

**Automation - Optimised to the Max**

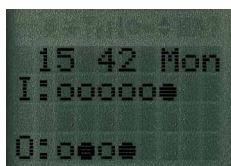
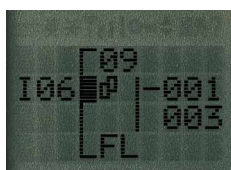
**ALPHA –  
In A Class  
Of Its Own**



**The Dawn of a New Controller Era**

## The New ALPHA – First in a New Generation of Controllers

**User-friendly controls:**  
LCD screen and 8  
function keys for  
programming, data  
entry, editing and plain  
text message displays.



### The new controller class

Mitsubishi Electric, world market leader in compact PLC systems, has done it again: Their new ALPHA range defines a completely new controller class – a class that it is destined to dominate. ALPHA has the power it takes to handle tough tasks. Each program can include up to 64 functions or 1,500 bytes, and every function (timers, counters,

analog signal processing, calendar, clock etc.) can be used as often as needed in all programs. The ALPHA controllers also include many other advanced, user-friendly features.

### Analog signal processing

The ALPHA (24 V DC supply) can use up to eight inputs as either digital or analog inputs

(0-10V, 8 bit resolution).

Analog signal processing functions include a function for shifting the analog signal, integrated Schmitt trigger (on/off trigger) and simple comparisons.

### Powerful instruction set

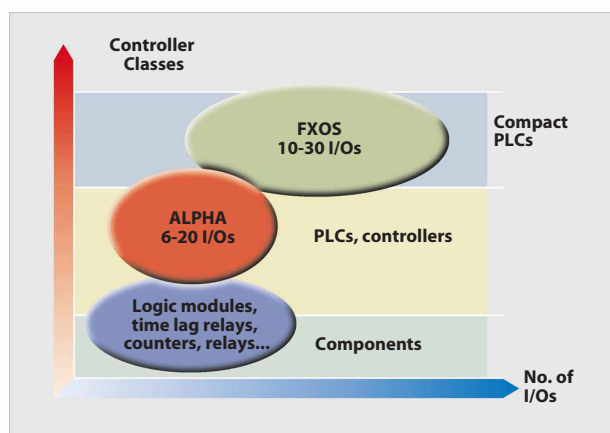
The comprehensive ALPHA instruction set has been designed specifically with your day-to-day automation needs in mind. It includes simple and complex Boolean expressions, functions like Set/Reset and remote control switches, eight timer functions (including impulse generator function), up/down

### Full Range of Models

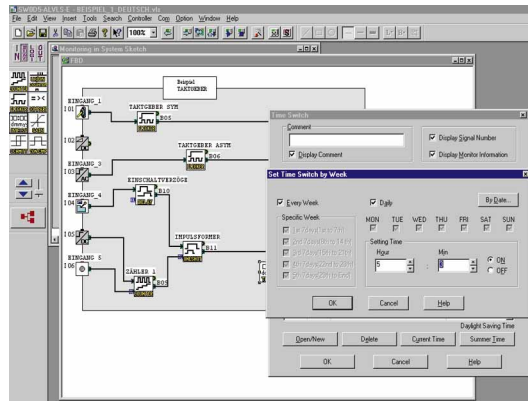
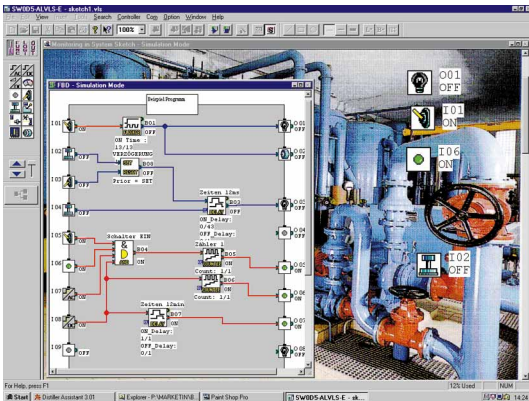
ALPHA is available in several different versions:

- ALPHA 6 with 4I/2O
- ALPHA 10 with 6I/4O
- ALPHA 20 with 12I/8O

**The pioneering new ALPHA controller closes the gap between discrete components and PLC systems.**







*The intuitive AL-PCS/WIN programming software package is clearly structured: Inputs on the left, outputs on the right and functions in between.*

counters, operating hours counters etc. The result is unparalleled performance and maximum practical functionality.

