



The AC 800M for compact control is a family of controllers built as rail-mounted modules, consisting of CPU:s, communication modules, power supply modules and various accessories. There are 5 controller modules to choose from, from medium power and low cost to high power and support for full redundancy.

Features\Controllers (requires firmware version >4.0)	PM851	PM856	PM860	PM861A	PM864A	PM866
<b>Processor Unit</b>	<b>PM851K01 incl:</b> 1 PM851 CPU and required optional items	<b>PM856K01 incl:</b> 1 PM856 CPU and required optional items	<b>PM860K01 incl:</b> 1 PM860 CPU and required optional items	<b>PM861AK01 incl:</b> 1 PM861A CPU and required optional items <b>PM861AK02 incl:</b> 2 PM861A CPUs and required optional items	<b>PM864AK01 incl:</b> 1 PM864A CPU and required optional items <b>PM864AK02 incl:</b> 2 PM864A CPUs and required optional items	<b>PM866K01 incl:</b> 1 PM866 CPU and required optional items <b>PM866K02 incl:</b> 2 PM866 CPUs and required optional items
<b>Optional items</b> (partly included in Processor Units, see Price List)	TP830 Baseplate, TP850 CEX-bus term., TK850 CEX-bus cable, TB807, ModulBus term, Battery RAM backup, TB852 RCU-link term, TB851 RCU-link cable, SB821 External Battery Unit, TK212 Tool cable, TC562 Short Distance Modem, TK853V020 Modem cable, BC810K02 CEX-bus Interconnection unit; TK851V010 Connection cable, SD821/SD822/SD823 Power Supply, SS822 Voiting Unit, Mains Breaker Kit.					
<b>Clock frequency</b>	24 MHz	24 MHz	48 MHz	48 MHz	96 MHz	133 MHz
<b>Memory (RAM)</b>	8 Mb	8 Mb	8 Mb	16 Mb	32 Mb	64 Mb
<b>RAM available for application</b>	2.787 Mb	2.787 Mb	2.787 Mb	8.289 Mb	25.049 Mb	52.996 Mb
<b>Processor type</b>	MPC860	MPC860	MPC860	MPC860	MPC862	MPC 866
<b>Compact Flash memory for storage of application and data</b> (CF memory: type 1, 3 mm thickness)	Yes	Yes	Yes	Yes	Yes	Yes
<b>CPU redundancy support</b>	No	No	No	Yes	Yes	Yes
<b>Switch over time in red. conf.</b>	–	–	–	max 10 ms	max 10 ms	max 10 ms
<b>Performance, 1000 boolean operations (a:=b and c)</b>	0.46 ms	0.46 ms	0.23 ms	0.23 ms	0.15 ms	0.09 ms
<b>No. Controllers per control projects</b>	32					
<b>No. of applications per control project</b>	256					

Features / PLCs	PM851	PM856	PM860	PM861A	PM864A	PM866
No. of applications per controller	8					
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					
Flash PROM for firmware storage	2 Mb flash					
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 180/300 ma	typ/max 250/430 ma	typ/max 287/487 ma	typ/max 287/487 ma
Power dissipation	typ 5.0 W	typ 5.0 W	typ 5.0 W	typ 6.0 W	typ 6.9 W	typ 6.9 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					
OPC Server for AC 800M	40 000 variables					
OPC Server update rate	0.1 s - 1 hour (1 s default)					
OPC Servers per controller	Max 2					
OPC clients per OPC server	Max 5					
Event queue in controller per OPC client	Up to 3000 events					
AC800M transm. speed to OPC server	36-86 events/sec, 113-143 data messages/sec (PM864, 50 % load, 1 500 subscription queue)					
Comm. modules on CEX bus	1	12	12	12	12	12
Supply current on CEX bus	Supply current: Max 24 V - 2.4 A (fuse 3.15 A fast)					
I/O clusters on ModuleBus (local I/O)	1 el. + 1 opt.	1 el. + 7 opt.	1 el. + 7 opt.	1 el. + 7 opt.	1 el. + 7 opt.	1 el. + 7 opt.
I/O capacity on ModuleBus (local I/O) (Non redundant configuration only)	max 24 I/O modules	max 96 I/O modules	max 96 I/O modules	max 96 I/O modules	max 96 I/O modules	max 96 I/O modules
ModuleBus scan rate	0 - 100 ms (actual time depending on number of I/O modules)					
Supply current on Electrical Modulbus	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
Ethernet interface	Ethernet (IEEE 802.3), 10 Mbits/s, RJ-45, female (8-pole)					
Control Network protocol	MMS (Manufacturing Message Service)					
Control Network capacity	Up to 23 000 Boolean/s (<475 boolean/message) with 50 % CPU application load Up to 140 000 Boolean/s (<475 boolean/message) with <5 % CPU application load					
Recommended Control Network backbone	100 Mbit/s - 1 Gbit/s Ethernet (IEEE 802.3)					
Redundancy Control Network switchover time	1 sec					
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					



Supported Communication modules	Profibus	RS-232 C	MB300	INSUM	Drivebus	S100 I/O interface	IEC 61850
<b>Connectors</b>	DB female (9-pin)	RJ-45 female (8-pin)	RJ-45 female (8-pin)	RJ-45 female (8-pin)	Fiber-optic	Miniribbon (36-pin)	RJ-45 female (8-pin)
<b>24 V current consumption</b>	typ 190 ma	typ 100 ma	typ 150 ma	typ 150 ma	typ 200 ma	typ 200 ma	typ 160 ma
<b>Protection class</b>	IP20 according to EN60529, IEC 529						
<b>Certifikation</b>	Meets EMC directive 89/336 EEC acc. to EN 50081-2 and EN 61000-6-2						
- CE-marked							
- UL-508	Yes	Yes	Yes	Yes	Yes	Yes	Yes
- UL60079-15 (Class 1 Zone 2)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Dimensions</b>	W 58 x H 186 x D 135 mm (2.3 x 7.3 x 5.3 in.)						
<b>Weight (including base)</b>	700 g (1.5 lb.)	520 g (1.2 lb.)	700 g (1.5 lb.)	600 g (1.3 lb.)	700 g (1.5 lb.)	600 g (1.3 lb.)	700 g (1.5 lb.)



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