Airmaster P1 – A18.1_EN

Identification:	P1
Product Family:	Airmaster™
Definition:	PLC (pre-programmed logic controller)
Function:	Compressor / motor control, I/O monitoring and protection device
Part number:	Refer to Product guide / price list for specific part number or contact dealer
Software:	Pre-programmed application software, configurable via password protected OUI
Supported protocol:	Airbus485, Modbus RTU (via gateway), Profibus DP (via gateway) and DeviceNet (via gateway)

Airmaster™ sets the standard for pre-programmed logic controllers in air compressor, vacuum and related applications. Why? For nearly 30 years, Airmaster™ products have pioneered developments in compressed air and vacuum application PLC's, ensuring our customers remain at the forefront in their chosen area of expertise. Our continued commitment to product development has positioned Airmaster™ as the global leader and choice solution for compressed air and vacuum application PLC controls.

By choosing Airmaster™, our customers benefit from time savings, cost savings and faster development cycles, the result of Airmaster™ application hardware and software attributes.

By choosing Airmaster™ our customers don't just get a machine PLC. Airmaster™ is complimented by Metacentre™, a complete range of application system solutions. Metacentre™ products include multiple compressor and vacuum 'system controllers', distributed I/O devices for ancillary control and monitoring and a range of software solutions for networking, monitoring and trending purposes. For more information on the Metacentre™ range of system solutions, visit the Metacentre™ micro site @ www.metacentre.eu.

Like all Airmaster™ products, P1 is designed with a core application focus. This focus positions Airmaster™ P1 as a 'small' to 'mid-range' member of the Airmaster™ product family, ideally suited to positive displacement rotary screw, vane and piston compressor or vacuum applications. Using an 80C51 family processor, product features are arranged to ensure a cost effective and feature rich PLC with options that enhance where required. This approach ensures that the incremental cost of lesser used or more exotic features is not levied across all controllers.

Display Values:

Pressure:	Bar or psi
Temperature:	^{o}C or ^{o}F
Hour counters:	Total Hours Run Loaded Hours Service Hours

Display Status:

⏻	Started
▣	Running
↪	Loaded
⚠	Alarm/Warning
🔧	Service Due

Standard features:

Menu adjustable pressure set points

Pressure sensor or pressure switch regulation control

Menu adjustable motor star/delta time

Automatic stop to standby with menu adjustable Motor run-on-time

Menu adjustable controlled stop motor run-on-time

Menu adjustable blow down time

Menu adjustable pressure alarm (warning) and trip (shutdown) levels

Menu adjustable temperature alarm (warning) and trip (shutdown) levels

Integral power failure automatic restart facility

Remote load/unload; digital input option or data communications

Remote start/stop; digital input option or data communications

Airmaster™ P1 features a backlit 45mm x 25mm graphic display complimented by an ergonomically engineered membrane switch keypad. Both are conveniently arranged for easy and intuitive access and interrogation of Airmaster™ P1's software menus.

A variety of input and output connections are conveniently arranged to the rear of the controller (see over).

Airmaster™ P1 is assembled in a ruggedized housing with an IP65 rating once installed in the host air compressor or vacuum pump.

Like other Airmaster™ products, P1 carries CE, UL and CSA regulatory approvals.

Identification:	P1
Product family:	Airmaster™
Definition:	PLC (pre-programmed logic controller) comprising an industrial computer with an 80C51 family processor, an operator user interface with a background illuminated graphics display, keys, digital and analogue inputs
Rated voltage:	24vAC +/-15%
Power consumption:	50VA
RAM:	5KB
Flash EPROM:	64KB
Graphic display:	Monochrome graphic display, 45mm x 25mm
Backlight:	YES
Keypad:	6 tactile key, Membrane switch panel construction
Digital inputs	5 x digital inputs, 0 – 24vAC plus E Stop (see R1C)
	C2 : Shutdown Trip (e.g. Motor Fault)
	C3 : Shutdown Trip (e.g. Oil Filter)
	C4 : Shutdown Trip (e.g. Separator Element)
	C5 : Configurable for Alarm, Trip
	C6 : Configurable for Alarm, Trip or Selectable Function
Analogue inputs:	1 x 4-20mA input (pressure), 1 x specified KTY, PT100, PT1000 input (temperature)
Relay outputs:	4 x relay outputs:
	R1C : R1 Common 24Vac; also used for Emergency Stop Detection
	R1 : Load Solenoid - Contacts, 24Vac only, 4A (cosØ=1) / (2.5ADC)
	C : R2-4 Common; Contacts, 24Vac to 115Vac, 4A (cosØ=1) / (2.5ADC)
	R2 : Main/Line Motor Contactor
	R3 : Star Motor Contactor
	R4 : Delta Motor Contactor
Serial interface	1 x RS485 (2 optional)
Serial communication:	Airbus485™, MODBUS RTU (via gateway), Profibus DP (via gateway), DeviceNet (via gateway)
Software:	Pre programmed application software configurable via OUI
Languages:	N/A…, alpha, numeric, symbolic
Display symbols:	ISO7000 and custom
Dimensions:	144mm (W) x 96mm (L) x 38mm (D)
Construction:	IP65 corrosion protected Aluminum Alloy, IP65 polyethylene keypad
	IP65 panel mount sealing, IP20 corrosion protected rear steel plate
Mounting:	4 x M4 clearance holes for front accessible screw or rivet type fixings
	135mm x 86mm rectangle panel aperture
Regulatory approvals:	CE, UL: UL508, CSA: CAN/CSA C22.2 No. 14-M91
Operating temperature:	0°C ~ 55°C (32°F to 130°F)
Storage temperature:	-25°C ~ +75°C (-13ºF to 167ºF)
Relative humidity:	<95% condensation @ 40°C without condensation
Vibration:	IEC 68-2-6 Fc/27 Ea/29 Eb
EMC Immunity:	IEC 801-2/3/4/5, EN61000-4-2/3/4/5; CISPR 22, EN55022 class A conducted/radiated ROHS compliant