807 Modulebus Terminator</p>	3BSE042558R1
 <p><b>TU849 Termination Unit for 1+1 TB840.</b> MTU with individual power supply. Support for non-redundant I/O. Including: - 1 pcs Power Supply Connector - 1 pcs TB807 Modulebus Terminator</p>	3BSE042560R1
 <p><b>TK811V015 POF Cable, 1.5 m, Duplex</b> L = 1.5 m latching duplex connector Duplex plastic fibre</p>	3BSC950107R1
<p><b>TK811V050 POF Cable, 5 m, Duplex</b> L = 5 m latching duplex connector Duplex plastic fibre</p>	3BSC950107R2
<p><b>TK811V150 POF Cable, 15 m, Duplex</b> L = 15 m latching duplex connector Duplex plastic fibre</p>	3BSC950107R3
 <p><b>TK812V015 POF Cable, 1.5 m, Simplex</b> L = 1.5 m latching connector Simplex plastic fibre</p>	3BSC950118R1
<p><b>TK812V050 POF Cable, 5 m, Simplex</b> L = 5 m latching connector Simplex plastic fibre</p>	3BSC950118R2
<p><b>TK812V150 POF Cable, 15 m, Simplex</b> L = 15 m latching connector Simplex plastic fibre</p>	3BSC950118R3

## Power supplies and Voters selection guide

Feature	SD831	SD832	SD833	SD834	SS823	SS832	SD853	SD854	SS855
Rated output current	3 A	5 A	10 A	20 A	20 A	10 A (20 A in parallel operation)	10 A	20 A	40 A
Rated output power	72 W	120 W	240 W	480 W	-	-	240 W	480 W	-
Rated output voltage	24 V d.c.	24 V d.c.	24 V d.c.	24 V d.c.	-	-	24 V d.c.	24 V d.c.	-
Rated input power	134/143 VA	240/283 VA	447/514 VA	547/568 VA	500 W	2 x 10 A			2 x 20 A
Mains/input voltage, nominal	100-240 V a.c. 110-300 V d.c.	100-120 V a.c. 200-240 V a.c. Auto-select input	100-120 V a.c. 200-240 V a.c. Auto-select input	100-240 V a.c. 110-150 V d.c.	1x24 V d.c.	2x24 V d.c.	100-240 V a.c. 110-150 V d.c.	100-240 V a.c. 110-150 V d.c.	-
Mains voltage variation allowed	100-240 V a.c. +10 %, 110-300 V d.c. -20 % / +25 %	100-120 V a.c. +10 %, 200-240 V a.c. +10 %	100-120 V a.c. +10 %, 200-240 V a.c. +10 %	85-276 V a.c. 88-187 V d.c.	-	-	85-264 V a.c. 88-180 V d.c.	85-264 V a.c. / 88-180 V d.c.	-
Primary peak inrush current at power on	<28/<54 A	<10 A	<10 A	<13 A	-	-	6 A / 9 A peak	10 A / 4.5 A peak	-
Applications	SELV and PELV	SELV and PELV	SELV and PELV	SELV and PELV	-	-	SELV and PELV	SELV and PELV	-
Load sharing	-	-	-	Parallell connection	Yes	-	Parallell connection	Parallell connection	Two in parallell for voting 40 A
Supervision relay	No	No	No	Yes	Yes	Yes	Yes	Yes	No
Power Factor (at rated output power)	0.61/0.56	0.56/0.47	0.59/0.51	0.95/0.90	-	-	0.99/0.97	0.99/0.95	-
Heat dissipation	10/8 W	14/13 W	24/22 W	40/31 W	24 W at 20 A and 6 W at 5 A	18 W	16.4 W / 12.1 W, 120/230 V a.c.	29.6/22.1 W, 120/230 V a.c.	2 x 10 A: 1.7 W 2 x 20 A: 5.9 W



## Power supplies and Voters selection guide






Feature	SD831	SD832	SD833	SD834	SS823	SS832	SD853	SD854	SS855
Efficiency factor (%)	88/89.8	89.4/90.2	91/91.6	92.4/93.9	-	-	93.6/95.2	94.2/95.6	-
Output voltage regulation at max. current	< 50 mV / < 100 mV	< 70 mV / < 100 mV s	< 70 mV / < 100 mV	< 10 mV / < 100 mV	1.2 V lower than input	0.85 V lower than input	< 50 mV	< 100 mV	-
Ripple (peak to peak)	< 50 mV	< 50 mV	< 50 mV	< 100 mV	-	-	< 50 mV	50 mV	-
Secondary voltage holdup time at mains blackout	29/120 ms	80/78 ms	46/47 ms	32/51 ms	-	-	37 ms	32 ms	-
Maximum output current (min)	3.3 A	6 A At ambient temp < 45 °C	12 A At ambient temp < 45 °C	30 A < 4 s	35 A (Overload)	25 A (Overload)	12 A At ambient temp < 45 °C	24 A At ambient temp < 45 °C	65 A (up to 5 seconds)
Maximum ambient temperature	55 °C	55 °C	65 °C	55 °C	55 °C	55 °C	70 °C	70 °C	70 °C
Primary: Recommended external fuse <sup>(1)</sup>	10-20 A	10-20 A	10-20 A	10-20 A	-	-	10-20 A	10-20 A	-
Secondary: Short circuit	4-8 A	10-14 A	14-18 A	Hiccup (2s on 17s off)	-	Max 25 A RMS	Hiccup (2s on 18s off)	Hiccup (2s on 18s off)	Max 26 A RMS
Secondary: Over-Voltage protection	< 39 V	< 39 V	< 39 V	< 37 V	< 30 V	-	Max 32 V	Max 32 V	-
Class of protection	I PE (Protective Earth) connection required				-	-	I PE (Protective Earth) connection required		III PE (Protective Earth) or chassis connection not required.
Protection rating	IP20 according to IEC 60529								
Width	32 mm (1.26 in.)	32 mm (1.26 in.)	60 mm (2.36 in.)	82 mm (3.23 in.)	116 mm (4.6 in.)	32 mm (1.26 in.)	39 mm (1.53 in.)	48 mm (1.88 in.)	36 mm
Depth	102 mm (4.02 in.)	117 mm (4.61 in.)	117 mm (4.61 in.)	127 mm (5.0 in.)	145 mm (5.8 in.) including connector	117 mm (4.61 in.)	117 mm (4.60 in.)	127 mm (5.00 in.)	127 mm
Height	124 mm (4.88 in.)	124 mm (4.88 in.)	124 mm (4.88 in.)	124 mm (4.88 in.)	132 mm (5.3 in.)	125 mm (4.9 in.)	124 mm (4.88 in.)	124 mm (4.88 in.)	124 mm
Mounting spacing Width mm	15 mm (0.59 in.)	15 mm (0.59 in.)	15 mm (0.59 in.)	15 mm (0.59 in.)	15 mm (0.6 in.)	15 mm (0.59 in.)	15 mm (0.59 in.)	15 mm (0.59 in.)	5 mm
Mounting spacing Height mm	40 mm (1.57 in.)	40 mm (1.57 in.)	40 mm (1.57 in.)	40 mm (1.57 in.)	25 mm (1.2 in.)	25 mm (1 in.)	40 mm (1.57 in.)	40 mm (1.57 in.)	top 40 mm, bottom 20 mm
Weight (lbs.)	430 g (0.9 lbs.)	500 g (1.1 lbs.)	700 g (1.5 lbs.)	1200 g (2.6 lbs.)	870 g (1.9 lbs.)	350 g (0.77 lbs.)	600 g (1.32 lbs)	830 g (1.83 lbs)	280 g
Corrosive atmosphere ISA-S71.04	G2	G2	G2	G2	G3	G2	G3	G3	G3
CE mark	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ATEX Zone 2	No	No	No	No	Yes	No	Yes	Yes	Yes
IECEx Zone 2	-	-	-	-	-	-	Yes	Yes	Yes
Hazardous Location, Class 1 Div 2	No	No	No	Yes	No	No	Yes	Yes	Yes
Electrical safety	IEC 61131-2, UL 508, EN 50178						IEC 60950-1		
Pollution degree	Degree 2, IEC 60664-1								
Mechanical operating conditions	EN 61131-2								
EMC	EN 61000-6-4 and EN 61000-6-2								
Over voltage Categories	Over-voltage Category III (IEC/EN 60664-1)								
RoHS compliance	DIRECTIVE/2011/65/EU (EN 50581:2012)								
WEEE compliance	DIRECTIVE/2012/19/EU								

