

# The new automation concept KS 108

## Decentralized automation tasks – Programmable Automation Controller – PAC

With the new "KS 108 family", PMA starts a new era for high-performance process controllers and multi-zone controllers. The devices offer compact combinations for control, sequencing, visualization, and operating functions plus numerous field bus interfaces. This new automation approach combines PMA's established control technology with the IEC 61131 programming environment.

As a result, use and application of the ready-made function blocks of PMA's control technology is not restricted to experienced programmers – i.e. there is no need to "reinvent the wheel". In this way, the decades of experience accumulated by PMA are now available in the form of tried and tested functions in a library.

The robust, low-profile metal housing is fitted either with a 5,7 or a 10-inch touchpanel (TFT or CSTN), and practically all types of industrial interfaces are available at the rear of the unit. At the front, a USB port permits the use of memory sticks. Control parameters are adjusted by means of PMA's

standard BlueControl® tool. Apart from the well-known RM 200 and vario I/O systems, PMA now offers the new RL 400 for decentralized digital & analog inputs/outputs – a modular system based on rail line, which is expandable without the restrictions of a back panel.

Find out more about the features of this new automation family, and the possible solutions it offers: Save time and costs, implement individual projects quickly and reliably, and make optimum use of available resources. Visit one of the autumn exhibitions in 2006. PMA will be participating with partner companies in:

- MSV Brno 2006, Czech Republic, with Profess
- BIAS Fair 2006, Milan, Italy, with FASE
- Furnaces North America 2006, Reno, Nevada, USA, with Danaher
- Vienna Tec 2006, Austria
- SPS/IPC/DRIVES 2006, Nuremberg, Germany



Preliminary information is available via:

Basic info KS 108

Item 01

## PMA will participate at the FAKUMA

In Friedrichshafen, and for the first time, PMA will present the extruder automation system **vario EC108** with the new operating unit based on the KS 108 operating terminal. Via the integrated CANopen interface, automated extruders can now be addressed as co-extruders in accordance with EUROMAP 27-5.

Also in the area of hot-runner control, PMA will introduce the "HRC vario mini" – a new solution for 8 up to 64 control zones. Other topics, such as PMA's solutions for tempering units and complete automation of plastics processing machines, can be discussed with our experts on the exhibition stand.



Info Package Plast

Item 02

# Novelties

## Packaged power

### Comprehensive range of compact solid-state power relays

Outstanding features mark the new range of SSRs for 1, 2, and 3-phase operation – and which can replace the previous versions without problems, thanks to identical mounting holes. Load currents of 10...90 A, high reverse voltage without the need for external varistors, high switching power due to excellent I2t values and generously dimensioned thyristors, nominal current ratings at higher temperatures than before – ideal features for general-purpose use.

Even “short-circuit proof” versions are available for use with standard automatic circuit breakers (Type B).

Many other application possibilities provided by the flexible connecting options, removable control terminals, and optional add-ons of these SSRs “made in Germany” are described in our new flyer. Of particular interest: our attractive quantity discount prices. Simply ask us!



SSR flyer and SSR data sheets Item 03

## Data monitor KS 3002

### New technology in a familiar design ...

...describes the new data monitor KS 3002 in a nutshell. As the successor for the established KS 3000, the new KS 3002 offers the same comprehensive range of functions. However, the storage medium has been replaced with a modern Compact Flash card, the configuration port is now accessible from the front, and several useful features have been added to the software.

Early in 2007, an optional Ethernet port will provide the possibility of linking the device into modern network structures. In short, all of this has turned the KS 3002 into a “state-of-the-art” data acquisition system.

And finally, the attractive price will certainly help to simplify the change to this new data monitoring generation.



Data sheet KS 3002 Item 04

## New pressure and differential pressure transmitter

Compared with the previous versions, the new generation of precision pressure and DP transmitters feature improved functions and operation.

The new pressure transmitters are called PM 50, the differential pressure versions with ceramic measuring cell are called PD 60, and those with metal separating diaphragms PD 61. Other features are:

- Error reduced from 0,1% to 0,075%
- On-site setup is guided in the display
- Span is adjustable without opening the housing
- 'Quick Setup' menu
- SIL certificate
- Improved safety concept

What's more, intrinsically safe versions (Ex ia) are available.



Data sheet PM 50 Item 05  
Data sheet PD 60 Item 06  
Data sheet PD 61 Item 07

## What one has down in black and white ...

...this motto continues to be valid for the future, because we now have “worthy successors” for the successful point recorder KS 3560, and the line recorder KS 3540. The new recorders KS 3660 and KS 3640 offer all the essential functions of their predecessors, plus several new features.

The inputs of all versions are universal inputs. Even better reliability is ensured, thanks to a new contactless technology using semiconductor relays with high breakdown voltages, and brushless DC servo motors. The 101 x 16 VFD dot matrix screen provides numerous options: a digital

display of all channels, a bargraph, a flag display, a binary status display, and a date/time display.

These new paper chart recorders are used in countless applications, such as furnace temperature monitoring, recording the measurement of harmful substances, in research & development departments, in pharmaceutical applications, refrigeration plants, etc., as well as a general monitoring and quality assurance device.



Data sheet KS 3640 Item 08

## KS 98-1 carbon

### Precise surface hardening with control of carbon content in carburizing plants

Are you looking for a consistently defined surface hardness within tight tolerances for your steel components? Our solution enables you to achieve this aim cost-effectively and reliably.

