



Note on instructions

When working in hazardous areas, the safety of personnel and equipment depends on compliance with the relevant safety regulations. The people in charge of installation and maintenance bear a special responsibility. It is essential that they have an exact knowledge of the applicable rules and regulations.

The instructions provide a summary of the most important safety measures and must be read by everyone working with the product so that they will be familiar with the correct handling of the product.

The instructions have to be kept for future reference and must be available throughout the expected life of the product.

Description

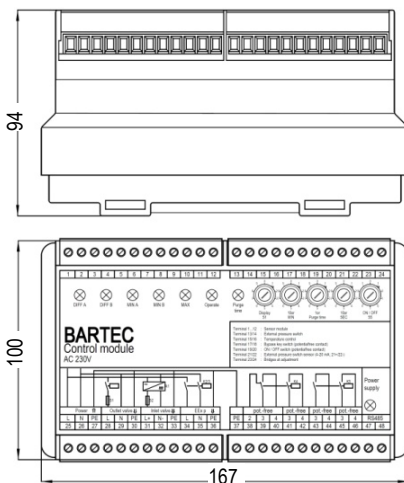
The control module is designed for use in APEX control units.

Its functions are the control, regulation and signalling for Ex p operating equipment.

All components in the APEX control are connected, controlled and monitored on the control module.

The components are connected by means of terminals.

Dimensions in mm



01-7331-7M0001/A-04/14-STVT-368045

Explosion protection

Ex type of protection

Ex II 2(1) G
Ex d e [ia Ga] IIC Gb

Installation: (Type 17-5522-2..)

Ex II (1) G [Ex ia Ga px] IIC

0044

Certification

Enclosure:
PTB 97 ATEX 1066U
IECEX PTB 11.0082U
Installation:
DMT 99 ATEX E082
IECEX BVS 13.0039

Ex-i circuits

Supply circuit 1

U₀=30 V
I₀=100 mA
P₀=750 mW
C₀=66 nF
L₀=3 mH

Supply circuit 2

U₀=7.5 V
I₀=10 mA
P₀=20 mW
C₀=11 µF
L₀=330 mH

Signal circuit 1

U₀=7.5 V
I₀=50 mA
P₀=95 mW
C₀=11 µF
L₀=14 mH

Signal circuit 2

U₀=-7.5 V
I₀=10 mA
P₀=20 mW
C₀=11 µF
L₀=330 mH

Signal circuit 3

U₀=-30 V
I₀=100 mA
P₀=750 mW
C₀=66 nF
L₀=3 mH

Ambient temperature ranges max.

-20 °C to +40 °C (operation)
-40 °C to +60 °C (storage)

Approved for zones

1 and 2

Technical data

Construction

Flameproof clip-on enclosure for TS 35

Enclosure materials

High-quality thermoplastics

Protection class

Electronic installation	IP66
Terminals	IP20
Terminals with cover	IP30

Connection terminals

2.5 mm², fine-stranded

Displays

LED in the enclosure front

Operating elements

Rotary switch in the enclosure front

Weight

2.5 kg

Electrical data

Supply voltage

AC 230 V ± 10%
AC 115 V ± 10%
DC 24 V ± 10%

Power consumption

P_v=8 W/230 V

Make contacts

K 2/3, 5 A at cos φ = 1
K 4 and K 5; 5 A; potential free

Purging gas valve

Digital or proportional
(type-dependent)

Purge gas valve power

9 W (type-dependent)
15 W (type-dependent)

Safety Instructions

The control module may be used only within the specified temperature range.

Unprotected, incorrect installation can cause malfunctioning and the loss of protection against explosions.

The control module may be connected and assembled/disassembled only by qualified personnel who are authorized and trained to install electric components in hazardous areas.

Always disconnect the control module from voltage before assembling / disassembling.

The control module may be fitted / replaced only inside an APEX control unit.

Utilization in areas other than those specified or the modification of the product by anyone other than the manufacturer will exempt BARTEC from liability for defects or any further liability.

The general applicable statutory rules and other binding directives relating to workplace safety, accident prevention and environmental protection must be adhered to.

The control module may be operated only if it is clean and not damaged in any way.

Marking

Particularly important points in these instructions are marked with a symbol:

DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to personal injury.

Note

Important instructions and information on effective, economical and environmentally compatible handling.

Standards conformed to

EN 60079-0:2012
EN 60079-1:2007
EN 60079-7:2007
EN 60079-11:2012

Assembly, Installation, and Commissioning

WARNING

Risk of serious injury due to incorrect proceedings.

- Only authorized and qualified personnel may do any of the assembly, disassembly, installation and commissioning work.

CAUTION

Risk of injury by failure to comply with instructions.

- The relevant installation and operating regulations must be observed when setting up or operating explosion-proof electrical systems.