<sup>(1)</sup> Microcircuit Breaker (MCB), Characteristic B

\* For detailed information on each module, please visit: [compacthardwareselector.com](http://compacthardwareselector.com)


## AC 800M and S800 I/O


### Power Supplies and Voters


Power Supplies and Voters	Article no.	
<p>Modules are compliant to ISA-S71.04 level G3, unless explicitly stated differently.</p>		
 <p><b>SD831 Power Supply, 3 A, G2 Compliant</b> Input a.c. 100-240 V or d.c. 110-300 V. Output d.c. 24 V 3 A. If redundant power application is required connect to SS8XX voting unit. DIN rail mounted.</p>	3BSC610064R1	
<p><b>SD832 Power Supply, 5 A, G2 compliant</b> Input a.c. 100-120/200-240 V. Output d.c. 24 V 5 A, auto-select input. If redundant power application is required connect to SD8XX voting unit. DIN rail mounted.</p>	3BSC610065R1	
<p><b>SD833 Power Supply, 10 A, G2 Compliant</b> Input a.c. 100-120/200-240 V, auto-select input. Output d.c. 24 V 10 A. If redundant power application is required connect to SD8XX voting unit. DIN rail mounted.</p>	3BSC610066R1	
<p><b>SD834 Power Supply, 20 A, G2 Compliant</b> Input a.c. 100-240 V or d.c. 110-300 V. Output d.c. 24 V 20 A. If redundant power application is required connect to SS8XX voting unit. DIN rail mounted.</p>	3BSC610067R1	
<p><b>SD853 Power Supply, 10 A, G3 Compliant</b> 10 A Power Supply Module. Input AC 100-240 V. Input DC 110-150 V. Output DC 24-28 V. Mounting on horizontal DIN rail. Width 39 mm.</p>	3BSE088188R1	
<p><b>SD854 Power Supply, 20 A, G3 Compliant</b> 20 A Power Supply Module. Input AC 100-240 V. Input DC 110-150 V. Output DC 24-28 V. Mounting on horizontal DIN rail. Width 48 mm.</p>	3BSE088189R1	
 <p><b>SS823 Power Voting Unit, G3 Compliant</b> Required in a High Integrity 800xA system. One per power supply unit, also at redundant configurations. Input d.c. 24 V. Dual 24 V to single 24 V, 20 A. Certified for SIL3 according to IEC 61508. DIN rail mounted.</p>	3BSE038226R1	
 <p><b>SS832 Power Voting Unit, G2 Compliant</b> Input d.c. 24 V. Dual 24 V to single 24 V, 2x10 A. DIN rail mounted. G2 compliant.</p>	3BSC610068R1	
 <p><b>SS855 Power Voting Unit, G3 Compliant</b> Input 2*8.4...36.4V, 2x20 A. DIN rail mounted.</p>	2PAA125624R1	
 <p><b>Mains Breaker Kit for DIN Rail 115 V /230 V</b> 115/230 V a.c. with input terminals, breaker and 3 fused (6.3 A), double output terminals. Width = 102,5 mm.</p>	3BSE022262R1	

# Compact Product Suite - Media

The articles below may only be selected when ordering licenses for a new installation, or if the end user is part of ABB's Control System Lifecycle Management program.

Compact Control Builer Media	Article no.	
 <p><b>Compact Control Builder AC 800M 6.1.1-2 Media</b> Compact Control Builder AC 800M 6.1.1-2 and OPC Server for AC 800M installation media on a write protected USB drive.</p>	7PAA008192R1	

Compact HMI Media	Article no.	
 <p><b>Compact HMI 6.1.1-1Media (USB)</b> Compact HMI 6.1.1-1 installation media on a write protected USB drive. Manuals as PDFs.</p> <p>Media can also be downloaded from ABB Library or My ABB/My Control System.</p> <p>No license is included.</p>	7PAA006152R1	

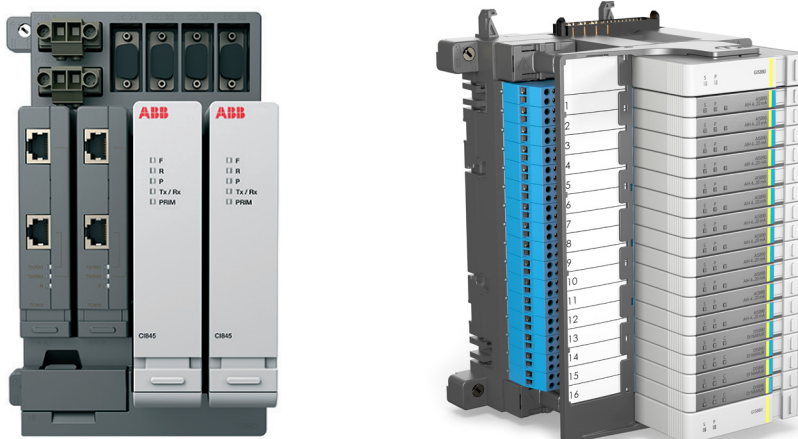
Dongles		
 <p><b>License dongle for USB Port</b> For use in System 800xA or Compact HMI systems. To be used with 800xA 5.1 Rev A and later.</p>	3BSE064644R1	

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# Select I/O

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Select I/O is an Ethernet networked, single channel granular I/O system for the ABB Ability™ System 800xA automation platform. Select I/O helps decouple project tasks, minimizes the impact of late changes and supports standardization of I/O cabinetry ensuring automation projects are delivered on-time and under budget.

