

AC 800F controller

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This field controller covers all major fieldbuses in process automation. Optionally, AC 800F supports

redundancy. A single controller can typically support around 1,000 I/Os.

The AC 800F controller has a modular structure. The CPU is designed as a backplane to which various

Modules-power supply units, Ethernet and fieldbus modules-can be attached in line with the application.

(For more product details models please click: <https://www.plcdcsmodule.com>)



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Economical and reliable

The AC800F offers users a new automation solution that integrates simple engineering ideas into an open, advanced system architecture:

* Fully redundant design

- * Freedom of choice: PROFIBUS, FOUNDATION Fieldbus or HART, or a mix of applications within a single controller.
- * simple and efficient engineering: FDT/DTM support
- * All engineering, from design and commissioning to system maintenance and diagnostics, requires only one tool package (CBF); asset optimisation and batch handling
- * System engineering covering fieldbus and device management configurations
- * In-house integrated Web Server technology for remote diagnostics

AC800F Field Controller Technical Parameters

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Technical data:	
CPU	32-Bit Exceedance RISC Processor High Speed Bit Processing Capability
RAM	4 Mbyte (SRAM) OR 16 Mbyte (DRAM) Internal or external battery backup capability 4 Mbyte Flash EPROM
Environmental conditions	Ambient Temp: 0...60 ° C Protection level: IP 20
Dimensions	239 x 202 x 164 mm (W x H x D) DIN Guide rail mounting
Power supply	120 / 230 V AC 24 V DC, redundancies Power loss: 30 VA max.
Approvals	CSA-UL, CE, NAMUR

AC800F Field Controller Features and Benefits

High Safety

To achieve the goal of safe operation and high plant equipment availability, the AC800F supports a full range of redundant operating modes.

This improves safety and avoids production downtime. Redundancy can be applied to:

- * System bus (standard Ethernet solution)
- * Controllers
- * Input/output modules
- * Fieldbus master communication modules
- * Fieldbus
- * Coupling connection devices
- * HIS communication



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High flexibility

Digital communications have transformed automation technology for the better, and today fieldbus technology is widely accepted as a means of transmitting field device signals while overlaying many of the necessary device diagnostic data. This technology is driving the development of new application areas such as asset optimisation.

The AC800F collects and processes signals and diagnostic data from up to four fieldbuses. If required, the AC800F can also support multiple bus types simultaneously, which is unmatched by conventional controllers. In addition, the compact and modular design of the AC800F and the common electronic components can be used for a wide range of applications, allowing the AC800F to be simply installed in the control room or used directly in the field.

- * PROFIBUS
- * Foundation Fieldbus
- * MODBUS protocol
- * Interbus
- * IEC 870-5 telecontrol protocol

* CAN-Bus for connection of input/output modules

* HART protocol via Profibus remote I/O.

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Power supply modules

SA 801F : input voltages from 115 ... 230 V AC

SD 802F : redundant DC voltage 24 V DC



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ABB SA801F, 115...230VAC Power Supply Module Features

Wide input power range 115-230VAC with EMC filtering

3.3VDC +/-3%5A, 5.0VDC +/-3%5A, total output power 26.5W

Input and output voltage monitoring, provide power failure signal

Over-current detection and short-circuit protection

Output hold for 20ms in case of power failure

Diagnostic interface (with EMC filter)

EEPROM for diagnostic data

AC800FCPU motherboard status detection and operating elements

ABB SA811F, 115...230VAC Power Supply Module Features

Wide input power range 115-230VAC with EMC filtering

3,3VDC +/-3% 6,5A, 5,0VDC +/-3% 5,5A, total output power 35W

Suitable for PM803F CPU motherboards

Input and output voltage monitoring to provide power failure signals

Over-current detection and short-circuit protection

Output hold for 20ms in case of power failure

Diagnostic interface (with EMC filter)

EEPROM for diagnostic data

AC800FCPU motherboard status detection and operating elements

ABB SD802F, 24VDC Power Module Features

Dual redundant 24VDC +/-25% power inputs with EMC filtering

3.3VDC +/-3% 5A, 5.0VDC +/-3% 5A, total output power 26.5W

Input and output voltage monitoring, providing power failure signals

Over-current detection and short-circuit protection

Output hold for 20ms in case of power failure

Automatic switching of input power supply

Diagnostic interface (with EMC filter)

EEPROM for diagnostic data

AC800F CPU motherboard status detection and operating elements

ABB SD812F, 24VDC Power Supply Module Features

Dual redundant 24VDC +/-25% power inputs with EMC filtering

3.3VDC +/-3% 6.5A, 5.0VDC +/-3% 5.5A, total output power 35W

Input and output voltage monitoring, providing power failure signals

Over-current detection and short-circuit protection

Output hold for 20ms in case of power failure

Automatic switching of input power supply

Diagnostic interface (with EMC filter)