Assembly / Disassembly

DANGER

Death or risk of injury due to incorrect proceedings.

- The control module may be installed only in an APEX control unit.

Only suitable tools must be used for installation.

Check before assembling that the control module is in perfect condition.

Installation

WARNING

Risk of serious injury due to incorrect electrical connection.

- Take care not to damage the cores during installation/connection.
- The ends of the fine-stranded and multi-stranded conductors must be prepared. Wire end ferrules must be crimped with suitable crimping tools.

Commissioning

Before commissioning check that:

- the device has been installed correctly.
- the device is not damaged.
- the connection has been established properly.
- the cables have been laid correctly.
- all screws are tightened securely.

Note

For setting the control module parameters, please refer to the Operating Instruction of the APEX control unit.

Operation

DANGER

Death or serious injury due to improper use.

- It is only allowed to operate the control module within the technical limits that apply to it (see Explosion Protection and Technical Data sections).

CAUTION

Risk of injury due to unallowed proceedings.

- It is not permissible to modify the control module in any way.

Maintenance and Fault Clearance

The operator of the control module must keep it in good condition, operate it properly, monitor it and clean it regularly.

Note

For troubleshooting, please refer to the Operating Instruction of the APEX control unit.

Disposal

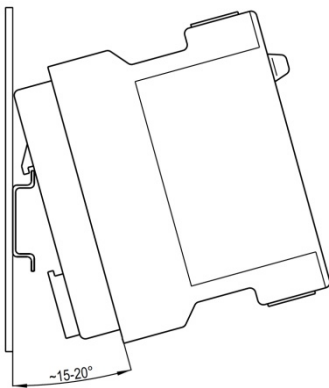
The components in the control module contain metal and plastic parts.

Therefore the statutory requirements for electrical scrap must be observed (e.g. disposal by an approved disposal company).

Service Address

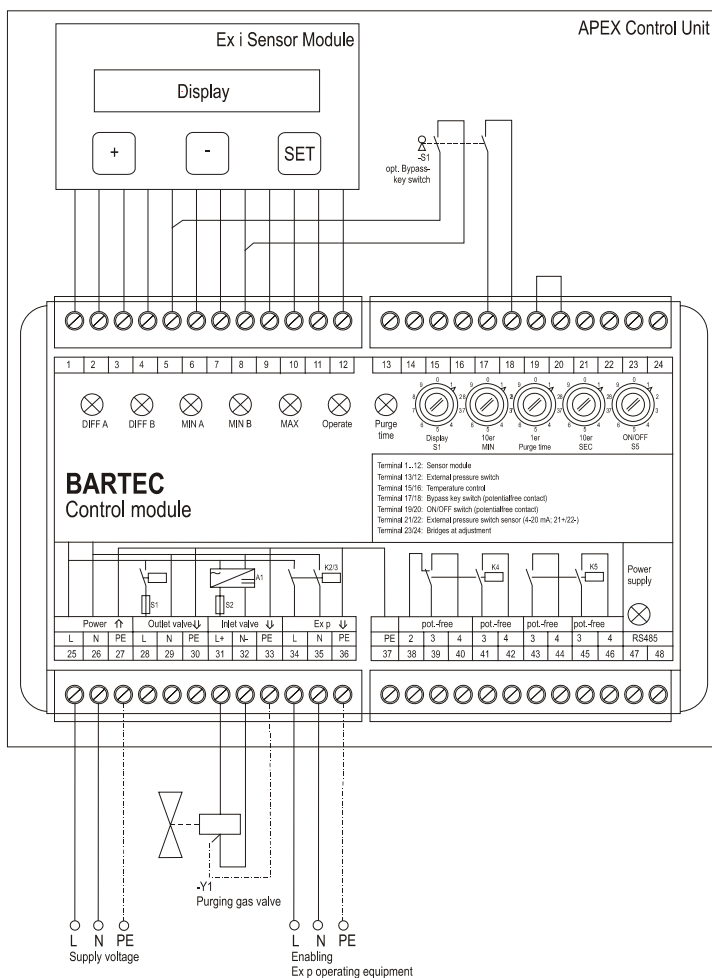
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Assembly instructions



- Set the control module at an angle of approx. 15° with the upper fastening lug on the DIN rail.
- Tilt the control module slowly into the 0° position until the lower latches engage under the DIN rail.

Connection



Order numbers

Type number	Designation	Input voltage	Purging gas valve power
07-7331-8112/2100	Control module	AC 230 V	9 W
07-7331-8122/2100	Control module	AC 115 V	9 W
07-7331-8142/2100	Control module	DC 24 V	9 W
07-7331-8112/3100	Control module	AC 230 V	15 W
07-7331-8122/3100	Control module	AC 115 V	15 W

01-7331-7M0001/A-04/14-STVT-368045