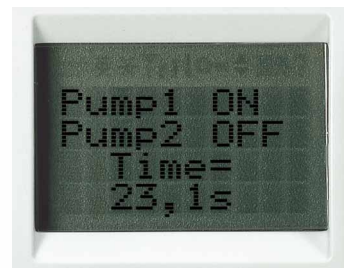
### Direct programming

Besides the programming via personal computer, the direct programming without additional equipment is another ALPHA highlight. The control panel at the front with graphical LCD screen and

eight function keys supports fast, efficient programming with support from a menu system in five languages. All instruction information is displayed and can be edited by the user.

### Powerful PC programming software

ALPHA can also be programmed from a PC using the user-friendly AL-PCS/WIN Windows software package



*New display function: function block values, value changes and text messages are all displayed directly on the controller.*

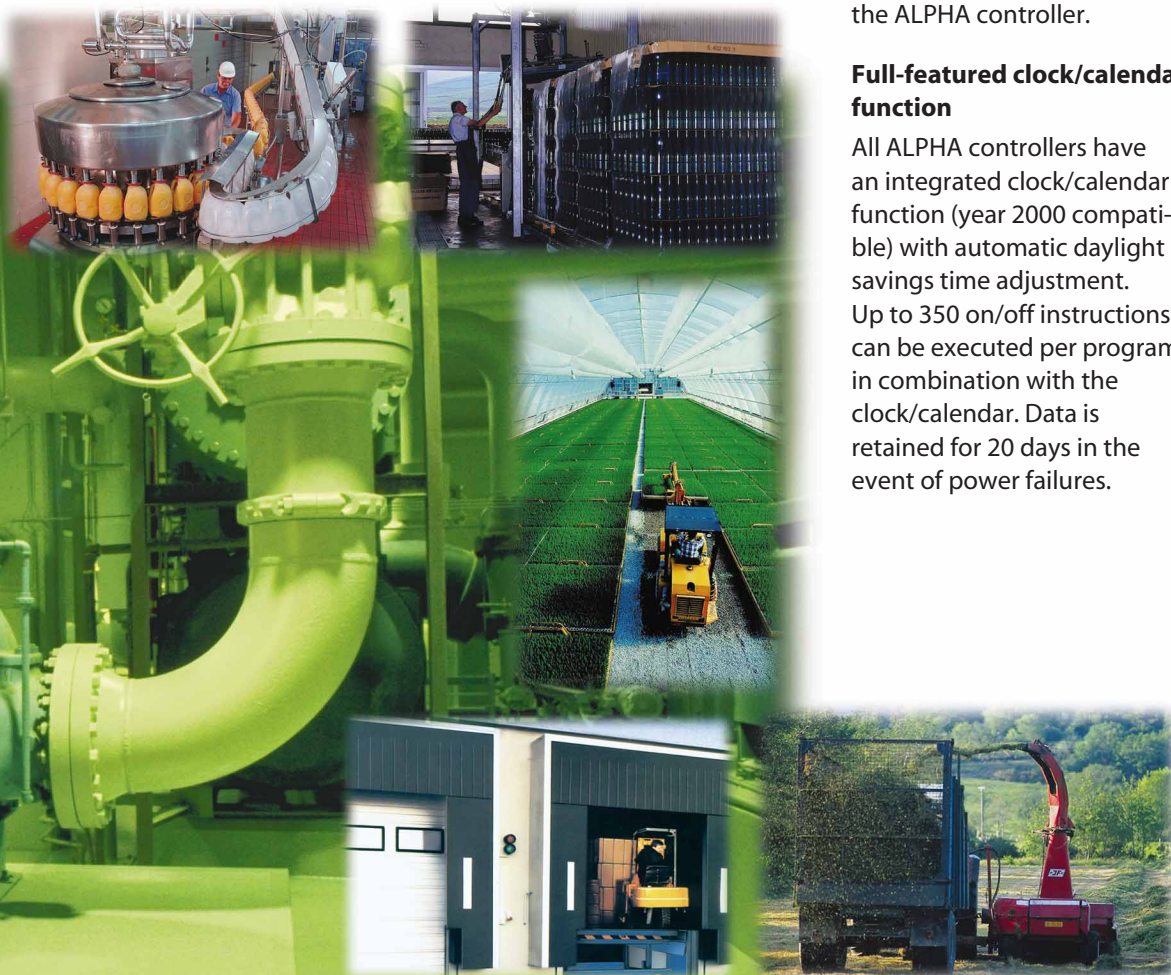
with online help in five languages (D/GB/F/I/E). Program simulation for debugging is possible both in online mode with the ALPHA connected or offline without the ALPHA controller.