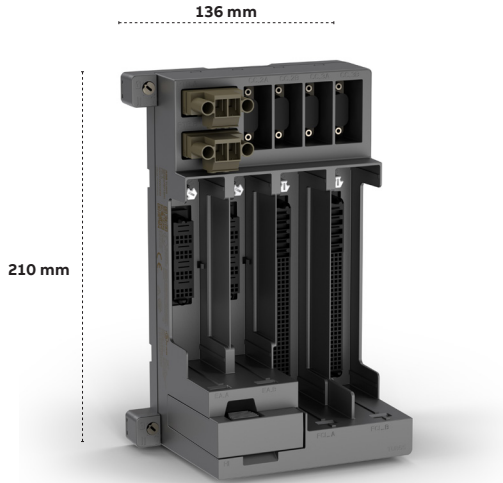


## Select I/O selection guide for Compact Product Suite

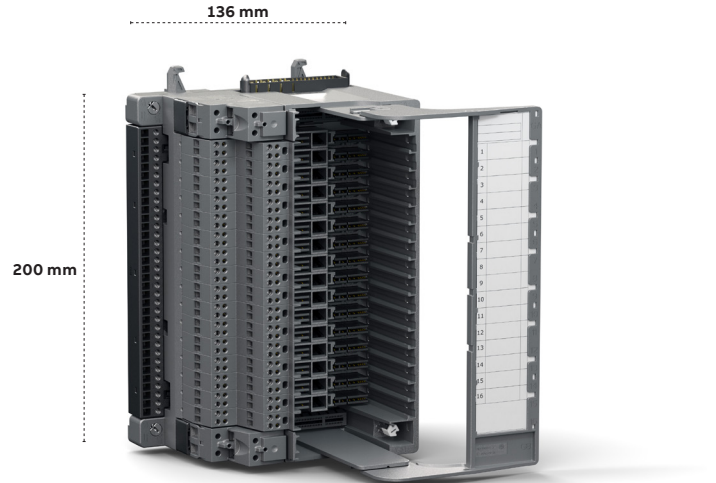
	Signal Type	Signal Range	HART	SOE	Galvanic Isolation	Loop Supervision	Current Limitation	CE	ATEX Zone 2	cULus Class I Division 2	High Integrity SIL 3
AIS880	Analog In	4...20 mA	•		ch-2-ch	•	•	•	•	Yes	•
AIS885	Analog In IS	4...20 mA, 1.2 A	•		Group	•	•	•	•	On IPA	•
AIS890	Analog In IS	4...20 mA	•		ch-2-ch	•	•	•	•	On IPA	•
DIS880	Digital In	24 V		•	ch-2-ch	•	•	•	•	Yes	•
DIS890	Digital In IS	NAMUR		•	ch-2-ch	•	•	•	•	On IPA	•
AOS880	Analog Out	4...20 mA	•		ch-2-ch	•	•	•	•	Yes	•
DOS880	Digital Out	24 V, 0.6 A			Group	•	•	•	•	Yes	•
DOS885	Digital Out	24 V, 3 A			Group	•	•	•	•	Yes	•
GTS810	N/A	N/A			N/A	N/A	N/A	•	•	On IPA	
GIS880	GIO	N/A			N/A	N/A	N/A	•	•	Yes	•

For detailed information on each module, please visit: [compacthardwareselector.com](http://compacthardwareselector.com)

## Measurements



TU865 Ethernet FCI MTU



TUS810 Select I/O MTU

## Select I/O

### Extended warranty for Select I/O Hardware






We can offer an extended warranty for one, two, or three years in addition to normal warranty conditions for Select I/O Hardware. See price list Extended Warranty Time.

### ISA-S71.04 level G3 compliance

Modules are compliant to ISA-S71.04 level G3, unless explicitly stated differently.



## Communication

### Field Communication Interface

Field Communication Interface	Article no.	
 <p><b>CI845 Ethernet FCI module</b> 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. For Select I/O High Integrity SIL3 one HI880 is needed.</p>	3BSE075853R1	
 <p><b>TU865 MTU for Ethernet FCI and Select IO</b> Ethernet Fieldbus Communication Interface Module Termination Unit for connection of single or redundant Select I/O. Supports single or redundant Ethernet Fieldbus Communication Interface Module, single or redundant Ethernet Adapter and High Integrity Module. Mounting on vertical DIN-rail.</p>	3BSE078712R1	
 <p><b>TC810 Ethernet Adapter for Ethernet FCI</b> Ethernet Adapter for copper media with built in 2-port switch. Hosts two RJ45 ports. Use as single or redundant.</p>	3BSE076220R1	
 <p><b>TC811 Ethernet Adapter Single Mode Fiber</b> Ethernet Adapter for single mode fiber with built in 2-port switch. Hosts two LC ports. Use as single or redundant.</p>	3BSE078714R1	
 <p><b>HI880 HI Module for Ethernet FCI</b> High Integrity Module enables High Integrity SIL3 communication with the Select I/O.</p>	3BSE078701R1	



## Select I/O Modules

### I/O Modules

I/O Modules	Article no.	
 <p><b>DIS850 Digital Input IS</b> Digital Input Intrinsicly Safe Signal Conditioning Module for 2-wire devices. Sequence of Events (SOE) enabled.</p>	3BSE078774R1	
<p><b>DOS810 Digital Output 24V 0.6A</b> Digital Output 24V 0.6A Signal Conditioning Module.</p>	3BSE078768R1	
 <p><b>GTS810 Grounding Termination Module</b> Grounding Termination Signal Conditioning Module</p>	3BSE093006R1	
<p><b>GFS810 Ground Fault Detection Module</b> Ground Fault Detection SCM, Haz Loc</p>	3BSE093005R1	



