

DATA SHEET

PM554, PM556, PM564, PM566

Processor Module



1 Ordering data

Table 1: Processor modules for AC500-eCo

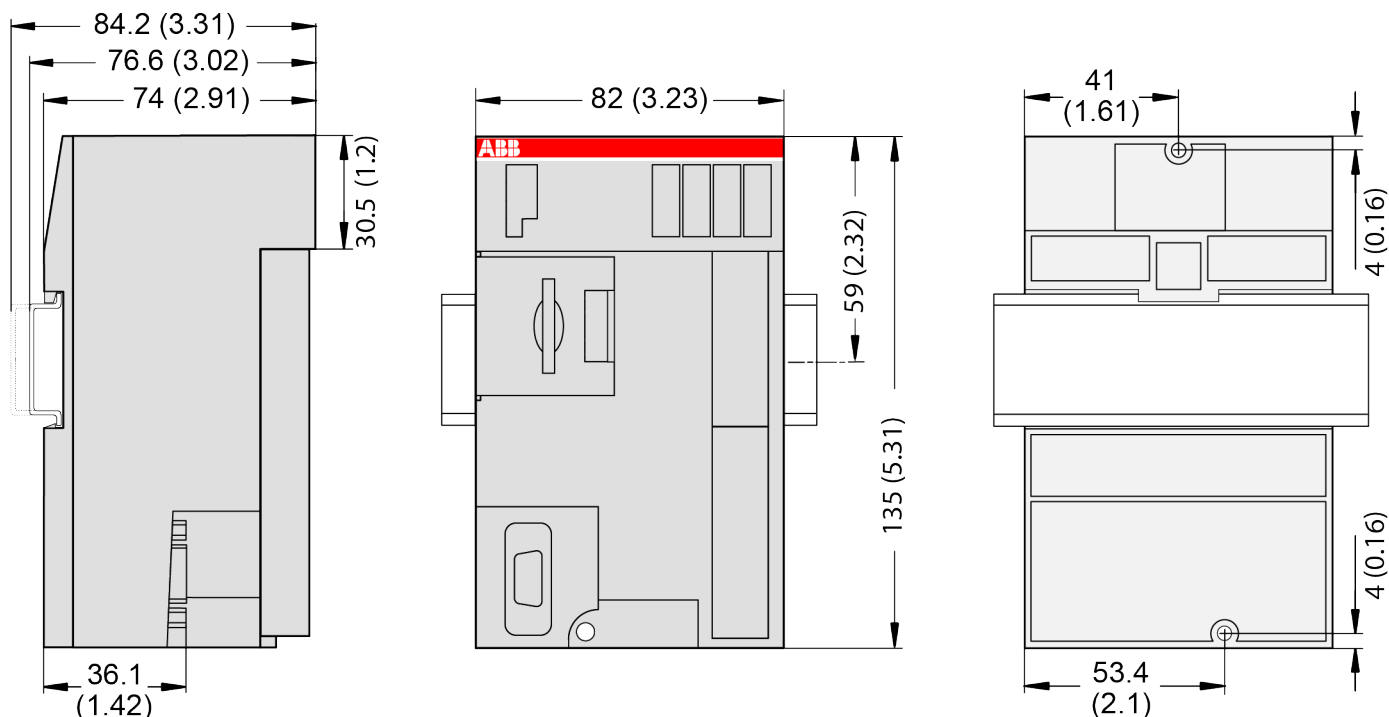
Part no.	Description	Product life cycle phase *)	Possible migration device
1SAP 120 600 R0001	PM554-TP, processor module, 128 kB memory, 8 DI, 6 DO-T, 24 V DC, with pluggable I/O terminal blocks	Classic	
1SAP 120 600 R0071	PM554-TP-ETH, processor module, 128 kB memory, 8 DI, 6 DO-T, 24 V DC, onboard Ethernet, with pluggable I/O terminal blocks	Classic	
1SAP 120 700 R0001	PM554-RP, processor module, 128 kB memory, 8 DI, 6 DO-R, 24 V DC, with pluggable I/O terminal blocks	Classic	
1SAP 120 800 R0001	PM554-RP-AC, processor module, 128 kB memory, 8 DI, 6 DO-R, 100 V AC ... 240 V AC, with pluggable I/O terminal blocks	Classic	