The highly specialized processes in gas carburizing plants require suitably adapted automation technology. Operators expect a simple, transparent, and unmistakable procedure when preparing and activating different recipes. For monitoring the variable temperature and gas concentrations, and for calculating the C potential to obtain defined carbon enrichment in the surface layer of steel components, the indirect measurement method using sensors to determine oxygen partial pressure has proved to be most effective.

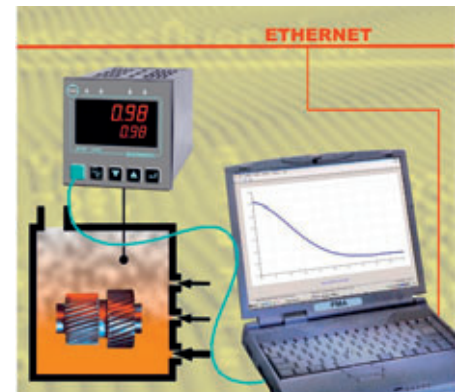
The new PMA controller KS 98-1 carbon permits the direct connection of temperature and oxygen sensors, calculates the C potential 'Cp' in the furnace atmosphere (also taking the alloying factor and the C potential of the batch into account), and meets all the processing requirements of these highly complex thermo-chemical procedures – coupled with previously unknown user-friendliness.

This competent and reliable solution is based on our cooperation with the specialized sensor manufacturer METROTEC.

Additional information is given in our flyer "KS 98-1 carbon" with the topics:

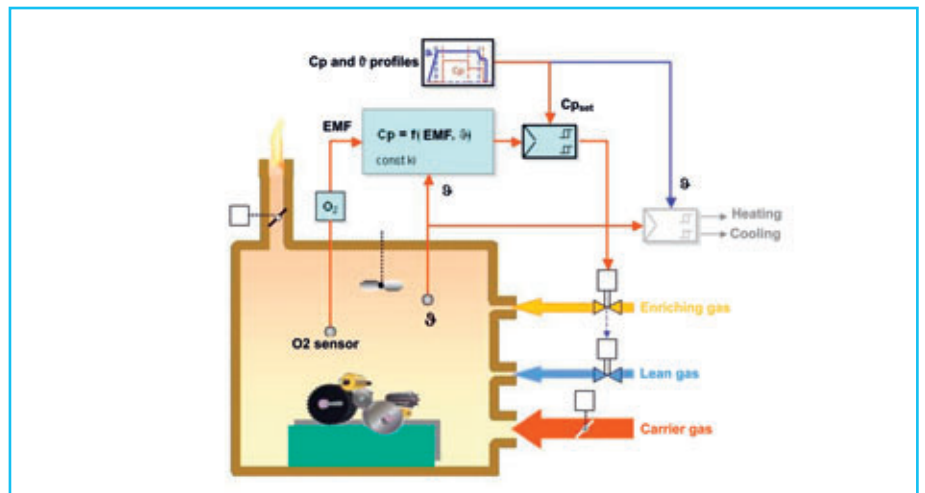
- New approaches solve practical needs
- Backed by control technology – Safe operation has priority

- Batch reports and recipe generation
- A compact answer for C potential control: KS 98-1 carbon



Flyer KS 98-1 carbon

Item 09



## Feature articles from PMA

### New in the trade press

On our website you will find numerous feature articles from international trade journals, which you can download in the PDF format under:

<http://www.pma-online.de/en/featart/index.html>

<http://www.pma-online.de/de/fachau/index.html>



# Topical information

## New PMA CD

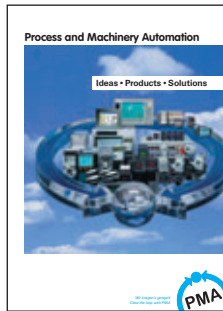
The latest PMA CD will be available before the end of this year. Use this service to reserve your personal copy. The CD will also contain information about the new KS 108 automation system.



New PMA CD

Item 10

## PMA Product Profile



The brochure "Ideas - Products - Solutions" gives a brief outline of all the products, systems, and services provided by PMA.

PMA Product Profile

Item 11



**Exhibitions - People - New Products...**



Further information from:  
[www.pma-online.de](http://www.pma-online.de)



Friedrichshafen  
17th to 21st October  
2006

Details of other international exhibitions and fairs at which we will be present with our distributors under: [www.pma-online.de/en/fairs/index.html](http://www.pma-online.de/en/fairs/index.html)



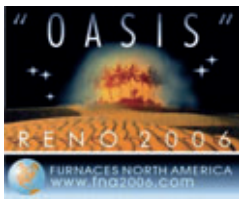
BIAS, Milan Italy,  
20th to 23rd September  
2006, FASE



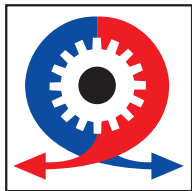
SPS/IPC/DRIVES/  
**Elektrische  
Automatisierung**  
Systeme und Komponenten  
Fachmesse & Kongress

Nürnberg, 28th to 30th Nov. 2006

Furnaces  
North America  
2006  
Reno, Nevada,  
USA,  
27th to 28th  
Sept. 2006



MSV Brno 2006,  
Brno, Czech Republic,  
18th to 22nd  
September 2006,  
Profess



MSV 2006



Internationale Fachmesse  
für die Industrie  
Vienna, Austria, 10th to 13th Sept. 2006



systems - components - solutions  
France, Paris, 5th to 8th Dez. 2006



Germany

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