[1] EC TYPE-EXAMINATION CERTIFICATE

[2] Equipment or Protected System Intended for use in Potentially explosive atmospheres Directive 94/9/EC

[3] EC-Type Examination Certificate Number: **Nemko 10ATEX1061X**

[4] Equipment or Protective System: **Alarm Latch Relay**

[5] Applicant / Manufacture: **Austdac Pty Ltd**

[6] Address: **Unit 1/4 Packard Avenue**
Castle Hill NSW 2154
Australia

[7] This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] Nemko AS, notified body number 0470 in accordance with Article 9 of Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report no. 141542

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

CENELEC EN 60079-0: 2006, CENELEC EN 60079-11: 2007

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

[11] This EC-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC.
Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

[12] The marking of the equipment or protective system shall include the following :

I M1 **Ex ia I**

Oslo, 2010-02-17

Rolf Hoel
Certification Manager, Ex-products

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[13] Schedule

[14] EC-TYPE EXAMINATION CERTIFICATE No Nemko 10ATEX1061X

[15] Description of Equipment or Protective System

The alarm latch relay type ALR-2 is designed to accept an alarm signal input and provide relay contact output status and/or visual LED indications of the alarm condition. The status of the potential free output relay contacts can be either latched or mono. The relay output contacts are potential free and could be connected to a separate intrinsically safe power supply.

The alarm input signal can be from a separate intrinsically safe power supply when the input relay K1 is fitted and resistor R5 is not fitted. When the input relay K1 is not fitted and resistor R5 is fitted the alarm signal is powered from the same intrinsically safe power supply that power the relay module.

The two alarm LED indicators are mounted on the Printed Circuit Board. The external indicators can be connected to the External Alarm LED Output.

The reset signal is not required for the mono version.

[16] Report No. 141542

Descriptive Documents

Name/Title	Drawing No.	Rev/Issue	Date	Sheet No
Alarm Latch Relay With Acknowledge Type ALR-2 PCB0030A Schematic Diagram	56-002-03	09	2007/05/01	1
Alarm Latch Relay With Acknowledge Type ALR-2 Assembly Details	56-003-04	06	2006/11/23	1
Alarm Latch Relay With Acknowledge Type ALR-2 Label Details	56-004-13	05	2010/02/15	1
Alarm Latch Relay With Acknowledge Type ALR-2 Connection Diagram	56-005-18	05	2006/11/28	1
Alarm Latch Relay With Acknowledge Type ALR-2 Isolation Input Option Connection Diagram	56-010-18	02	2006/11/28	1
Alarm Latch Relay With Acknowledge Type ALR-2 PCB0030A Artwork Details	56-006-21	04	2007/05/01	3
Alarm Latch Relay With Acknowledge Type ALR-2 PCB0030A Bill Of Materials	56-009-14	08	2007/05/01	2
Alarm Latch Relay With Acknowledge Type ALR-2 PCB0030A Component Loading Diagram	56-012-07	02	2007/05/01	2
Alarm Latch Relay With Acknowledge Type ALR-2 Bill Of Materials	56-013-14	01	2006/09/18	2

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[17] Special Conditions for Safe Use

1. The ALR-2 Relay should not be used as a barrier between hazardous and safe areas.
2. All the power supplies that may be connected to the ALR-2 Relay must be Intrinsically Safe.
3. The ALR-2 Relay must be installed inside an enclosure that has level of protection IP54 or higher.
4. The following electrical parameters shall be taken into account during installation:

Power Supply Input:

Electrical Parameter	Terminals 3 and 4
Maximum Input Voltage (Ui)	16.5 VDC
Maximum Input Current (Ii)	3 A
Maximum Internal Capacitance (Ci)	0 µF
Maximum Internal Inductance (Li)	0 mH

Output Terminals:

Electrical Parameter	Output 1 (Terminals 13,11,12) Output 2 (Terminals 16,18,17) Output 3 (Terminals 14,15)
Maximum Input Voltage (Ui)	30 VDC
Maximum Input Current (Ii)	1.0 A

Alarm Input:

Electrical Parameter	R5 not fitted and K1 is fitted Terminals 1 and 2	R5 is fitted and K1 not fitted Terminals 1 and 6
Maximum Output Voltage (Uo)	0 V	16.5 V
Maximum Output Current (Io)	0 A	1.737 A
Maximum External Capacitance (Co)	-	11 µF
Maximum External Inductance (Lo)	-	50 µH
Ratio Lo/Ro	-	65 µH/Ω
Maximum Input Voltage (Ui)	30 VDC	0 V
Maximum Input Current (Ii)	3 A	0 A
Maximum Internal Capacitance (Ci)	0 µF	0.178 µF
Maximum Internal Inductance (Li)	0 mH	0 mH

External Alarm LED Output:

Electrical Parameter	Terminals 7 and 8
Maximum Output Voltage (Uo)	16.5 V
Maximum Output Current (Io)	37 mA
Maximum External Capacitance (Co)	11 µF
Maximum External Inductance (Lo)	50 µH
Ratio Lo/Ro	60 µH/Ω
Maximum Input Voltage (Ui)	0 V
Maximum Internal Capacitance (Ci)	0 µF
Maximum Internal Inductance (Li)	0 mH

Reset Input:

Electrical Parameter	Terminals 5 and 6
Maximum Output Voltage (Uo)	16.5 VDC
Maximum Output Current (Io)	1.737 A
Maximum External Capacitance (Co)	11 µF
Maximum External Inductance (Lo)	50 µH
Ratio Lo/Ro	65 µH/Ω
Maximum Input Voltage (Ui)	0 V
Maximum Internal Capacitance (Ci)	0.178 µF
Maximum Internal Inductance (Li)	0 mH

[18] Essential Health and Safety Requirements

See item 9

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