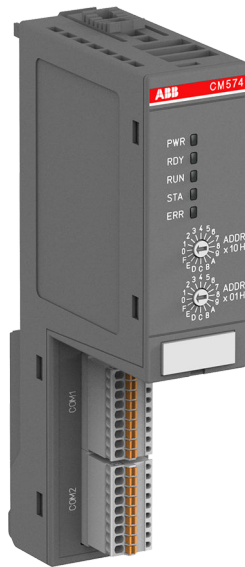


DATA SHEET

CM574-RS

Communication module



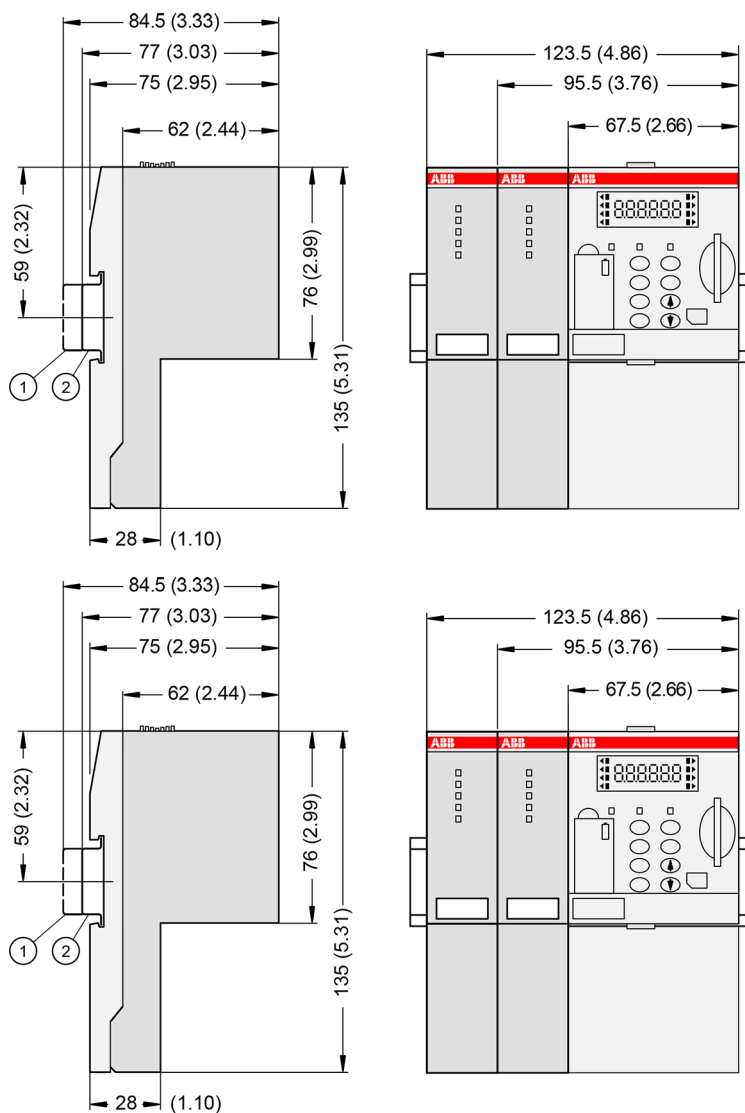
1 Ordering data

Part no.	Description	Product life cycle phase *)
1SAP 170 400 R0201	CM574-RS, communication module, 2 serial RS232/485, free configurable serial interface module	Active



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

2 Dimensions



- 1 Din rail 15 mm
- 2 Din rail 7.5 mm



The dimensions are in mm and in brackets in inch.

3 Technical data

The system data of AC500 and S500 ↪ *Chapter 4 “System data AC500” on page 3* are applicable to the standard version.

The system data of AC500-XC are applicable to the XC version.

Only additional details are therefore documented below.

The technical data are also applicable to the XC version.