EEPROM for diagnostic data

AC800FCPU motherboard status detection and operating elements

Ethernet modules

EI 801F : 10Base2 module (Cheapernet) for ThinCoax type coax. cable

EI 802F : AUI module for connecting transceivers for 10Base5, 10Base2, 10BaseT, 10BaseFL or star coupler units

EI 803F : 10/100BaseTP module for Shielded Twisted Pair cables

• Fieldbus modules

FI 830F : Profibus DP module for direct operation of Profibus field devices

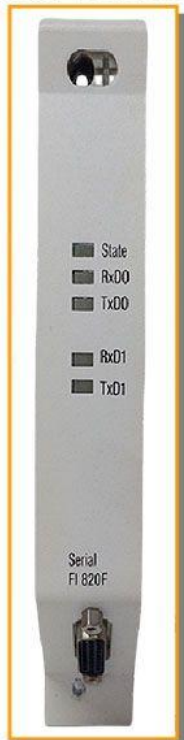
FI 820F : Serial module, 2 channels, protocols available : MODBUS, Sartorius scale protocol, continuously being expanded

FI 810F : CAN module, 3 channels, protocols available : DigiNet P

AM 801F : Battery module for redundant battery back-up

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Serial Interface Module (FI 820F)



- 2 Ports
- RS485/422/232C
- Modbus Protocol (Master & Slave)

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automation equipment



Profibus Module (FI 830F)



- Profibus DP V1
 - up to 12 Mbps
 - Master 'Class 1 & 2'
 - 'Single Master Mode'
 - ext. Master Class 2 allowed
 - Line Redundancy by external Hardware Box RLM01
- Profibus PA by DP/PA-Converter
- Hot swappable

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AC800F controller is a controller with fieldbus function launched by ABB in 2000, which has rich fieldbus interfaces and can realise controller redundancy, communication redundancy and power redundancy. AC800M has as many as 9 kinds of controllers to choose from, and AC800F is different from AC800M is only equipped with configuration software CCB, there is no own man-machine monitoring software, you can choose a third-party software as their own man-machine monitoring software, so it is more suitable for the engineering company to use. Similarly, AC800M can also realise controller redundancy, communication redundancy and power redundancy.

AC800F Hardware

model numbers		descriptive
Processor Modules		PM802F
		PM803F
		8M
		16M
model numbers		descriptive
Communication module	FI810F	CAN
	FI820F	Serial
	FI830F	Profibus DP
	FI840F	FF
model numbers		descriptive
Ethernet Module	EI811F	10BASE-2
	EI812F	AUI
	EI813F	10BASE-T
model numbers		descriptive
Battery module	AM895F	front panels
	AM811F	Battery module

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Power Supply Modules	model numbers	descriptive
	SA811F	Power Supply Modules 115/230V->24VDC
	SD812F	Redundant Power Module 24VDC->24VDC
	model numbers	descriptive
	SB808F	RAM backup battery (use for EI8**F mouldings)
	TK807F	SA801F Power supply cable
	TK808F	Power supply cable for SA801F/SA811F
	TK809F	Power supply cable for SA801F/SA811F
	TK821F	Serial communication cables 0.5m
attachment	TK831F	CAN communications cable 0.5m ◦ 3×2×0.25 square millimetre
	TK811F	CAN communications cable 3m ◦ 3×2×0.25 square millimetre
	TK817F	CAN communications cable 100m ◦ 3×2×0.5 square millimetre
	TK891F	Diagnostic cables 5m
	TK890F	Diagnostic cables 10m
	TB870F	Connection terminal block for serial interface
	TK802F	SD802F Power supply cables
	SY809F	Battery holder
	model numbers	descriptive
AC800F software (Classic)	EI801F	10BASE-2
	EI802F	AUI
	EI803F	10BASE-T
	AM801F	Battery module
	SA801F	Power Modules 115/230V->24VDC
	SD802F	Redundant Power Modules 24VDC->24VDC

ABB Control Systems

AC800F Series:

pm802f pm803f sa801f sa811f sd802f sd812f tk807f tk808f tk809f tk802f tk821f tk831f tk811f
tk817f tk890f tk891f tb870f ei803f ei811f ei812f ei813f fi810f fi820f
fi830f fi840f am811f am895f(4) sb808f sy809f

AC800M Series:

pm851k01 pm856k01 pm860k01 pm861ak01 pm861ak02 pm864ak01 pm864ak02 pm866ak01
pm866ak02 sb821 sb822 pm865ak01 pm865ak02 sm810k01 sm811k01
tk212a tk562 tk853v020 ci854ak01 ci853k01 ci860k01 ci855k01 ci856k01 ci857k01 ci857k01
ci858k01 ci867k01 ci868k01 tk850v007 tb850 tb851 tk851v010 tb852 BC810K02 CEX

AC700 Series:

pm783f tb711f ta724 ta521 ta523 ta525 ta526 ai723f ax722f dc732f tu715f cp-c 24/5.0 cp-c
24/10.0 cp-c mm cp-a cm cp-a ru

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