

RTK PEX7250 explosion proof annunciator

Operating instructions

Introduction

This manual provides the information necessary to install, connect, test and maintain the RTK PEX7250 explosion proof alarm annunciator.

Description

The RTK PEX7250 explosion proof annunciator is available with 1 of 3 of our established products fully integrated within the enclosure. Option 1 = RTKP725, Option 2 = RTK725B/C and these versions are available using 30 x 30 mm, 30 x 60 mm or 60 x 60 mm window sizes. Option 3 = RTKSIL725 which is certified for SIL2 applications. This version is available in 30 x 60 mm or 60 x 60 mm window sizes.

The standard enclosure is copper free cast aluminium alloy and is finished in a light grey two-part epoxy paint, coloured RAL7035, making it ideal for offshore applications. Systems are available in a range of formats and sizes and all carry the same approval to internationally recognised Zone 1 standards.

Installation

This product has been certified to be mounted in Zone 1,2,21 or 22 hazardous areas. Equipment must be installed in accordance to IEC60079-14 (Electrical installation in hazardous areas) or alternative national standards.

Manual Handling

Below are basic methods which should be observed while handling the equipment.

- Assess the load (size, shape and weight). Is mechanical or human assistance is required?
- Assess where the unit will be placed. Make sure there are no obstructions, and the route is clear.
- Stand as close to the load as possible, with your feet shoulder width apart.
- Bend your knees and try to keep the back's natural, upright posture.
- Grasp the load firmly as close to the body as you can.
- Use the legs to lift the load in a smooth motion as this offers more leverage reducing the strain on your back.
- Carry the load close to the body with the elbows tucked into the body.
- Avoid twisting the body as much as possible by turning your feet to position yourself with the load

Mounting

Unit is supplied with mounting brackets for vertical or horizontal mounting.

Connection detail

Refer to wiring diagram supplied for terminal connections. All wiring inside the box must be carried out in compliance with the characteristics of the components.

Use and Service

All the operations of installation and service will be carried out when the circuit is not powered. Take care in not damaging the coupling joints; always reapply the silicone grease to the flanges before re-closing the box, and ensure all closing screws have been returned and fully tightened. Use screws of quality A2-70 according UNI 7323 with ultimate tensile strength of at least 700N/mm²

Cable Entries

Refer to the General Arrangement drawing supplied with the unit for details on cable entries fitted to the RTK PEX7250 Annunciator.

WARNING:

Ensure only correctly sized cable glands are used and that any threaded hole within the lid or the body not being used is closed with certified blanking plugs. Cable entries shall also be suitably sealed if the enclosure is to be used in dust atmospheres.

Specific Conditions of Use

1. It is the responsibility of the installation engineer to ensure that suitably ATEX equipment certified Ex db IIB+H2 cable glands and blanking plugs are installed to ensure that the IP rating of IP66/67 is maintained on the Ex d enclosure.
2. When the enclosure is fitted with an MTL5521, the enclosure must be mounted vertically.

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Safety Instructions

These instructions are addressed to qualified personnel in compliance with the national laws. The equipment should be installed to local codes of practice and also IEC60079-14 and IEC60079-17 (when applicable) concerning the electrical equipment for potentially explosive atmospheres.

- The purchaser should make the manufacturer aware of any External effects or Agressive substances that the equipment may be exposed to.
- The enclosure will only be installed in the designated hazardous area as stated in the equipment certificate.
- Comply with all data indicated on the enclosure
- The enclosure will only be installed if it is wholly intact
- Use exclusively spare parts from Eaton Electric Ltd
- Routine maintenance and servicing will be carried out exclusively by qualified electricians with the supervision of "expert" personnel.

Annunciator Instructions

For full detailed operating instructions refer to full Annunciator manual supplied with unit.

Location

RTK PEX7250 has been certified for use in Zone 1, Zone 2, Zone 21 or Zone 22 and with Gas Groups IIB+Hydrogen and IIIC

Labelling

The RTK PEX7250 are shipped with one of the following labels:-

- Certification label (Figures 3-4) showing all relevant certification information dependant on which application is required.