Parameter	Value
Protocol	Programmable with Automation Builder e.g. Modbus / ASCII via serial interfaces
Interface	Serial interface
Serial interface standard	EIA RS-232 or EIA RS-485
Potential separation	Yes, from the CPU, 500 V DC
Serial interface parameters	Configurable via software
Modes of operation	Programming or data exchange
Transmission rate	9.6 kbit/s to 187.5 kbit/s
Protocol	Programmable
Interface connector	MC 0.5/9-G-2.5, 9-pin, male
Processor	PowerPC
Usable CPUs	PM57x, PM58x, PM59x
Usable terminal bases	All TB5xx
Ambient temperature	see: System data AC500 ↗ Chapter 4 "System data AC500" on page 3 System Data AC500 XC
Communication module bus	Dual-port memory, 8 kB
Internal power supply	Through the communication module bus of the terminal base
Current consumption from 24 V DC power supply at the terminal base of the CPU	Typ. 80 mA
Internal RAM memory	256 kB
External RAM memory	-
External Flash memory	512 kB (firmware) + 2 x 64 kB (user data)
Status display	PWR, RDY, RUN, STA, ERR
Weight	Ca. 150 g

4 System data AC500

4.1 Environmental conditions

Table 1: Process and supply voltages

Parameter	Value
24 V DC	
Voltage	24 V (-15 %, +20 %)
Protection against reverse polarity	Yes
120 V AC	
Voltage	120 V (-15 %, +10 %)
Frequency	50/60 Hz (-6 %, +4 %)
230 V AC	
Voltage	230 V AC (-15 %, +10 %)

Parameter		Value
	Frequency	50/60 Hz (-6 %, +4 %)
120 V AC...240 V AC wide-range supply		
	Voltage	120 V...240 V (-15 %, +10 %)
	Frequency	50/60 Hz (-6 %, +4 %)
Allowed interruptions of power supply, according to EN 61131-2		
	DC supply	Interruption < 10 ms, time between 2 interruptions > 1 s, PS2
	AC supply	Interruption < 0.5 periods, time between 2 interruptions > 1 s

! NOTICE!
Exceeding the maximum power supply voltage for process or supply voltages could lead to unrecoverable damage of the system. The system might be destroyed.

! NOTICE!
Improper voltage level or frequency range which cause damage of AC inputs:

- AC voltage above 264 V
- Frequency below 47 Hz or above 62.4 Hz

! NOTICE!
Improper connection leads cause overtemperature on terminals.
PLC modules may be destroyed by using wrong cable type, wire size and cable temperature classification.

Parameter		Value
Temperature		
	Operating	0 °C...+60 °C: Horizontal mounting of modules. 0 °C...+40 °C: Vertical mounting of modules. Output load reduced to 50 % per group.
	Storage	-40 °C...+70 °C
	Transport	-40 °C...+70 °C
Humidity		Max. 95 %, without condensation
Air pressure		
	Operating	> 800 hPa / < 2000 m
	Storage	> 660 hPa / < 3500 m
Ingress protection		IP20

4.2 Creepage distances and clearances

The creepage distances and clearances meet the requirements of the overvoltage category II, pollution degree 2.

4.3 Insulation test voltages, routine test

According to EN 61131-2

Parameter	Value	
230 V circuits against other circuitry	2500 V	1.2/50 μ s
120 V circuits against other circuitry	1500 V	1.2/50 μ s
120 V...240 V circuits against other circuitry	2500 V	1.2/50 μ s
24 V circuits (supply, 24 V inputs/outputs, analog inputs/outputs), if they are galvanically isolated against other circuitry	500 V	1.2/50 μ s
COM interfaces, galvanically isolated	500 V	1.2/50 μ s
COM interfaces, electrically not isolated	Not applicable	Not applicable
FBP interface	500 V	1.2/50 μ s
Ethernet	500 V	1.2/50 μ s
ARCNET	500 V	1.2/50 μ s
230 V circuits against other circuitry	1350 V	AC 2 s
120 V circuits against other circuitry	820 V	AC 2 s
120 V...240 V circuits against other circuitry	1350 V	AC 2 s
24 V circuits (supply, 24 V inputs/outputs, analog inputs/outputs), if they are galvanically isolated against other circuitry	350 V	AC 2 s
COM interfaces, galvanically isolated	350 V	AC 2 s
COM interfaces, electrically not isolated	Not applicable	Not applicable
FBP interface	350 V	AC 2 s
Ethernet	350 V	AC 2 s
ARCNET	350 V	AC 2 s

4.4 Power supply units

For the supply of the modules, power supply units according to SELV or PELV specifications must be used.



