

# Controllers - AC 800M Controllers

## Compact Product Suite hardware selector

AC 800M is a family of rail-mounted modules, consisting of CPUs, communication modules, power supply modules and various accessories. There are several CPU modules to choose from, ranging from single units with medium processing power and memory to fully redundant units with high processing power.

For updated information regarding System 800xA please visit our 800xA Hardware Selector. In the HW-selector, you can compare different communication modules, AC 800M controllers, S800 I/O modules, S900 I/O modules, Select I/O modules, module termination units, networks equipment, panels, power supplies, and voters, and also print your PDF files or save an outline of all modules in the product area.

Below is an outline of the range of different AC 800M controllers available.



Specific feature <sup>1</sup>	PM851AK01	PM856AK01	PM857K01	PM857K02
<b>General info</b>				
Article number	3BSE066485R1 (PM851AK01)	3BSE066490R1 (PM856AK01)	3BSE088385R1 (PM857K01)	3BSE088386R1 (PM857K02)
Redundancy	No			Yes
High Integrity	No		Yes	
Clock Frequency	24 MHz		96 Mhz	
Performance, 1000 boolean operations	0.46 ms		0.17 ms	
Performance	0.46 ms		0.17 ms	
Memory	12 MB (from 800xA 5.1 FP4)	16 MB (from 800xA 5.1 FP4)	32 MB	
RAM available for application	6.253 MB (from 800xA 5.1 FP4)	10.337 MB (from 800xA 5.1 FP4)	22.184 MB	
Flash memory for storage	Yes		No	
<b>Dimensions</b>				
Width	119 mm (4.7 in.)			
Height	186 mm (7.3 in.)			
Depth	135 mm (5.3 in.)			
Weight (including base)	1100 g (2.4 lbs)		1200 g (2.6 lbs)	2700 g (5.95 lbs)
<b>Environment and certification</b>				
RoHS compliance	EN 50581:2012			
WEEE compliance	DIRECTIVE/2012/19/EU			

<sup>1</sup> For detailed information on each module, please visit: [compacthardwareselector.automation.abb.com](http://compacthardwareselector.automation.abb.com)



Specific feature <sup>1</sup>	PM858K01	PM858K02	PM860AK01	PM862K01
<b>General info</b>				
Article number	3BSE082895R1 (PM858K01)	3BSE082896R1 (PM858K02)	3BSE066495R1 (PM860AK01)	3BSE076940R1 (PM862K01)
Redundancy	No	Yes	No	
High Integrity	No			
Clock Frequency	33 Mhz		48 MHz	67 Mhz
Performance, 1000 boolean operations	0.36 ms		0.23 ms	0.18 ms
Performance	0.36 ms		0.23 ms	0.18 ms
Memory	16 MB		16 MB (from 800xA 5.1 FP4)	32 MB
RAM available for application	7.147 MB		10.346 (from 800xA 5.1 FP4)	23.521 MB
Flash memory for storage	Yes			
<b>Dimensions</b>				
Width	119 mm (4.7 in.)			
Height	186 mm (7.3 in.)			
Depth	135 mm (5.3 in.)		135 mm (5.3 in.)	135 mm (5.3 in.)
Weight (including base)	1200 g (2.6 lbs)	K01 1200 g (2.6 lbs) / K02 2700 g (5.95 lbs)	1100 g (2.4 lbs)	1200 g (2.6 lbs)
<b>Environment and certification</b>				
RoHS compliance	EN 50581:2012			
WEEE compliance	DIRECTIVE/2012/19/EU			

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Specific feature <sup>1</sup>	PM862K02	PM863K01	PM863K02	PM866AK01
<b>General info</b>				
Article number	3BSE081636R1 (PM862K02)	3BSE088381R1 (PM863K01)	3BSE088382R1 (PM863K02)	3BSE076939R1 (PM866AK01)
Redundancy	Yes	No	Yes	No
High Integrity	No	Yes		No
Clock Frequency	67 Mhz	96 Mhz		133 MHz
Performance, 1000 boolean operations	0.18 ms	0.17 ms		0.09 ms
Performance	0.18 ms	0.17 ms		0.09 ms
Memory	32 MB			64 MB
RAM available for application	23.521 MB	22.184 MB		51.389 MB
Flash memory for storage	Yes	No		Yes
<b>Dimensions</b>				
Width	119 mm (4.7 in.)			
Height	186 mm (7.3 in.)			
Depth	135 mm (5.3 in.)	135 mm (5.3 in.)		135 mm (5.3 in.)
Weight (including base)	K01 1200 g (2.6 lbs) / K02 2900 g (6.4 lbs)	1200 g (2.6 lbs)	K02 2700 g (5.95 lbs)	1200 g (2.6 lbs)
<b>Environment and certification</b>				
RoHS compliance	EN 50581:2012			
WEEE compliance	DIRECTIVE/2012/19/EU			