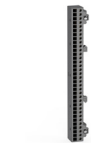









## Select I/O Modules

### High Integrity I/O Modules

High Integrity I/O Modules	Article no.	
 <p>The modules can only be connected to an AC 800M controller PM857, PM863 or PM867 via CI845.</p>		
<p><b>GIS880 Generic I/O Module High Integrity</b> Generic I/O Module High Integrity. Certified for SIL3. Use as single or redundant.</p>	3BSE075855R1	
 <p><b>AIS880 Analog Input 4 to 20mA HI</b> Analog Input Signal Conditioning Module High Integrity for 2/4-wire devices. 16 bit. HART communication. Certified for SIL3.</p>	3BSE074053R1	
<p><b>AIS885 Analog Input IS 4 to 20mA HI 1.2 A</b> Analog Input Signal Conditioning Module High Integrity for 2/3/4-wire devices. 16 bit. HART communication. 1.2 A field power. Certified for SIL3.</p>	3BSE080108R1	
<p><b>AIS890 Analog Input IS 4 to 20mA HI</b> Analog Input Intrinsicly Safe Signal Conditioning Module High Integrity for 2-wire devices. 16 bit. HART communication. Certified for SIL3.</p>	3BSE074063R1	
<p><b>AOS880 Analog Output 4 to 20 mA HI</b> Analog Output Signal Conditioning Module High Integrity for 2-wire devices. 16 bit. HART communication. Certified for SIL3.</p>	3BSE074055R1	
<p><b>DIS880 Digital Input 24V HI</b> Digital Input 24V Signal Conditioning Module High Integrity for 2/3/4-wire devices. Sequence of Events (SOE) enabled. Certified for SIL3.</p>	3BSE074057R1	
<p><b>DIS890 Digital Input IS HI</b> Digital Input Intrinsicly Safe Signal Conditioning Module High Integrity for 2-wire devices. Sequence of Events (SOE) enabled. Certified for SIL3.</p>	3BSE077763R1	
<p><b>DOS880 Digital Output 24V 0.6A HI</b> Digital Output 24V 0.6A Signal Conditioning Module High Integrity. Certified for SIL3.</p>	3BSE074059R1	
<p><b>DOS885 Digital Output 24V 3A HI</b> Digital Output 24V 3A Signal Conditioning Module High Integrity. Certified for SIL3.</p>	3BSE074061R1	

## Select I/O Modules





### Module Termination Units

Module Termination Units		Article no.
	<p><b>TUS810K01 MTU for Select I/O</b> Select I/O Module Termination Unit TUS810K01 includes 1ps TUS810, 16ps FTB810 Field Terminal Blocks, 2ps PTB810 Power Injection Terminal Blocks and 1ps TUC810 Terminal Cover. Mounting on vertical DIN-rail.</p>	3BSE083204R1
	<p><b>TUS810K02 MTU for Select I/O IS</b> Select I/O Module Termination Unit IS TUS810K02 includes 1ps TUS810, 16ps FTB890 Field Terminal Blocks, 2ps TL820 Empty Slot Protectors and 1ps TUC810 Terminal Cover. Mounting on vertical DIN-rail.</p>	3BSE093004R1
	<p><b>GTB810 Grounding Terminal Bar</b> Grounding Terminal Bar with 34 screw terminals for the Select I/O Module Termination Unit. Used to ground shields and spare cores.</p>	3BSE078722R1
	<p><b>FTB810K01 Field Terminal Block</b> 4-wire Field Terminal Block with screws for the Select I/O Module Termination Unit. 10 pieces per package.</p>	3BSE088180R1
	<p><b>FTB890K01 Field Terminal Block IS</b> 4-wire Intrinsically Safe Field Terminal Block with screws for the Select I/O Module Termination Unit. 10 pieces per package.</p>	3BSE092175R1
	<p><b>FTB840K01 Redundant Field Terminal Block</b> Redundant 4-wire Field Terminal Block with screws for the Select I/O Module Termination Unit. 10 pieces per package.</p>	3BSE093007R1
	<p><b>PTB810K01 Power Injection Terminal Block</b> Power Injection Terminal Block with screws for the Select I/O Module Termination Unit. 10 pieces per package.</p>	3BSE088182R1
	<p><b>TUC810K01 Terminal Cover</b> Terminal Cover which holds user labels for the Select I/O Module Termination Unit. 10 pieces per package.</p>	3BSE088181R1
	<p><b>TS810K01 Screw Lugs</b> Screw lugs for TU860/TU865 and TUS810. 100 pieces per package.</p>	3BSE090351R1
	<p><b>TUW890K01 Separation wall IS and non-IS</b> Separation wall between Intrinsically Safe and non Intrinsically Safe Select I/O Module Termination Units. 10 pieces per package.</p>	3BSE093009R1
	<p><b>TL820K01 Empty slot protector power inj</b> Empty slot protector for a Power Injection Terminal Block slot on the Select I/O Module Termination Unit. 10 pieces per package.</p>	3BSE093010R1
	<p><b>TL830K01 Cover for power inlets on TU86x</b> IP30 protection for power inlets on FCI base plate TU865/ TU860. 20 pieces of TL830 and 10 pieces of TL831 per package.</p>	3BSE093013R1








## Select I/O Modules

### ModuleBus Communication Parts

ModuleBus Communication Parts	Article no.
 <p><b>TB868 Modulebus Terminator</b> One Modulebus Terminator is needed per cluster.</p>	3BSE088162R1
 <p><b>TB861V009 Compact Modulebus Extension</b> Extends the Modulebus from one DIN-rail to another. Length 0.9m.</p>	3BSE088163R1
 <p><b>TB861V011 Compact Modulebus Extension</b> Extends the Modulebus from one DIN-rail to another. Length 1.1m.</p>	3BSE090352R1
 <p><b>TB861V015 Compact Modulebus Extension</b> Extends the Modulebus from one DIN-rail to another. Length 1.5m.</p>	3BSE088164R1