### Full-featured clock/calendar function

All ALPHA controllers have an integrated clock/calendar function (year 2000 compatible) with automatic daylight savings time adjustment. Up to 350 on/off instructions can be executed per program in combination with the clock/calendar. Data is retained for 20 days in the event of power failures.

*The new ALPHA range is ideal for applications in many industries, including:*

- Textiles industry
- Paper industry
- Cartons and packaging
- Water treatment
- Woodworking
- Customised machines
- Greenhouses
- Agricultural machinery
- Pump control systems
- Handling systems
- Ship equipment
- Door and gate controls
- Special-purpose vehicles





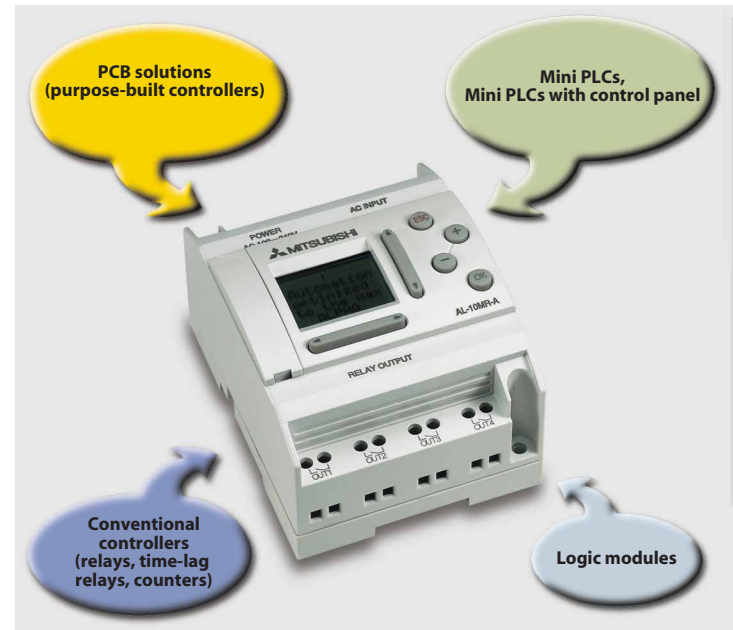
# ALPHA – The Pioneering New Controller Concept

**ALPHA's powerful features set it apart from the competition:**

- **Many pre-programmed functions**
- **1,500 bytes program memory**
- **Display function**
- **8 analog inputs, gain function, integrated Schmitt trigger controller**
- **Integrated clock/calendar for up to 350 on/off commands per program**
- **Graphical programming software package**
- **ALPHA 20 compatible communications with the AL-ASI-BD extension for the AS interface fieldbus.**

Until now there has been a gap in factory automation technology for simple programmable applications. Discrete components like relays, time lag relays and counters can only handle very basic tasks, and available PLC systems often have more power and features than needed.

Mitsubishi Electric, the world market leader in compact PLC systems, has responded by developing a completely new controller system that closes this automation gap: The ALPHA controller.



## The New ALPHA Controllers - Specifications and Accessories

Model	AL-6MR-A	AL-10MR-A	AL-10MR-D	AL-10MT-D	AL-20MR-A	AL-20MR-D	AL-20MT-D
I/Os	6	10	10	10	20	20	20
Power supply	100-240 V AC	100-240 V AC	24 V DC	24 V DC	100-240 V AC	24 V DC	24 V DC
Inputs	4 (100-240 V AC)	6 (100-240 V AC)	6 (24 V DC)	6 (24 V DC)	12 (100-240 V AC)	12 (24 V DC)	12 (24 V DC)
Outputs	2 (8 A relay)	4 (8 A relay)	4 (8 A relay)	4 (1 A trans./24 V DC)	8 (8 A relay)	8 (8 A relay)	8 (1 A trans./24 V DC)
Dimensions/mm (WxHxD)	71.2 x 90 x 55	71.2 x 90 x 55	71.2 x 90 x 55	71.2 x 90 x 55	124.6 x 90 x 55	124.6 x 90 x 55	124.6 x 90 x 55

**AL-PCS/WIN-EU:** CD including Windows compatible software in 5 languages (D/GB/F/I/SP), manuals, sample programs

**AL-PCS/WIN-EU-Demo:** CD including Windows compatible demo software (excluding ALPHA communications), 5 languages (D/GB/F/I/SP), manuals, sample programs

**AL-232CAB:** PC-ALPHA connection cable, length 2.5 m

**AL-EEPROM:** Memory cassette

**AL-ASI-BD:** Extension module for ALPHA 20, fieldbus ASI, slave

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Order No. 113837-B, Printed in Germany 10-99, LN

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