

CR:110AIS

ATEX & EEx

Intrinsically Safe Personal Noise Dosemeter

Introduction

The CR:110AIS is a specially developed version of the new CR:110A doseBadge Personal Noise Dosemeter that has been certified for use in hazardous zones and carries Intrinsic Safety Certification. All of the measurement functions and features of the standard CR:110A version are provided by the CR:110AIS version.

Please refer to the CR:110A doseBadge Datasheet for technical specifications and measurement information of the CR:110AIS doseBadge. This document describes the different classifications of certification provided by the CR:110AIS doseBadge for both ATEX (EU Directive 94/9/EC) and the requirements of CENELEC/IEC. This certification applies to the CR:110AIS version of the doseBadge only, and not to the standard CR:110A instrument.

Please note that there are many different levels of certification for products designed to be used in hazardous areas and the user must ensure that the certification for the CR:110AIS doseBadge is sufficient for the environment in which it will be used.

The CR:110AIS doseBadge is the only component of the doseBadge system which has been certified and it should only be used with the accessories supplied or with those provided for use by Cirrus Research plc. The use of any other accessory or parts not supplied by Cirrus Research plc specifically for use with the CR:110AIS may render the Intrinsic Safety Certification invalid. Please contact Cirrus Research plc or your local representative for further information.

Please note that RC:110A Reader Unit and the RC:101A Keyfob Remote Control are not certified for use in hazardous zones and the doseBadge must be started before entering any hazardous zones.

Additional certification may be available for the CR:110AIS other than that specified in this datasheet. Please contact your local representative or Cirrus Research plc for further details.

CR:110AIS Intrinsically Safe doseBadge Personal Noise Dosemeter

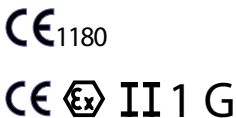
CR:110AIS doseBadge Specification

The CR:110AIS version of the CR:110A doseBadge carries approval for use in hazardous areas. The following information is provided in accordance with the requirements of EN 50014:1997 and EN 50020:1994.

Manufactured by Cirrus Research plc
Acoustic House, Bridlington Road, Hunmanby, North Yorkshire,
YO14 0PH, United Kingdom

Group II Non-Mining Applications

CR:110AIS Personal Noise Dosimeter
Certificate No. Baseefa04ATEX0330

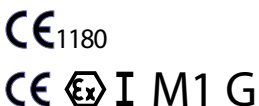


EEx ia IIC T4

Input Parameters: $U_i=10V, I_i=30mA$
Output Parameters: $U_o=6.4V, I_o=31mA$
 $C_i=0, L_i=0$

Group I Mining Applications

CR:110AIS Personal Noise Dosimeter
Certificate No. Baseefa04ATEX0331X



EEx ia I (-20°C ≤ Ta ≤ +40°C)

Input Parameters: $U_i=10V, I_i=30mA$
Output Parameters: $U_o=6.4V, I_o=31mA$
 $C_i=0, L_i=0$

CR:110AIS doseBadge Case Specifications

The CR:110AIS doseBadge case is made from the following materials:

Silicon Brass* comprising 14% Zn
4% Si
79% Copper
Plated with 5μ Electroless Nickel
0.25μ Gold

*US Equivalent C87500 (ASTM B198 Alloy 13B)

Maximum Surface Temperature

The maximum surface temperature of the CR:110AIS doseBadge casing is less than (<) 135°C

ATEX Directive Certification Description

The ATEX Directive became a mandatory requirement for all hazardous area equipment sold in the European Union from 2003. In addition to the technical requirements demanded by the appropriate standards for each type of produce, the ATEX Directive imposes additional requirements on the certificate holder in terms of quality systems, product documentation etc.

Group II Non-Mining Applications



CE¹¹⁸⁰ = Marking of the Notified Body
CE = CE Marking
Ex = EU Explosive Atmosphere Symbol
II = Equipment Group: Non-Mining Applications
1 = Equipment Category: Very High Protection
G = Type of Explosive Atmosphere: Group II

Group I Mining Applications



CE¹¹⁸⁰ = Marking of the Notified Body
CE = CE Marking
Ex = EU Explosive Atmosphere Symbol
I = Equipment Group: Mining Applications
M1 = Equipment Category: Energised (in presence of explosive atmosphere)

CENELEC/IEC Certification Description

The certification for the CR:110AIS doseBadge is as follows:

EEx ia IIC T4 Group 2 for Non-mining applications

E = Conformity with European Standard
Ex = Explosion Protection Symbol
ia = Intrinsic Safety to CENELEC EN 50020
(IEC 79-11) for Group II (Non Mining)
IIC = Gas Group :Hydrogen (Surface above ground)
T4 = Maximum surface temperature <135°C

EEx ia Group 1 for Mining applications

E = Conformity with European Standard
Ex = Explosion Protection Symbol
ia = Intrinsic Safety to CENELEC EN 50020
(IEC 79-11) for Category M1 (Mining)
I = Gas Group :Methane (Mining)
Group I = Mining Applications



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