## Select I/O Modules

### Empty Slot Protectors

Empty Slot Protectors	Article no.
 <p><b>TL810K01 Empty slot protector for FCI</b> Empty slot protector for a Fieldbus Communication Interface slot on the Ethernet FCI Module Termination Unit. 10 pieces per package.</p>	3BSE088170R1
 <p><b>TL811K01 Empty slot protector for EA</b> Empty slot protector for a Ethernet Adapter slot on the Ethernet FCI Module Termination Unit. 10 pieces per package.</p>	3BSE088171R1
 <p><b>TL812K01 Empty slot protector for GIO</b> Empty slot protector for a Generic I/O Module slot on the Select I/O Module Termination Unit. 10 pieces per package.</p>	3BSE088172R1
 <p><b>TL813K01 Empty slot protector for SCM</b> Empty slot protector for a Signal Conditioning Module slot on the Select I/O Module Termination Unit. 10 pieces per package.</p>	3BSE088173R1
 <p><b>TL814K01 Empty slot protector HI Module</b> Empty slot protector for a High Integrity Module slot on the Ethernet FCI Module Termination Unit. 10 pieces per package.</p>	3BSE088174R1

## Select I/O Modules

### Power Supplies

Power Supplies	Article no.
 <p><b>SD853 Power Supply 10 A, G3 Compliant</b> 10 A Power Supply Module. Input AC 100-240 V. Input DC 110-150 V. Output DC 24-28 V. Mounting on horizontal DIN rail. Width 39 mm.</p>	3BSE088188R1
 <p><b>SD854 Power Supply 20 A, G3 Compliant</b> 20 A Power Supply Module. Input AC 100-240 V. Input DC 110-150 V. Output DC 24-28 V. Mounting on horizontal DIN rail. Width 48 mm.</p>	3BSE088189R1

# NE800

## Network components

**NE800 provide pre-configured network components that are tested with System 800xA and Compact Product Suite to ensure top quality performance and provide protection against cyber threats.**

Wired switches (NE800) – includes a set of rack- and DIN-mounted switches and a wide range of modular transceivers.

Redundant Network Routing Protocol (RNRP) routers are available as part of the NE800 portfolio developed for use with both System 800xA and Compact Product Suite.

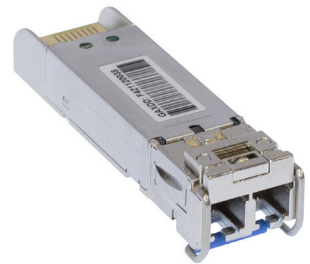
NE800 enables you to take control of your network infrastructure, and benefit from the full potential of a robust, highly performing, and secure your process automation system.



—  
NE870



—  
NE801



—  
PT801



—  
NE840

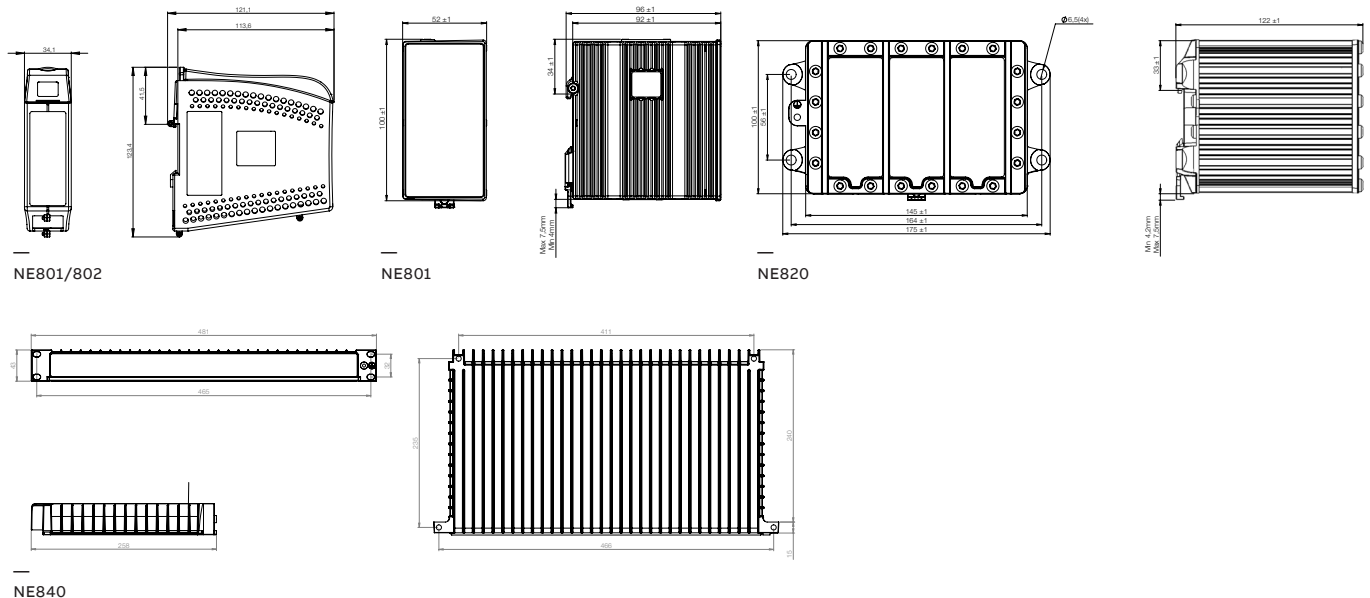
## NE800 selection guide

Specific feature	NE801	NE802	NE810	NE820	NE840
Article number	3BSE080209R1	3BSE080237R1	3BSE080207R1	3BSE080208R1	3BSE080211R1
Managed	Lightly managed (configurable using physical dip-switches)	Lightly managed (configurable using physical dip-switches)	Managed	Managed	Managed
Dimension (W x H x D)	34 x 123 x 121 mm	34 x 123 x 121 mm	52 x 100 x 101 mm	175 x 105 x 122 mm	466 x 258 x 43 mm
Weight	0.2 kg	0.2 kg	0.7 kg	2.2 kg	3.8 kg
Degree of protection	IP21	IP21	IP40	IP40	IP40
Operating voltage	9.6 to 57.6 VDC redundant power input	9.6 to 57.6 VDC redundant power input	19 to 60 VDC redundant power input	16 to 60 VDC redundant power input	90 to 264VAC, 47 to 63 Hz
Rated current	350 mA @ 12 VDC	100 mA @ 12 VDC	240 mA @ 24 VDC 120 mA @ 48 VDC	930 (1120 <sup>(1)</sup> ) mA @ 20 VDC 380 (450 <sup>(1)</sup> ) mA @ 48 VDC	350 mA @ 120 VAC 60 Hz 220 mA @ 240 VAC 50 Hz
Ethernet TX	4 x 10/100 Mbit/s	4 x 10/100/1000 Mbit/s	8 x 10/100 Mbit/s	7 x 10/100/1000 Mbit/s, 8 x 10/100 Mbit/s	7 x 10/100/1000 Mbit/s, 8 x 10/100 Mbit/s
Ethernet SFP pluggable connections (FX or TX)	1 x LC-connection, 100 Mbit/s	1 x 10/100/1000 Mbit/s	2 x 10/100/1000 Mbit/s	4 x 10/100/1000 Mbit/s	4 x 10/100/1000 Mbit/s
Digital I/O	-	-	1 x 4-ports detachable screw terminal	1 x 4-ports detachable screw terminal	1 x 4-ports detachable screw terminal
Console	-	-	1 x 1 x 2.5 mm jack	1 x USB Micro-B connector	1 x USB Micro-B connector
Operating Temperature	-25 to +70 °C	-40 to +74 °C	-40 to +70 °C	-40 to +70 °C	-40 to +55 °C
Temperature Storage & Transport	-25 to +70 °C	-40 to +85 °C	-50 to +85 °C	-50 to +85 °C	-40 to +85 °C
Network redundancy	-	-	Fast reconfiguration of network typology (FRNT) FRNT ring coupling	Fast reconfiguration of network typology (FRNT) FRNT ring coupling	Fast reconfiguration of network typology (FRNT) FRNT ring coupling
Mounting	DIN-mounted	DIN-mounted	DIN-mounted	DIN-mounted	Rack-mounted
Marine certificate	DNV	DNV	DNV	DNV	DNV
G3 compliant	Compliant	Compliant	Compliant	Compliant	Compliant
MTBF <sup>(2)</sup>	500,000 hours	1,182,374 hours	630,000 hours	303,000 hours	123,000 hours

