BARTEC VODEC

M CLASS

M CLASS Public Address & General Alarm System

Modular. Standard. Flexible.

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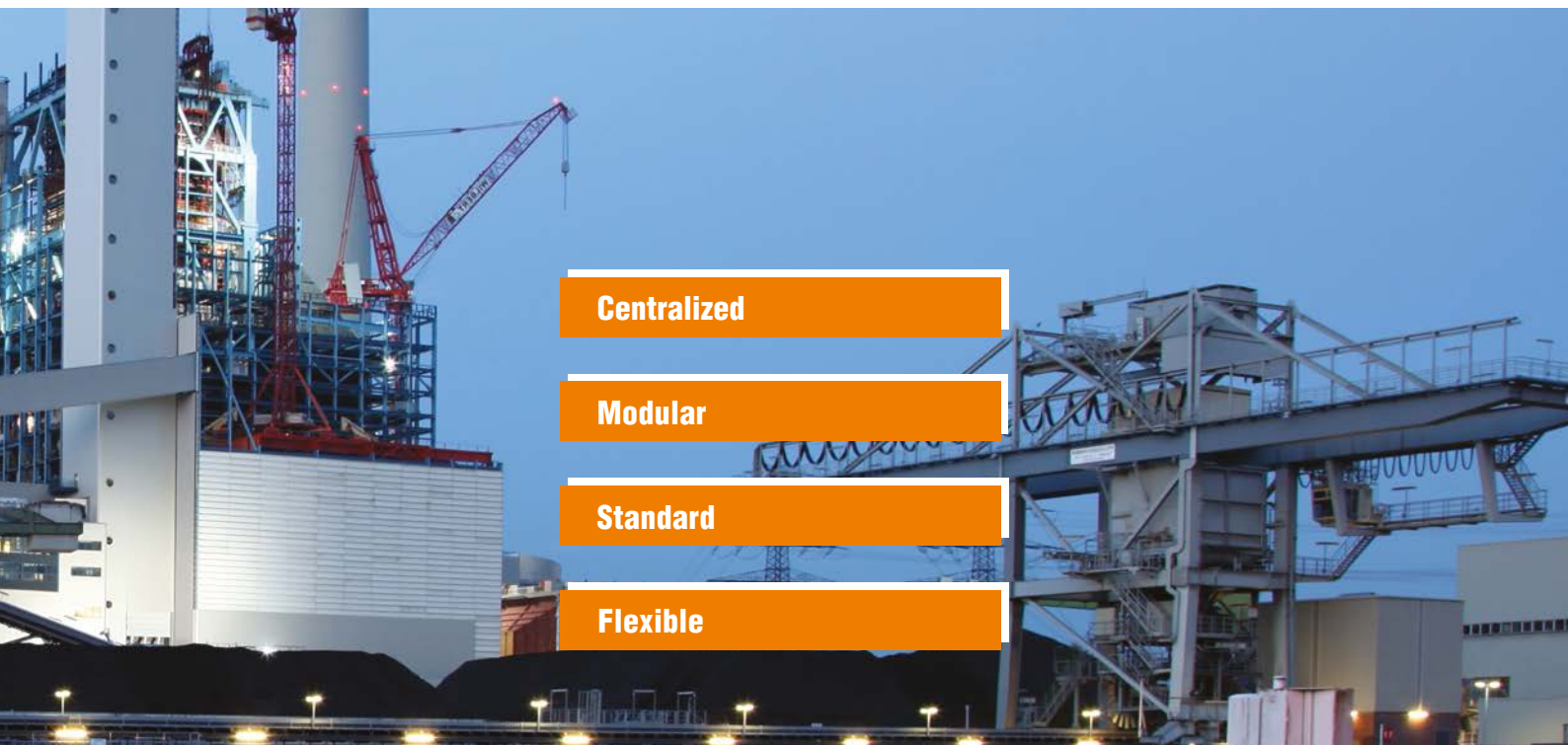
Market Expectations

Today's market for Public Address and General Alarm systems demands robust modular and intuitive solutions. The PAGA design must allow for ease of integration and adaptability into existing infrastructures and system environments whilst always ensuring the required levels of safety and meeting the most stringent regulatory safety standards. The system must support common interfaces and network technologies providing intuitive operation. The BARTEC VODEC M Class Public Address and General Alarm System PAGA, has taken the renowned P3 PAGA system to the next level with state-of-the-art technology to meet current and future customer requirements.

