



FM Approvals  
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# CERTIFICATE OF COMPLIANCE

## HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

***N-132/a/4-20-IL, Transmitter Power Supply***

NI / I / 2 / ABCD / T4 Ta = 60°C, 70 °C (Vertical Mount Only)

NI / I / 2 / IIC / T4 Ta = 60°C, 70 °C (Vertical Mount Only)

AIS / I, II, III / 1 / ABCDEFG; 91 606 99 31 1; Entity

I / 0 / [AEx ia] / IIC; 91 606 99 31 1; Entity

a = Number of Channels: 1 or 2

<i>Max Entity Parameters</i>					
<i>Terminals</i>	<i>Voc</i>	<i>Isc</i>	<i>Po</i>	<i>Ca</i>	<i>La</i>
	<i>(V)</i>	<i>(mA)</i>	<i>(mW)</i>	<i>(nF)</i>	<i>(mH)</i>
12(+), 11(-)	27.0	88	576	90	2.3
15(+), 13(-)*	27.0	88	576	90	2.3
12(+), 10 (signal), 11(-)	27.0	88	576	90	2.3
15(+), 14 (signal), 13(-)*	27.0	88	576	90	2.3
10 (signal), 11(-)	4.2	0.042	0.044	100000	1000
14 (signal), 13(-)*	4.2	0.042	0.044	100000	1000

\* = Only for Model type N-132/2/4-20-IL

***Special conditions of Use:***

1. *Shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.*

**N-132/a-bc, Isolating Switching Amplifier**

AIS / I, II, III / 1 / ABCDEFG; T4 Ta = 70 °C; 91 706 99 31 1; Entity

I / 0 / [AEx ia] / IIC; T4 Ta = 70 °C; 91 706 99 31 1; Entity

a = Number of Channels: 1, 2 or 1(2)

bc = Power Supply: 01 or 10

<b>Max Entity Parameters</b>							
<i>Terminals</i>	<i>Voc</i>	<i>Vt</i>	<i>Isc</i>	<i>It</i>	<i>Po</i>	<i>Ca</i>	<i>La</i>
	(V)	(V)	(mA)	(mA)	(mW)	(μF)	(mH)
10(+), 11(-), 14(+), 15(-)*	9.6	-	10	-	24	3.6	350
10-14 (+), 11-15 (-)*	-	9.6	-	20	48	3.6	90

\* = Only for Model type N-132/2-bc

**Special conditions of Use:**

1. Shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

**N-132/a-E-10, Isolating Switching Amplifier**

NI / I / 2 / ABCD / T4 Ta = 70 °C

NI / I / 2 / IIC / T4 Ta = 70 °C

AIS / I, II, III / 1 / ABCDEFG; 91 706 99 31 1; Entity

I / 0 / [AEx ia] / IIC; 91 706 99 31 1; Entity

a = Number of Channels: 1 or 2

<b>Max Entity Parameters</b>							
<i>Terminals</i>	<i>Voc</i>	<i>Vt</i>	<i>Isc</i>	<i>It</i>	<i>Po</i>	<i>Ca</i>	<i>La</i>
	(V)	(V)	(mA)	(mA)	(mW)	(μF)	(mH)
10(+), 11(-), 14(+), 15(-)*	9.6	-	10	-	24	3.6	350
10-14 (+), 11-15 (-)*	-	9.6	-	20	48	3.6	90

\* = Only for Model type N-132/2-bc

**Special conditions of Use:**

1. Shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

**Equipment Ratings:**

The Transmitter Power Supplies and the N-132/1-E-10 and N-132/2-E-10 Isolating Switching Amplifiers are Nonincendive for Class I, Division 2, Groups A, B, C, D, and Class I, Zone 2 Groups IIC with intrinsically safe outputs for connections to Class I, II, III, Division 1, Groups A, B, C, D, E, F, G and Class I, Zone 0, Group IIC Hazardous (Classified) Locations when installed per manufacturer's control drawings.

The N-132/a-bc Isolating Switching Amplifiers are associated apparatuses which provide intrinsically safe outputs for connections to Class I, II, III, Division 1, Groups A, B, C, D, E, F, G and Class I, Zone 0, Group IIC Hazardous (Classified) Locations when installed per manufacturer's control drawings.

**FM Approved for:**

RECHNER Industrie-Elektronik GmbH  
Lampertheim, Germany



This certifies that the equipment described has been found to comply with the following Approval Standards and other documents:

Class 3600	1998
Class 3610	1999
Class 3611	1999
Class 3810	1989
Including suppliment #1	1995
ANSI/ISA-12.00.01	2005
ANSI/ISA-12.02.01-2002	2002
ISA 12.16.01-2002	2002
ISA 12.23.01-2004	2004
ANSI/ISA-TR12.21.01	2004


Original Project ID: 3038878

Approval Granted: March 18, 2010

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
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FM Approvals LLC

  
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J.E. Marquedant  
Group Manager, Electrical

18 March 2010  
Date