<sup>(1)</sup> With 500 mA USB load

<sup>(2)</sup> according to MIL-HDBK-217K

For detailed information on each module, please visit: [compacthardwareselector.com](http://compacthardwareselector.com)



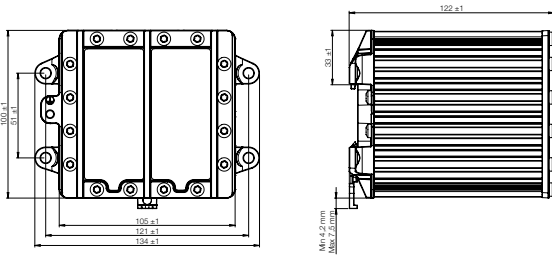
Specific feature	NE870	NE871
Article number	3BSE080239R1	3BSE080240R1
Managed	Yes	Yes
Routing	Yes	Yes
Firewall	Yes	Yes
Dimension (W x H x D)	134 x 100 x 122 mm	134 x 100 x 122 mm
Weight	1.5 kg	1.5 kg
Degree of protection	IP40	IP40
Operating voltage	16 to 60 VDC	16 to 60 VDC
Rated current	0.43 (0.60 <sup>(1)</sup> ) A @ 20 VDC 0.19 (0.25 <sup>(1)</sup> ) A @ 48 VDC	0.31 (0.48 <sup>(1)</sup> ) A @ 20 VDC 0.15 (0.21 <sup>(1)</sup> ) A @ 48 VDC
Ethernet TX	3 x 10/100/1000 Mbit/s, Ethernet TX, RJ-45 8 x 10/100 Mbit/s, Ethernet TX, RJ-45	3 x 10/100/1000 Mbit/s, Ethernet TX, RJ-45
Digital I/O	1 x 4-ports detachable screw terminal	1 x 4-ports detachable screw terminal
Console	1 x USB Micro-B connector	1 x USB Micro-B connector
Operating Temperature	-40 to +70 °C	-40 to +70 °C
Temperature Storage & Transport	-50 to +85 °C	-50 to +85 °C
Network redundancy	Redundant Network Routing Protocol (RNRP) Fast reconfiguration of network typology (FRNT) FRNT ring coppling	Redundant Network Routing Protocol (RNRP) Fast reconfiguration of network typology (FRNT) FRNT ring coppling
Mounting	DIN-mounted	DIN-mounted
Marine certificate	DNV	DNV
G3 compliant	Compliant	Compliant
MTBF <sup>(2)</sup>	430,000 hours	430,000 hours

<sup>(1)</sup> With 500 mA USB load

<sup>(2)</sup> according to MIL-HDBK-217K






**Agency approvals and standards compliance**

EMC	EN 50121-4	Railway applications – Electromagnetic compatibility – Emission and immunity of the signalling and telecommunications apparatus
	EN 55022	Information technology equipment – Radio disturbance characteristics – Limits and methods of measurement
	EN 55024	Information technology equipment – Immunity characteristics Limits and methods of measurement
	EN 61000-6-1	Electromagnetic compatibility – Immunity for residential, commercial and light-industrial environments
	EN 61000-6-2	Electromagnetic compatibility – Immunity for industrial environments
	EN 61000-6-3	Electromagnetic compatibility – Emission standards for residential, commercial and light industrial environments
	EN 61000-6-4	Electromagnetic compatibility – Emission standard for industrial environments
		FCC part 15 Class A
Safety	UL/IEC/EN 60950-1, IT equipment	
Marine	DNV Standard for Certification no. 2.4	
RoHS compliance	EN 50581:2012	
WEEE compliance	DIRECTIVE/2012/19/EU	





## NE800

### Network switches

Network switches	Article no.	
 <p><b>NE801</b> DIN-mounted 5 ports lightly managed switch, 4 10/100Mbit RJ45 ports &amp; 100Mbit LC optical port. Redundant 24V DC-power input.</p>	3BSE080209R1	
 <p><b>NE802</b> DIN-mounted 5 ports lightly managed switch; 4 10/100/1000Mbit RJ45 ports &amp; 1Gbit SFP. Redundant 24V DC-power input.</p>	3BSE080237R1	
 <p><b>NE810</b> DIN-mounted 10 ports managed switch, 8 10/100Mbit RJ45 ports &amp; 2 Gbit SFP ports. Redundant 24V DC-power input.</p>	3BSE080207R1	
 <p><b>NE820</b> DIN-mounted 19 ports managed switch, 8 10/100Mbit RJ45 ports, 7 Gbit RJ45 ports &amp; 4 Gbit SFP ports. Redundant 24V DC-power input.</p>	3BSE080208R1	
 <p><b>NE840</b> Rack-mounted 19 ports managed switch, 8 10/100Mbit RJ45 ports, 7 Gbit RJ45 ports &amp; 4 Gbit SFP ports. 110/230V AC-power input.</p>	3BSE080211R1	