M CLASS PAGA

The new high-performance M Class PAGA system protects a corporation's most critical assets - its people, machines and the environment. It provides a safety solution that is effective, optimized and simple.

Tried and tested technology together with modern state of the art networking protocols ensure reliable industrial communication. A solution for all customized needs, perfect for small but critical and also suitable for large and complex system networks. The modular concept of the M Class PAGA meets the international requirements of EN 54-16, EN 60849, SOLAS, NORSOK and others.

Centralized

Modular

Standard

Flexible

BENEFITS

Centralized
The centrally available data and distributed system control provides for all your needs from one access point. From here you can employ up to 200 priority levels, 1,000 individually selectable and configurable call groups and 65,000 programmable addresses.

Modular
The modular design concept allows the system to be customized to meet the needs of operations as well as the requirements of regulatory agencies.

Standard
Utilizing standard interfaces and protocols allows for easy and efficient integration of external systems. The M Class PAGA can be integrated into existing advanced Ethernet/IP data networks.

Flexible
Whether you are dealing with an existing data network or direct interconnection via fiber / copper, or the use of a star, ring, or hybrid network topology, the flexibility of the M Class PAGA delivers a true and tested solution.

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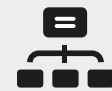## NETWORKS

The M Class PAGA can be successfully integrated into many common network environments. Data and speech communication can be transmitted via standard Ethernet and IP technology as well as standard audio technologies. The nature of industrial facilities is changing, both for the physical size of the process areas and the increased complexity and interaction between processes. This requires for the PAGA to be equally scalable and flexible.

At the heart of the M Class PAGA design is safety and ease of use with unparalleled configuration options. These enables the system to be designed to meet the most complex of requirements.

The system has an infinitely scalable network architecture which allows for the interconnection of distributed M Class PAGA systems designed to meet the Plant Wide functional safety requirements.

Server-M	Build Rack	MPORT/SoftWire	MVAP/S
GUI	ECU	Log View	SIMULATE

MODULAR DESIGN

- Multiple simultaneous speech paths
- 65,000 programmable addresses
- 1,000 selectable group calls
- 1,000 speaker groups
- 200 priority levels
- Multi zone capable

- Multiple alarm tones
- Pre-recorded messaging
- Visual alarm indications
- Activation of relays (magnetic door locks etc.)
- Alignment with HSE scenarios

This level of customization allows you to implement versatile, complex communication, information and warning structures in line with your occupational health, safety and environment protocols.

EASY TO USE

The M Class Graphical User Interface or GUI, provides the end user state of the art, intuitive and easy to use configuration software tools, enabling complex communication and network scenarios to be designed, tested and implemented with ease and accuracy.

A full database of all M Class PAGA components and functions are available with comprehensive "as you type" system checks and integrated configuration checks. The M Class GUI allows the user to create a validated configuration solution. Whether it is one single system or multiple system network, only one configuration file is needed.

For monitoring and management of the M Class PAGA system or network, BARTEC VODEC has developed the web based management tool. This tool allows the user to centrally monitor and configure the overall functionality of the system in a safe and convenient manner:

- Status indicators for CPU, interface cards, call stations, etc.
- Display active events, e.g. error messages
- Download status and error reports
- Download log files for customers and service personnel
- Download and upload configuration files developed in the M Class GUI

- Upload software and firmware upgrades.
- Maintenance tool kits
- Enhanced Operational help displays
- Controlled Remote Access
- Offline engineering, testing and simulation

CENTRAL AND DISTRIBUTED INTELLIGENCE

The M Class PAGA system operates on a common architecture providing real-time alarm and warning control and activation throughout the system for ease of system operability. To provide enhanced integrity it is also possible to distribute this intelligence to the local node to ensure maximum availability.

System wide status information is locally processed and centrally available for analysis and reaction. The constant monitoring and evaluation of connected components and interfaces combined with the centralized intelligence provide the end users with the optimum solution with fast and reliable alarm control. You can rely on the BARTEC VODEC system solution, whether utilizing pre-programmed automated scenarios or relying on manual activation.