Part no.	Description	Product life cycle phase *)	Possible migration device
1SAP 121 200 R0071	PM556-TP-ETH, processor module, 512 kB memory, 8 DI, 6 DO-T, 24 V DC, onboard Ethernet, with pluggable I/O terminal blocks	Classic	
1SAP 120 900 R0001	PM564-TP, processor module, 128 kB memory, 6 DI, 6 DO-T, 2 AI and 1 AO, 24 V DC	Classic	PM5012-T-ETH/PM5032-T-ETH
1SAP 120 900 R0071	PM564-TP-ETH, processor module, 128 kB memory, 6 DI, 6 DO-T 2 AI and 1 AO, 24 V DC, Ethernet interface	Classic	PM5032-T-ETH
1SAP 121 000 R0001	PM564-RP, processor module, 128 kB memory, 6 DI, 6 DO-R, 2 AI and 1 AO, 24 V DC	Classic	PM5012-T-ETH/PM5032-T-ETH
1SAP 121 100 R0001	PM564-RP-AC, processor module, 128 kB memory, 6 DI, 6 DO-R, 2 AI and 1 AO, 100 V AC ... 240 V	Classic	PM5012-T-ETH/PM5032-T-ETH
1SAP 121 000 R0071	PM564-RP-ETH, processor module, 128 kB memory, 6 DI, 6 DO-R, 2 AI and 1 AO, 24 V DC, Ethernet interface	Classic	PM5032-R-ETH/PM5052-R-ETH
1SAP 121 100 R0071	PM564-RP-ETH-AC, processor module, 128 kB memory, 6 DI, 6 DO-R, 2 AI and 1 AO, 100 V AC...240 V AC, Ethernet interface	Classic	PM5032-R-ETH/PM5052-R-ETH
1SAP 121 500 R0071	PM566-TP-ETH, processor module, 512 kB memory, 6 DI, 6 DO-T, 2 AI and 1 AO, 24 V DC, Ethernet interface	Classic	PM5052-T-ETH/PM5072-T-2ETH/PM5082-T-2ETH



*) Modules in lifecycle Classic are available from stock but not recommended for planning and commissioning of new installations.

1.1 Dimensions



The dimensions are in mm and in brackets in inch.

2 Technical data

The system data of AC500-eCo apply.

🔗 Chapter 3 “System data AC500-eCo” on page 7

Only additional details are therefore documented below.

General data

Power supply	24 V DC	100 - 240 V AC
Connection of power supply	Via removable 5-pin screw terminal	
Current consumption from power supply (max.)	PM554-TP: 180 mA PM554-TP-ETH: 190 mA PM554-RP: 220 mA PM556-TP-ETH: 190 mA PM564-TP: 210 mA PM564-TP-ETH: 220 mA PM564-RP: 240 mA PM564-RP-ETH: 250 mA PM566-TP-ETH: 220 mA	PM554-RP-AC: 200 mA at 100 V AC, 110 mA at 240 V AC *) PM564-RP-AC: 210 mA at 100 V AC, 125 mA at 240 V AC *) PM564-RP-ETH-AC: 220 mA at 100 V AC, 130 mA at 240 V AC *)

