Operating Instructions

RTK Instruments Limited
St James Business Park,
Knaresborough, North Yorkshire,
England. HG5 8PJ

Telephone: +44 (0)1423 580500
Facsimile: +44 (0)1423 580501
Web: www.rtkinstruments.com
Email: enquiry@ rtkinstruments.com

PEX7250 Explosion Proof Annunciator

Introduction

This manual provides the information necessary to install, connect, test and maintain the PEX7250 Explosion Proof Alarm Annunciator.

Description

The PEX7250 Explosion Proof Annunciator offers a vast range of features and benefits normally reserved for use in safe area annunciators only.
The heart of the system can be one of our field proven Alarm Annunciators, this can be the P725 or P725B/C which is available in 3 individual window sizes 30 x 30 mm, 30 x 60 mm or 60 x 60 mm. Also available is the SIL725 which is certified for SIL2 applications. This 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 or 2 (equipment Category 2) hazardous area. Equipment must be installed in accordance to IEC60079-14 (Electrical installation in hazardous areas) or alternative national standards.

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

- The enclosure will only be installed in the designated hazardous area as stated in the equipment certificate.
- All data indicated on the enclosure will be complied with
- The enclosure will only be installed if it is wholly intact
- Use exclusively spare part from RTK Instruments Ltd.
- Routine maintenance and servicing will be carried out exclusively by qualified electricians with the supervision of “expert” personnel.

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 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.

RTK Instruments Limited
St James Business Park,
Knaresborough, North Yorkshire,
England. HG5 8PJ

Telephone: +44 (0)1423 580500
Facsimile: +44 (0)1423 580501
Web: www.rtkinstruments.com
Email: enquiry@ rtkinstruments.com

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

Location
The PEX7250 has been certified to:
Ex II 2 GD Ex d IIB + H_2; Ex tD A21 IP65.
T85°C Tamb = 40°C and T100°C Tamb = 55°C

When connected to an approved system it may be installed in:

Zone 1 Explosive gas air mixture likely to occur, in normal operation.

Zone 2 Explosive gas air mixture not likely to occur, and if it does, it will only exist for a short time.

Be used with gases in groups, A, B or Hydrogen

Zone 21 or 21 Dust

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

- Certification label (Figures 1 -3) showing all relevant certification information dependant on which application is required.

Option A – P725 or P752B/C with PSU

ALARM ANNUNCIATOR SYSTEM TYPE PEX7250
Ex II 2 GD Ex d IIB + H_2; Ex tD A21 IP65
T85°C Tamb = 40°C T100°C Tamb = 55°C
CERT No: Baseefa06ATEX0089
Serial No: SP753-AAAAA YOM: BBBB
Voltage: CCC V(Max) Freq.: XXXX Hz
Watts: YYY W(Max) Amps: ZZZ A(Max)
WARNING:
Do NOT open when an explosive Atmosphere may be present
Use cable suitable for a minimum temperature of 105°C
Use screws of quality A2-70 according UNI 7323 with ultimate tensile strength of at least 700N/mm²
SEE INSTRUCTION MANUAL FOR CABLE GLAND INFORMATION
RTK INSTRUMENTS Knaresborough UK HG5 8PJ CE 1180

Figure 1: Certification label for option A.

Option B – P725 or P752B/C with MTL5021 IS isolator

ALARM ANNUNCIATOR SYSTEM TYPE PEX7250
Ex II 2 GD Ex d IIB + H_2; Ex tD A21 IP65
T85°C Tamb = 40°C
CERT No: Baseefa06ATEX0089
Serial No: SP753-AAAAA YOM: BBBB
Voltage: CCC V(Max) Freq.: XXXX Hz
Watts: YYY W(Max) Amps: ZZZ A(Max)
WARNING:
Do NOT open when an explosive Atmosphere may be present
Use cable suitable for a minimum temperature of 105°C
Use screws of quality A2-70 according UNI 7323 with ultimate tensile strength of at least 700N/mm²
SEE INSTRUCTION MANUAL FOR CABLE GLAND INFORMATION
CONTAINS I.S. DEVICE TO BAS01ATEX7148
ENCLOSURE TO BE MOUNTED VERTICALLY
RTK INSTRUMENTS Knaresborough UK HG5 8PJ CE 1180

Figure 2: Certification label for option B.