<sup>1</sup> For detailed information on each module, please visit: [compacthardwareselector.automation.abb.com](http://compacthardwareselector.automation.abb.com)



Specific feature <sup>1</sup>	PM866AK02	PM867K01	PM867K02	PM891K01
<b>General info</b>				
Article number	3BSE081637R1 (PM866AK02)	3BSE076355R1 (PM867K01)	3BSE081638R1 (PM867K02)	3BSE053241R1 (PM891K01)
Redundancy	Yes	No	Yes	No
High Integrity	No	Yes		No
Clock Frequency	133 MHz			450 MHz
Performance, 1000 boolean operations	0.09 ms			0.043 ms
Performance	0.09 ms			0.043 ms
Memory	64 MB			256 MB
RAM available for application	51.389 MB	46.559 MB		208.985 MB
Flash memory for storage	Yes	No		Yes
<b>Dimensions</b>				
Width	119 mm (4.7 in.)			174 mm (6.85 in.)
Height	186 mm (7.3 in.)			186 mm (7.32 in.)
Depth	135 mm (5.3 in.)			94 mm (3.70 in.)
Weight (including base)	K01 1200 g (2.6 lbs) / K02 2700 g (5.95 lbs)	1200 g (2.6 lbs)	K01 1200 g (2.6 lbs) / K02 2700 g (5.95 lbs)	1600 g (3.5 lbs)
<b>Environment and certification</b>				
RoHS compliance	EN 50581:2012			
WEEE compliance	DIRECTIVE/2012/19/EU			

<sup>1</sup> For detailed information on each module, please visit: [compacthardwareselector.automation.abb.com](http://compacthardwareselector.automation.abb.com)



Specific feature <sup>1</sup>	PM891K02	SM812 (HI controllers)
<b>General info</b>		
Article number	3BSE053242R1 (PM891K02)	3BSE072270R1
Redundancy	Yes	
High Integrity	No	Yes
Clock Frequency	450 MHz	133 Mhz
Performance, 1000 boolean operations	0.043 ms	
Performance	0.043 ms	-
Memory	256 MB	64 MB
RAM available for application	208.985 MB	-
Flash memory for storage	Yes	No
<b>Dimensions</b>		
Width	174 mm (6.85 in.)	59 mm (2.9 in.)
Height	186 mm (7.32 in.)	186 mm (7.3 in.)
Depth	94 mm (3.70 in.)	127.5 (5.0 in.)
Weight (including base)	K01 1600 g (3.5 lbs) / K02 4000 g (8.8 lbs)	0.7 kg (1.5 lbs)
<b>Environment and certification</b>		
RoHS compliance	EN 50581:2012	
WEEE compliance	DIRECTIVE/2012/19/EU	

<sup>1</sup> For detailed information on each module, please visit: [compacthardwareselector.automation.abb.com](https://compacthardwareselector.automation.abb.com)

# Accessories



Specific feature <sup>1</sup>	BC810K02	BC820K02	Compact Flash Card 4GB	SB822
<b>General info</b>				
Article number	3BSE031155R1 (BC810K02)	3BSE071500R1 (BC820K02)	2PAA121688R1	3BSE018172R1
Redundancy	Yes			
High Integrity	Yes	No		
Performance	Hot swap supported			
Memory			4 GB	
Type				Rechargeable battery unit
Rated output voltage				3.6 V
<b>Dimensions</b>				
Width	59 mm (2.9 in.)		42.8 mm (1.68 in.)	85.8 mm (3.38")
Height	185 mm (7.3 in.)		3.3 mm (0.13 in.)	136 mm (5.35") incl. hatch
Depth	127.5 mm (5.0 in.)		36.4 mm (1.43 in.)	58.5 mm (2.3")
Weight (including base)	1.5 kg (3.31 lbs) (BC810K02 package)	1.4 kg (3.1 lbs) (BC820K02 package)	0.011 kg (0.02 lbs)	
Weight (lbs.)				550 g (01.21 lbs.)
<b>Environment and certification</b>				
RoHS compliance	EN 50581:2012		DIRECTIVE/2011/65/EU	DIRECTIVE/2011/65/EU (EN 50581:2012)
WEEE compliance	DIRECTIVE/2012/19/EU			

<sup>1</sup> For detailed information on each module, please visit: [compacthardwareselector.automation.abb.com](http://compacthardwareselector.automation.abb.com)

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