## NE800

### Network routers/firewalls

Network routers/firewalls	Article no.	
 <p><b>NE870</b> DIN-mounted 11 ports RNRP router and firewall, 3 10/100/1000Mbit RJ45 ports and 8 10/100Mbit RJ45 ports. Redundant 24V DC-power input.</p>	3BSE080239R1	
 <p><b>NE871</b> DIN-mounted 3 ports RNRP router and firewall, 3 10/100/1000Mbit RJ45 ports. Redundant 24V DC-power input.</p>	3BSE080240R1	


## NE800

### Network accessories

Network accessories		Article no.
	<b>TK863</b> Cable.USB 2,5mm plug for NE810	3BSE080212R1
	<b>TK864</b> Micro USB Console cable for e.g. NE820, NE840, NE870 & NE871	3BSE080213R1

## NE800

### Modular Transceivers (SFPs)

Modular Transceivers (SFPs)		Article no.
	The ABB range of Small Form-factor Pluggable (SFP) transceivers covers versions suitable for 100 Mbit/s and Gigabit applications. LC connectors are used as standard due their small size. Operating temperature specification: -40 to +85°C (-40 to +185°F)	
	<b>PT801</b> Multimode, LC-connector, 2 km, 1310nm, 100Mbit/s Old type designation: MLC2	3BSE080214R1
	<b>PT802</b> Singlemode, LC-connector, 20km, 1310nm, 100Mbit/s Old type designation: SLC20	3BSE080215R1
	<b>PT803</b> Singlemode,BiDi, 20km, 1310nm TX, 1550nm RX, 100Mbit/s Old type designation: SLC20-BiDi-A	3BSE080223R1
	<b>PT804</b> Singlemode, BiDi, 20 km, 1550nm TX, 1310 RX, 100Mbit/s Old type designation: SLC20-BiDi-B	3BSE080224R1
	<b>PT805</b> Singlemode, LC-connector, 40km, 1310nm, 100Mbit/s Old type designation: SLC40	3BSE080216R1
	<b>PT806</b> Singlemode, BiDi, 40Km, 1310nmTX, 1550RX, 100Mbit/s Old type designation: SLC40-BiDi-A	3BSE080227R1
	<b>PT807</b> Singlemode, BiDi, 40Km, 1550nmTX, 1310RX, 100Mbit/s Old type designation: SLC40-BiDi-B	3BSE080228R1
	<b>PT808</b> Singlemode, LC-connector, 80km,1550nm, 100Mbit/s Old type designation: SLC80	3BSE080217R1
	<b>PT809</b> Singlemode, BiDi, 80km, 1310nm TX, 1550nm RX, 100Mbit/s Old type designation: SLC80-BiDi-A	3BSE080235R1
	<b>PT810</b> Singlemode, BiDi, 80km, 1550nm TX, 1310nm RX, 100Mbit/s Old type designation: SLC80-BiDi-B	3BSE080236R1
	<b>PT811</b> Singlemode, LC-connector, 120km,1550nm, 100Mbit/s Old type designation: SLC120	3BSE080218R1
	<b>PT812</b> Singlemode, BiDi, 120km, 1550nm TX, 1490 nm RX, 100Mbit/s. Old type designation: SLC120-BiDi-B	3BSE080233R1
<b>PT813</b> Singlemode, BiDi, 120km, 1490nm TX, 1550nm RX, 100Mbit/s. Old type designation: SLC120-BiDi-A	3BSE080234R1	

## NE800

### Modular Transceivers (SFPs)

Modular Transceivers (SFPs)	Article no.	
	<b>PT814</b> RJ-45, 100m, 10/100Mbit/s TX	3BSE080232R1
	<b>PT831</b> Multimode, LC-connector, 550m, 850nm, SX, 1000Mbit/s Old type designation: GMLC550	3BSE080222R1
	<b>PT832</b> Multimode, LC-connector, 2km, 1310nm, SX+, 1000Mbit/s Old type designation: GMLC2	3BSE080225R1
	<b>PT833</b> Singlemode, LC-connector, 10km, 1310nm, LX, 1000Mbit/s Old type designation: GSLC10	3BSE080219R1
	<b>PT834</b> Singlemode, BiDi, 20km 1310nmTX, 1490nm RX, 1000Mbit/s Old type designation: GSLC20-BiDi-A	3BSE080229R1
	<b>PT835</b> Singlemode, BiDi, 20 km, 1490TX, 1310nm RX, 1000Mbit/s Old type designation: GSLC20-BiDi-B	3BSE080230R1
	<b>PT836</b> Singlemode, LC-connector, 50km, 1550nm, XD, 1000Mbit/s Old type designation: GSLC50	3BSE080220R1
	<b>PT837</b> Singlemode, LC-connector, 80km, 1550nm, ZX, 1000Mbit/s Old type designation: GSLC80	3BSE080221R1
	<b>PT838</b> Singlemode, LC-connector, 110km, 1550nm, EZX, 1000Mbit/s. Old type designation: GSLC110	3BSE080231R1
	<b>PT839</b> GCX100-Copper, RJ-45, 100m, 1000Base TX	3BSE080226R1

### Specifications Optical Transceivers


Product title	Type	Link speed (Mbit/s)	Indicative range (km)	Power budget (dB)	TX/RX wavelength (nm)
PT801	Multi mode	100	2	20	1310/1310
PT802	Single mode	100	20	17	1310/1310
PT803	Single mode, BiDi	100	20	18	1310/1550
PT804	Single mode, BiDi	100	20	18	1550/1310
PT805	Single mode	100	40	30	1310/1310
PT806	Single mode, BiDi	100	40	26	1310/1550
PT807	Single mode, BiDi	100	40	26	1550/1310
PT808	Single mode	100	80	30	1550/1550
PT809	Single mode, BiDi	100	80	29	1310/1550
PT810	Single mode, BiDi	100	80	35	1550/1310
PT811	Single mode	100	120	35	1550/1550
PT812	Single mode, BiDi	100	120	32	1550/1490
PT813	Single mode, BiDi	100	120	32	1490/1550
PT814	RJ45	10/100	0.1	-	-
PT831	Multi mode	1000	0.3-0.55	9	850/850
PT832	Multi mode	1000	1-2	1	1310/1310
PT833	Single mode	1000	10	11	1310/1310
PT834	Single mode, BiDi	1000	20	15	1310/1490
PT835	Single mode, BiDi	1000	20	15	1490/1310
PT836	Single mode	1000	50	20	1550/1550
PT837	Single mode	1000	80	24	1550/1550
PT838	Single mode	1000	110	30	1550/1550
PT839	RJ45	1000	0.1	-	-

## Fieldbus Network

### FOUNDATION Fieldbus Network Components



#### FOUNDATION Fieldbus HSE/H1 Linking Device

LD 810HSE links the FOUNDATION Fieldbus HSE protocol to the FOUNDATION Fieldbus H1 protocol and vice versa. Up to 4 external powered H1 lines can be connected to one LD 810HSE. Two LD 810HSE can be combined to a redundant set of devices. In this case the Redundancy Link cable is required.