Option A – RTKP725 or RTKP752B/C with PSU

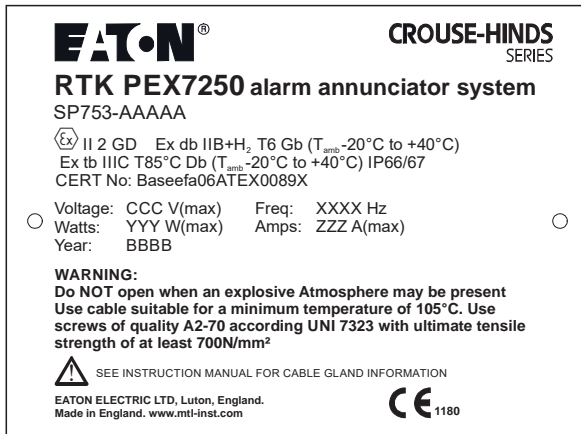


Figure 1: Certification label for option A.
(40°C ambient version)

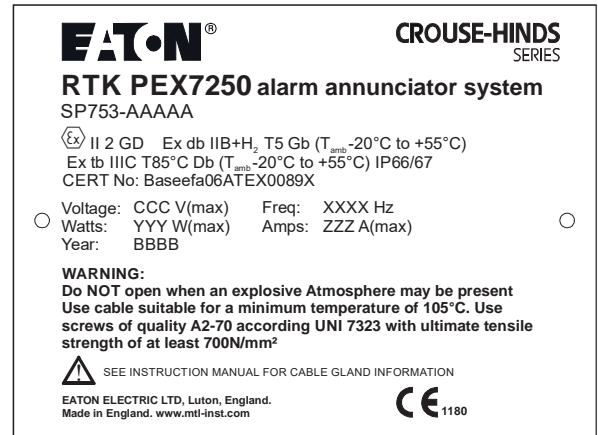


Figure 2: Certification label for option A.
(55°C ambient version)

Option B – RTKP725 or RTKP752B/C with MTL5521 IS isolator



Figure 3: Certification label for option B.

Special conditions for units with MTL5521

- The unit must be mounted vertically.
- Require a separate gland entry for the IS circuit only. No other electrical connections are allowed.
- Maximum Ambient of 40°C allowed

Option C – RTKSIL725



Figure 4: Certification label for option C

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Specification

Standards:

EN60079-1:2014, EN60079-0:2012+A11:2013,
EN60079-31:2013, EN60079-11:2012

Approved for :

Ex II 2 GD

Ex db IIB+H2 T6 Gb (Tamb -20°C to +40°C)

Ex tb IIIC T85°C Db (Tamb -20°C to +40°C) IP66/67

or:

Ex II 2

GDEx db IIB+H2 T5 Gb (Tamb -20°C to +55°C)

Ex tb IIIC T100°C Db (Tamb -20°C to +55°C) IP66/67

or, when fitted with MTL5521:

Ex II 2 (1) GD

Ex db [ia Ga] IIB+H2 T6 Gb (Tamb -20°C to +40°C)

Ex tb [ia Da] IIIC T85°C Db (Tamb -20°C to +40°C) IP66/67

Certificate No :

Baseefa06ATEX0089X

Max Power Dissipation:

116.3W@70% efficiency (Based On Largest sized
RTKP725 with LED's and repeat relays)

30W max for units with SIL725

Current

Max Size System: 2.2A

Connections

Terminals for 2.5mm² cable.

Protection

IP66

EMC Compliance

Immunity to EN61000-6-2:2005

Emissions to EN6100-6-4:2007

LVD Compliance

EN61010-1:2010

IEC61010-2-201 Ed.1

Ambient Temperature

Operating: -20°C to +40°C for T85

Operating: -20°C to +55°C for T100

Storage: -20°C to +80°C

Ambient temperature limited to +40°C for units fitted with
MTL5521 and RTKSIL725.

Humidity

0-95% RH, non-condensing

System

Largest RTK725 or RTK725B/C Annunciator – 5 Modules wide
x 3 Modules High (max dimensions 324W x 204H x 145D)

Largest RTKSIL725 Annunciator - 3 Modules wide x 2
Modules High (max dimensions W x H x 145D)

Largest Power Supply Unit 60W/24VDC @ 2.5 AMPS
(max dimensions 159W x 97H x 38D)

Cable Entries

Cable entries are shown on the General Arrangement drawing
supplied with the equipment. Ensure only correctly sized cable
glands or blanking plugs are used

Outputs

RTK725 Series and RTK725B/C units are equipped with dual
group relays and dual horn relays as standard.

Individual repeat relays and RS485 serial interface are available
on request.

RTKSIL725 units are supplied with SIL2 certified relay outputs
for horn and group. Individual repeat relays and additional SIL2
certified relay outputs are available on request.



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Publication No. INS RTK PEX7250 Rev 8 050619
June 2019

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The given data is only intended as a product
description and should not be regarded as a legal
warranty of properties or guarantee. In the interest
of further technical developments, we reserve the
right to make design changes.