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RELIABLE

The industrial sector is especially demanding when it comes to the availability and reliability of a PAGA system. The modular design concept of the M Class PAGA system facilitates the implementation of client and industry based redundancy requirements for the following components:

- Power supplies
- Exchange control boards
- Amplifiers, speakers
- Audio processors
- Microphone access panels
- Network connections

INTERCOM

- Half- and full-duplex capable
- Point-to-point connections
- Multi party and page party
- Emergency priority call override
- Call request and selective call control
- Conferencing

PUBLIC ADDRESS PA

- Group calls
- All calls/system wide page
- Selectable group calls
- Automatically activated group calls and all calls based on pre-programmed scenarios
- Direct group and all calls from existing PABX via telephone interface

PUBLIC ADDRESS/ GENERAL ALARM PA/GA

- Emergency warning
- Individual and complex scenarios (e.g. alarm triggering resulting from SIP and MODBUS interface inputs)
- Manual and automatically activated warning scenarios
- Integration of external systems (e.g. fire & gas, emergency shutdown)

In addition, the M Class PAGA supports full system redundancy (A/B systems) as specified by either customer or regulatory requirements.

To meet the many national and international regulations, BARTEC VODEC has made comprehensive monitoring of digital components a standard function of the M Class PAGA.

Parameters for monitoring can be configured directly for each M Class PAGA or centrally for a network of systems. The measurements are stored for future diagnosis and evaluation and are visible either in report fashion or directly from the devices.

These deviations can be emailed to service and operating personnel and an instantaneous alert is triggered if programmed on a call station. Whether customers use the existing network architecture or a system-to-system direct connection, should any of these connections fail, all local M Class PAGA functions are still available.

INTEGRATED

State-of-the-art PAGA systems must be capable of being integrated into existing and future industrial system environments.

The M Class PAGA has available interfaces for:

- Fire alarm systems
- Fire & gas alarm systems
- Universal analog/digital inputs and outputs
- Emergency shutdown systems (ESD)
- Manual call points

Integrated software interfaces, configured using the M Class GUI, are available for:

- Modbus TCP/IP, enabling the transfer of status information to external Modbus based systems
- VoIP (SIP interface), allowing for the interconnection of IP telephone systems for direct voice communication and function activation between a PABX and the M Class PAGA
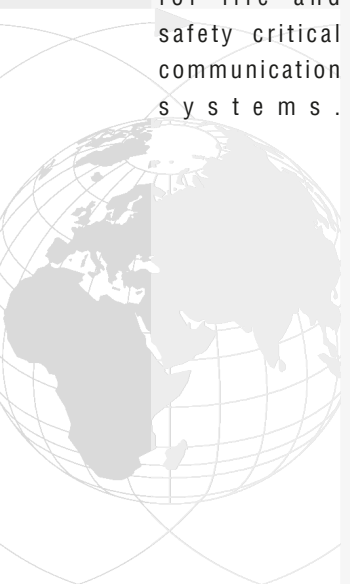- OPC

VERSATILITY

The M Class PAGA allows you to have the functions and capabilities of three separate systems - Intercom, Public Address and General Alarm - in one:

- Intercom system for fast and secure process communication
- Public address (PA) system for the announcement of information across the industrial plant
- Public Address and General Alarm System (PA/GA) to annunciate alarms and warnings for the protection of people, equipment and the environment

The modular design of hardware and the wide range of functions joined with the integration of all system features result in a versatile communication system that can be tailored to your individual requirements.

BARTEC VODEC

Your partner
for life and
safety critical
communication
systems.

THE BARTEC Group

Over the last 40 years, BARTEC has built a leading position amongst suppliers of safety equipment – worldwide. This has been achieved through innovative product design and engineering excellence, with testing and conformance to international standards.

**BARTEC protects people and the environment
by the safety of components, systems and plants.**

BARTEC embodies 40 years of experience and specialist knowledge in process applications, systems engineering, construction and service. We deliver solutions so that you can optimise control and production processes in your plants.

Partner with our engineering competence and design capability in:

- Plant construction and operation in Oil Refining, Petrochemicals, Chemicals, Pharmaceuticals, Environmental Protection and Energy
- Construction of machines and automation
- Engineering for process industries
- Food industry

BARTEC is always close at hand.

Our regional specialist teams, over 30 sales units and more than 50 specialist representatives bring BARTEC expertise to you, wherever you are.

Head office of BARTEC in Bad Mergentheim, Germany   BARTEC VODEC in Nottingham, United Kingdom