Linking Devices	Article no.	
 <p><b>LD 810 HSE EX Linking Device</b> LD 810 HSE EX module for DIN rail mounting with 4 H1 links and one HSE connector. The module itself needs external 24 VDC power supply. H1 links must be powered separately. Restrictions: Linking Device LD 810HSE Ex is not suitable for replacing one of the LD 800 Linking Devices in a redundant pair.</p> <p>To clarify, both devices in the redundant pair must be replaced with LD 810HSE Ex. Redundancy cable for LD 810HSE Ex can be made / procured by the end customer directly &amp; need not be ordered through ABB.</p>	3BSE091722R1	

## Fieldbus Network

### PROFIBUS Network Components

PROFIBUS Redundancy Link Module RLM02	Article no.	
 <p><b>RLM02, PROFIBUS Redundancy Link Module</b> PROFIBUS Redundancy Link Module for PROFIBUS line redundancy. Converts a non-redundant PROFIBUS line to two redundant RS485 lines or vice versa.</p>	3BSE091723R1	
 <p><b>Power Supply Filter (surge) 24 V DC</b> Mandatory to fulfill the requirements of Germanischer Lloyd (GL). WAGO article no. 750-626</p>	3BDZ000397R1	

PROFIBUS DP Accessories	Article no.	
<p><b>PCO 011, PROFIBUS DP connector with bus termination</b> max. 12 Mbit/s, 35° cable outlet, IP40, switchable bus termination Phoenix Contact article no. 2708232.</p>	3BDZ000371R1	
<p><b>PCO 012, PROFIBUS DP connector with bus termination and adapter</b> max. 12 Mbit/s, 35° cable outlet, IP40, switchable bus termination, programming connection SUB-D Phoenix Contact article no. 2708245</p>	3BDZ000372R1	



# Extended Warranty Time

## S800 I/O, S900 I/O, Fieldbus and AC 800M

Terms and conditions for the supply of products from Process Automation, Process Control Products within ABB AB in Sweden is valid.

Note that the price for the Extended Warranty Time order will be calculated as a percentage of the affected S800 I/O, S900 I/O, Fieldbus, AC 800M and Compact 800 HW articles in the accompanying order.

3% of the affected HW articles within the whole order  
 6% of the affected HW articles within the whole order  
 9% of the affected HW articles within the whole order  
 12% of the affected HW articles within the whole order

Extended Warranty 12 to 48 months	Article no.	
<p><b>Extended Warranty, 12 additional months</b></p> <p>12 additional months warranty time - S800 I/O, S900 I/O, Fieldbus and AC 800M            Note that the price for the Extended Warranty Time order will be calculated as 3 percentage of the affected S800 I/O, S900 I/O, Fieldbus and AC 800M articles in the accompanying order.</p>	3BSE049878R1	
<p><b>Extended Warranty, 24 additional months</b></p> <p>24 additional months warranty time - S800 I/O, S900 I/O, Fieldbus and AC 800M            Note that the price for the Extended Warranty Time order will be calculated as 6 percentage of the affected S800 I/O, S900 I/O, Fieldbus and AC 800M articles in the accompanying order.</p>	3BSE049878R2	
<p><b>Extended Warranty, 36 additional months</b></p> <p>36 additional months warranty time - S800 I/O, S900 I/O, Fieldbus and AC 800M            Note that the price for the Extended Warranty Time order will be calculated as 9 percentage of the affected S800 I/O, S900 I/O, Fieldbus and AC 800M articles in the accompanying order.</p>	3BSE049878R3	
<p><b>Extended Warranty, 48 additional months</b></p> <p>48 additional months warranty time - S800 I/O, S900 I/O, Fieldbus and AC 800M            Note that the price for the Extended Warranty Time order will be calculated as 12 percentage of the affected S800 I/O, S900 I/O, Fieldbus and AC 800M articles in the accompanying order.</p>	3BSE049878R4	

# Compact Product Suite References

This page gives you some references and links to more useful Compact Product Suite information. For more information about Compact Product Suite please also visit our web: [solutions.abb/compactproductsuite](https://solutions.abb/compactproductsuite)

## Compact Product Suite References

- [1] Compact Product Suite - Control products for process automation, 3BSE063717
- [2] Compact Control Builder - When engineering efficiency matters, 3BSE042578
- [3] Compact HMI 6.1.1-1 Overview, 3BSE040833
- [4] Panel 800 Version 6.2 Overview, 3BSE094397
- [5] For more information about the Compact Product Suite, please visit: [solutions.abb/compactproductsuite](https://solutions.abb/compactproductsuite)
- [6] For more information about Compact Product Suite hardware please visit: [compacthardwareselector.com](https://compacthardwareselector.com)
- [7] For information and support about Distributed Control Systems, please visit: [abb.com/controlsystems](https://abb.com/controlsystems)

## Compact Product Suite Hardware Selector

Choosing the right hardware made easy

The screenshot shows the 'Compact Product Suite hardware selector' web tool. At the top, it says 'ABB PROCESS AUTOMATION' and 'Compact Product Suite hardware selector'. Below this, there is a brief description: 'Process automation products for control system engineering- process controllers, safety controllers, field interfaces, process panels and HMIs. Here you can choose and compare hardware at a glance, filter according to your needs and download pdf-outlines for a product area or export individual detailed data-sheets.' On the right side, there is a list of articles: 'Control Builder Safe 3.0', 'Compact HMI 6.1.1', 'Compact Control Builder AC 800M 6.1.1-0', and 'Panel 800 Version 6.2'. Below the main content, there is a section titled 'Select product group' with a grid of buttons for 'Controllers', 'Communications', 'I/O Systems', 'Networks', 'Panels', and 'Power supplies & Voters', each with a 'SHOW PRODUCTS' button.

When planning your new project or expansion, finding the right hardware can be a challenge.

Check out the new web based tool that helps you find the hardware you need in a few clicks:

- Quick filtering according to your needs
- Compare different units at a glance
- Find matching termination units
- Check out our latest outlines of all modules and save nice looking datasheets

Start using the Compact Hardware Selector now at: [compacthardwareselector.com](https://compacthardwareselector.com)



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[compacthardwareselector.com](https://compacthardwareselector.com)**

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