



Ex p combination cabinets for Zone 1, 2 or 22

Description

The increasing demand of complex automation functions for processes in the field of chemistry, pharmacy, oil and gas calls for flexible, safe and maintenance-friendly solutions for measuring, controlling, regulating and visualization tasks, particularly in potentially explosive areas. Complete control systems and switchgear, motors, actuators and pumps, open-plan displays, industrial monitors incl. keyboards and printers must be made ready for applications in hazardous areas.

For many applications the Ex p pressurized enclosure is one of the most flexible Ex solutions. Thanks to this type of protection, non-explosion proof devices can be operated in potentially explosive areas of zone 1, 2 and 22. The underlying idea is to prevent an explosive atmosphere from entering a sealed protective enclosure by generating a permanent overpressure against the surrounding atmosphere. With its pressurized Ex p combination cabinet, BARTEC offers a completely new Ex solution for the control and automation of devices, machines and systems in zone 1, 2 and 22.

Depending on the application, non-explosion-proof control units and switchgear as well as complete automation systems are mounted into the Ex p combination cabinet. On the basis of the modular APEX 2003 overpressure control, which has been certified in accordance with ATEX, modern, operationable Ex solutions are realized - including the required certification in accordance with 94/9/EC.

The stirring gas overpressure is realized by a compensation of the leakage losses or by permanent flushing. The EEx p combination cabinet has been designed for an ambient temperature between -20 °C and +60 °C in the temperature classes T3 to T5. For temperature class T6, an ambient temperature between -20 °C and +40 °C is permissible.

The maintenance and availability of the explosion-proof devices and system has top priority. Within the course of many years, the BARTEC experts have gathered substantial experience with explosion protection applications as well as the conception of complete system solutions for automation. On the basis of this know-how, safe and economically efficient solutions ranging from engineering over production and procurement via commissioning and approval have been developed.

Depending on the application, Ex p solutions are realized with sheet-steel or stainless steel, with air-conditioning, different lacquer coats, seawater-resistant and tropic-proof. BARTEC solutions also comprise commissioning and function checks. For integration into the already existing explosion protection document, a detailed operating manual is supplied. In addition to this, introduction and training measures for qualified staff members may be implemented upon request.

Explosion protection

Ex protection type

- ⊕ II 2G EEx p II T3, T4, T5, T6
- ⊕ II 2G EEx p [ib] II C T3, T4, T5, T6
- ⊕ II 3G Ex pz II T3, T4, T5, T6
- ⊕ II 3D Ex pD 22 IP 54, T80 °C

Certification

TÜV 03 ATEX 2264 (Zone 1)

Ambient temperature

-20 °C to +60 °C (T6 max. +40 °C)

Technical data

Structure

Standard enclosure or tailor-made solutions

Enclosure material

Coated sheet-steel
stainless steel

Protection class

IP 55/IP 65

Overpressure range

0 to 25 mbar
0 to 300 mbar
0 to 1000 mbar

Stirring gas

cleaned compressed air or inert gas T_{max} = 40 °C

Purging time

0 to 99 min; 5 sec. drop-out delayed

Electrical data

Supply voltage

max. AC 690 V

Power consumption

depending on the application

Optional switching amplifier

up to 30 kW

Guidelines/norms/certifications

Directive 2004/108/EC
Directive 94/9/EC



Ex p combination cabinets

Installed components as examples:

- Devices
- Printers
- Operator terminals
- Control units
- Frequency converters
- Monitors
- Motors

Air-conditioning selection

- Operating heating
- Standstill heating
- Air cooler
- Air-conditionier
- Water-air cooler



Accessories

- Stirring gas filter systems
- Power amplifier up to 30 kW
- Interposing relays for data performances
- Bypass key switches