Safety Extra Low Voltage (SELV) and Protective Extra Low Voltage (PELV)

To ensure electrical safety of AC500/AC500-eCo extra low voltage circuits, 24 V DC supply, communication interfaces, I/O circuits, and all connected devices must be powered from sources meeting requirements of SELV, PELV, class 2, limited voltage or limited power according to applicable standards.



WARNING!

Improper installation can lead to death by touching hazardous voltages!

To avoid personal injury, safe separation, double or reinforced insulation and separation of the primary and secondary circuit must be observed and implemented during installation.

- Only use power converters for safety extra-low voltages (SELV) with safe galvanic separation of the primary and secondary circuit.
- Safe separation means that the primary circuit of mains transformers must be separated from the secondary circuit by double or reinforced insulation. The protective extra-low voltage (PELV) offers protection against electric shock.

4.5 Electromagnetic compatibility

Table 2: Range of use

Parameter	Value
Industrial applications	Yes
Domestic applications	No

Table 3: Immunity against electrostatic discharge (ESD), according to IEC 61000-4-2, zone B, criterion B

Parameter	Value
Electrostatic voltage in case of air discharge	8 kV
Electrostatic voltage in case of contact discharge	4 kV, in a closed switchgear cabinet 6 kV ¹⁾
ESD with communication connectors	In order to prevent operating malfunctions, it is recommended, that the operating personnel discharge themselves prior to touching communication connectors or perform other suitable measures to reduce effects of electrostatic discharges.
ESD with connectors of terminal bases	The connectors between the Terminal Bases and processor modules or Communication Modules must not be touched during operation. The same is valid for the I/O bus with all modules involved.

¹⁾ High requirement for shipping classes are achieved with additional specific measures (see specific documentation).

Table 4: Immunity against the influence of radiated (CW radiated), according to IEC 61000-4-3, zone B, criterion A

Parameter	Value
Test field strength	10 V/m

Table 5: Immunity against fast transient interference voltages (burst), according to IEC 61000-4-4, zone B, criterion B

Parameter	Value
Supply voltage units (DC)	2 kV
Supply voltage units (AC)	2 kV
Digital inputs/outputs (24 V DC)	1 kV
Digital inputs/outputs (120 V AC...240 V AC)	2 kV
Analog inputs/outputs	1 kV
CS31 bus	1 kV
Serial RS-485 interfaces (COM)	1 kV
Serial RS-232 interfaces (COM, not for PM55x and PM56x)	1 kV
ARCNET	1 kV
FBP	1 kV
Ethernet	1 kV
I/O supply (DC-out)	1 kV

Table 6: Immunity against the influence of line-conducted interferences (CW conducted), according to IEC 61000-4-6, zone B, criterion A

Parameter	Value
Test voltage	3V zone B, 10 V is also met.
High energy surges	According to IEC 61000-4-5, zone B, criterion B
Power supply DC	1 kV CM / 0.5 kV DM ²⁾
DC I/O supply	0.5 kV CM / 0.5 kV DM ²⁾
Communication Lines, shielded	1 kV CM ²⁾
AC I/O unshielded ³⁾	2 kV CM / 1 kV DM ²⁾
I/O analog, I/O DC unshielded ³⁾	1 kV CM / 0.5 kV DM ²⁾
Radiation (radio disturbance)	According to IEC 55011, group 1, class A

²⁾ CM = Common Mode, DM = Differential Mode

³⁾ When DC I/O inputs are used with AC voltage, external filters limiting high energy surges to 1 kV CM / 0.5 DM are required to meet requirements according IEC 61131-2.

4.6 Mechanical data

Parameter	Value
Mounting	Horizontal
Degree of protection	IP 20
Housing	Classification V-2 according to UL 94
Vibration resistance acc. to EN 61131-2	all three axes 2 Hz...8.4 Hz, continuous 3.5 mm 8.4 Hz...150 Hz, continuous 1 g (higher values on request)

Parameter	Value
Shock test	All three axes 15 g, 11 ms, half-sinusoidal
Mounting of the modules:	
DIN rail according to DIN EN 50022	35 mm, depth 7.5 mm or 15 mm
Mounting with screws	Screws with a diameter of 4 mm
Fastening torque	1.2 Nm

4.7 Approvals and certifications

Information on approvals and certificates can be found in the corresponding chapter of the *Main catalog, PLC Automation*.