Power supply	24 V DC	100 - 240 V AC
Current consumption from power supply (typ.)	PM554-TP: 60 mA PM554-TP-ETH: 70 mA PM554-RP: 80 mA PM556-TP-ETH: 70 mA PM564-TP: 95 mA PM564-TP-ETH: 100 mA PM564-RP: 110 mA PM564-RP-ETH: 120 mA PM566-TP-ETH: 100 mA	PM554-RP-AC: 20 mA at 100 V AC, 12 mA at 240 V AC *) PM564-RP-AC: 20 mA at 100 V AC, 11 mA at 240 V AC *) PM564-RP-ETH-AC: 23 mA at 100 V AC, 14 mA at 240 V AC *)
Inrush current at nominal voltage	Typ. 3.9 A²s	Typ. 0.3 A²s
Required fuse	3 A fast	Max. 10 A
Max. power dissipation within the processor module	PM554-TP: 3.0 W PM554-TP-ETH: 3.3 W PM554-RP: 3.5 W PM556-TP-ETH: 3.3 W PM564-TP: 3.9 W PM564-TP-ETH: 4.4 W PM564-RP: 4.5 W PM564-RP-ETH: 4.9 W PM566-TP-ETH: 4.4 W	PM554-RP-AC: 4.8 W PM564-RP-AC: 4.8 W PM564-RP-ETH-AC: 5.3 W
Processor module interfaces	I/O bus, COM1, COM2 (optional), Ethernet (depending on model)	
Connection system	see System Assembly, Construction and Connection	
Weight	PM554-TP: 300 g PM554-TP-ETH: 300 g PM554-RP: 350 g PM556-TP-ETH: 300 g PM564-TP: 300 g PM564-TP-ETH: 300 g PM564-RP: 350 g PM564-RP-ETH: 350 g PM566-TP-ETH: 300 g	PM554-RP-AC: 400 g PM564-RP-AC: 400 g PM564-RP-ETH-AC: 400 g
Mounting position	horizontal or vertical	

*) These values show the value of the apparent current (sum of active and reactive current)

Detailed data

Program memory	128 kB Flash EPROM (PM554-xP and PM564-xP types) 512 kB Flash EPROM (PM556-xP and PM566-xP types)
Data memory	
- VAR data	10 kB

- VAR_RETAIN data	1 kB, always buffered in flash
- %RB data (persistent)	1 kB, can be buffered in flash (depending on configuration)
- %MB data	2 kB (PM554 and PM564 types) 64 kB (PM556 and PM566 types)
Data buffering	In flash memory
Real-time clock (RTC)	Optional
Battery low indication	Warning
Programming languages	- Instruction List (IL) - Function Block Diagram (FBD) - Ladder Diagram (LD) - Sequential Function Chart (SFC) - Structured Text (ST) - Continuous Function Chart (CFC)
Processor type	Freescale ARM Processor 32-bit
Processor clock speed	50 MHz
Cycle time for 1000 instructions	
Binary	0.08 ms
Word	0.1 ms
Floating point	1.2 ms
Program execution	
Cyclic	Yes
Time-controlled	Yes
Multitasking	Yes
Interruption	1 interrupted with up or down edge detection
LEDs	Power, Run, Error, Status of I/Os
RUN/STOP switch	Yes
Protection of the user program by password	Possible
Usable accessories	MC503: Memory card TA561-RTC: Real-time clock TA562-RS: Serial RS-485 TA569-RS-ISO: Serial RS-485 isolated TA562-RS-RTC: Real-time clock and serial RS-485

Detailed data of the interfaces

Serial interface COM1	
Physical link	RS-485
Galvanic isolation	none
Transmission rate	Configurable from 1.2 to 187.5 kBit/s
Connection	9-pin D-sub female connector

Serial interface COM1	
Common mode range	Typ. -8 V / +12 V (CAUTION: The interface can be damaged if the signal exceeds the common mode range.)
Usage	- Programming port - Modbus (master and slave) - Serial ASCII communication - CS31 (master only)

Serial interface COM2 (optional)	
Physical link	RS-485
Galvanic isolation	none (TA562-RS or TA562-RS-RTC) 500 V DC (TA569-RS-ISO)
Baudrate	Configurable from 1.2 to 115.2 kBit/s
Connection	Removable 5-pin terminal block
Common mode range	Typ. -8 V / +12 V (CAUTION: The interface can be damaged if the signal exceeds the common mode range.)
Usage	- Programming port - Modbus (master and slave) - Serial ASCII communication

Data of I/Os

	PM55x-xP	PM56x-xP
Max. number of I/O modules	10	10
Digital inputs	320 + 8	320 + 8
Digital outputs	240 + 6	240 + 6
Type of digital outputs	PM554-TP PM554-TP-ETH PM554-RP PM554-RP-AC PM556-TP-ETH PM564-TP PM564-TP-ETH PM564-RP PM564-RP-AC PM564-RP-ETH PM564-RP-ETH-AC PM566-TP-ETH	Transistor Transistor Relays Relays Transistor Transistor Transistor Relays Relays Relays Relays Transistor
Analog inputs	160	160 + 2
Analog outputs	160	160 + 1