Special conditions for units with MTL5021

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

Option C – SIL725

ALARM ANNUNCIATOR SYSTEM TYPE PEX7250
Ex II 2 GD Ex d IIB + H_2; Ex tD A21 IP65
T85°C Tamb = 40°C
CERT No: Baseefa06ATEX0089
Serial No: SP753-AAAAA YOM: BBBB
Voltage: CCC V(Max) Freq.: XXXX Hz
Watts: YYY W(Max) Amps: ZZZ A(Max)
WARNING:
Do NOT open when an explosive Atmosphere may be present
Use cable suitable for a minimum temperature of 105°C
Use screws of quality A2-70 according UNI 7323 with ultimate tensile strength of at least 700N/mm²
SEE INSTRUCTION MANUAL FOR CABLE GLAND INFORMATION
RTK INSTRUMENTS Knaresborough UK HG5 8PJ CE 1180

Figure 3: Certification label for option C

RTK Instruments Limited
St James Business Park,
Knaresborough, North Yorkshire,
England. HG5 8PJ

Telephone: +44 (0)1423 580500
Facsimile: +44 (0)1423 580501
Web: www.rtkinstruments.com
Email: enquiry@ rtkinstruments.com

Specification

Standards: EN60079-1, EN60079-0, EN61241-0 and EN61241-1

Approved for : Ⓔx II 2 GD Ex d IIB + H_2;
Ex tD A21 IP65.
T85°C Tamb = 40°C and T100°C Tamb = 55°C

Certificate No : Baseefa06ATEX0089

Max Power Dissipation: 75W@70% efficiency
(Based On Largest sized P725 with LED's and repeat relays)
30W max for units with SIL725

Current
Max Size System: 2.2A

Connections
Terminals for 2.5mm^2 cable.

Protection
IP65

EMC Compliance
Immunity to EN61000-6-2 : 2001
Emissions to EN6100-6-4 : 2001

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 MTL5021 and SIL725.

Humidity
0-95% RH, non condensing

System
Largest 725 or 725B/C Annunciator – 5 Modules wide x 3 Modules High (max dimensions 324W x 204H x 145D)

Largest SIL725 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
725 Series and 725B/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.
SIL725 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.

RTK Instruments Limited
St James Business Park,
Knaresborough, North Yorkshire,
England. HG5 8PJ

Telephone: +44 (0)1423 580500
Facsimile: +44 (0)1423 580501
Web: www.rtkinstruments.com
Email: enquiry@ rtkinstruments.com

EC DECLARATION OF CONFORMITY

This is to certify that the PEX7250 Explosion Proof Alarm Annunciator

Manufactured by:-

RTK INSTRUMENTS LTD
ST JAMES BUSINESS PARK
KNARESBOROUGH
NORTH YORKSHIRE
HG5 8PJ

Conforms to the protection requirements of the following directives:

- Council directive 89/336/EEC (EMC Directive) to BS EN 61000-6-4 and BS EN 61000-6-2
- Council Directive 94/9/EC (ATEX Directive) to EN60079-1:2004, EN60079-0:2006, EN61241-0:2006 and EN61241-1:2004

The product is certified to:

Ex II 2 GD Ex d IIB + H_2; Ex tD A21 IP65
T85°C Tamb = 40°C and T100°C Tamb = 55°C
Certificate No: Baseefa06ATEX0089

The Quality System is certified and monitored by Baseefa Ltd
Notified Body number 1180,

Rockhead Business Park, Staden Lane, Buxton, Derbyshire, SK17 9RZ

.....
PAUL HARTLEY - MANAGING DIRECTOR
Date: 27th August 2008

Manufacturers of
Alarm Annunciators and Systems | Sequential Event Recorders | Display Facias Hazardous Area Interface, Alarm and Display Products | Signal Conditioning & Trip Amplifiers | Process Instrumentation

ISO 9001
FM 14290

RTK Instruments Limited
St James Business Park,
Knaresborough, North Yorkshire,
England. HG5 8PJ

Telephone: +44 (0)1423 580500
Facsimile: +44 (0)1423 580501
Web: www.rtkinstruments.com
Email: enquiry@ rtkinstruments.com

REV	**Detail of Change**	**Date**
0	**Original Issue**	25/10/04
1	**New temperature range added.**	17/07/07
2	**EC Declaration**	10/03/08
3	**P725B/C, MTL5021 and SIL725 added**	27/08/08

Manufacturers of
Alarm Annunciators and Systems | Sequential Event Recorders | Display Facias Hazardous Area Interface, Alarm and Display Products | Signal Conditioning & Trip Amplifiers | Process Instrumentation

ISO 9001
FM 14290