

CERTIFICATE OF COMPLIANCE

Certificate Number 20170926-E203960
Report Reference E203960-20131205
Issue Date 2017-SEPTEMBER-26

Issued to: HIRSCHMANN AUTOMATION AND CONTROL GMBH
STUTTGARTER STR 45-51
72654 NECKARTENZLINGEN GERMANY

**This is to certify that
representative samples of**

PROGRAMMABLE CONTROLLERS FOR USE IN
HAZARDOUS LOCATIONS
SEE ADDENDUM PAGE

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety:

ANSI/ISA 12.12.01-2015 NONINCENDIVE ELECTRICAL
EQUIPMENT FOR USE IN CLASS I AND II, DIVISION 2
AND CLASS III, DIVISIONS 1 AND 2 HAZARDOUS
(CLASSIFIED) LOCATIONS
CAN/CSA C22.2 NO. 213 NONINCENDIVE ELECTRICAL
EQUIPMENT FOR USE IN CLASS I AND II, DIVISION 2
AND CLASS III, DIVISIONS 1 AND 2 HAZARDOUS
(CLASSIFIED) LOCATIONS

Additional Information:

See the UL Online Certifications Directory at
www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's
Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program
UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please
contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>



CERTIFICATE OF COMPLIANCE

Certificate Number 20170926-E203960
Report Reference E203960-20131205
Issue Date 2017-SEPTEMBER-26

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Programmable Controllers for use in Hazardous Locations, Class I, Div. 2, Groups A, B, C and D.

Open type, Industrial ETHERNET Switch, Cat. Nos. EAGLE20- and EAGLE30- followed by 04, followed by 00 or 02, followed by 2O6 or 999, followed by TT, followed by 9, followed by 99, followed by S or T or E, followed by CC or K9, followed by 14 letters, dashes or dots.

Open Type, Programmable Controller, Cat. Nos. RSP20- , RSP25-, RSP30- and RSP35-, followed by a combination of up to 27 digits, letters, dashes and dots.



Bruce Mahrenholz, Director North American Certification Program
UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>



File E203960
Project 12CA64275

December 5, 2013

REPORT

on

Programmable Controllers for Use in Hazardous Locations
(NRAG, NRAG7)

Hirschmann Automation And Control GmbH
Neckartenzlingen, Germany

Copyright © 2013 UL LLC

UL LLC authorizes the above named company to reproduce this Report only for purposes as described in the Conclusion, provided it is reproduced in its entirety.

DESCRIPTION

PRODUCT COVERED:

USL, CNL - Programmable Controllers for use in Hazardous Locations, Class I, Div. 2, Groups A, B, C and D.

Open type, Industrial ETHERNET Switch, Cat. Nos. EAGLE20- and EAGLE30- followed by 04, followed by 00 or 02, followed by 206 or 999, followed by TT, followed by 9, followed by 99, followed by S or T or E, followed by CC or K9, followed by 14 letters, dashes or dots.

Open Type, Programmable Controller, Cat. Nos. RSP20- , RSP25-, RSP30- and RSP35-, followed by a combination of up to 27 digits, letters, dashes and dots.

GENERAL:

These devices are open type industrial Ethernet switches for **DIN rail installation and for use in industrial automation** applications. They are microcontroller-based and communicate via interfaces through wire or optical port. These devices are constructed in accordance with ordinary locations File E175531, Volume 1, Section 31, issued date 2012-12-15 and the following description. **Should the Procedure File E175531, issued date 2012-12-15 be withdrawn, labeling under this Procedure must be discontinued until authorization to resume is received.**

TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

Products designated USL have been investigated using requirements contained in:

ANSI/ISA 12.12.01-2015, Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Division 1 and 2 Hazardous (Classified) Locations.

*

Products designated CNL have been investigated using requirements contained in:

***CSA C22.2 NO. 213 NONINCENDIVE ELECTRICAL EQUIPMENT FOR USE IN CLASS I AND II, DIVISION 2 AND CLASS III, DIVISIONS 1 AND 2 HAZARDOUS (CLASSIFIED) LOCATIONS- Edition 2 - Revision Date 2016/05/01**

MODEL NOMENCLATURE:

e.g. EAGLE20-	04	00	206	TT	9	99	S	CC	
I	II	III	IV	V	VI	VII	VIII	IX	X

- I: Product:
EAGLE20 - Router without gigabit ports
EAGLE30 - Router with gigabit ports
- II: Number of 10/100 Mbit/s ports:
04 - 4x 10/100-Mbit/s ports
- III: Number of 100/1000 Mbit/s ports:
00 - 0x 100/1000-Mbit/s ports
02 - 2x 100/1000-Mbit/s ports
- IV: Uplink Port Configuration:
206 - 2x SFP slot for 100/1000Mbit/s F/O connections
999 - Not present
- V: Port Configuration:
TT- - all Twisted Pair /RJ45
- VI: Cellular phone interface:
9 - Not present
- VII: WAN port:
99 - Not present
- VIII: Temperature range:
S - Standard 0°C up to 60°C
T - Extended -40°C up to 70°C
E - Extended -40°C up to 70°C inclusive conformal coating.
- IX: Voltage range:
CC - (24 - 48) VDC, with redundant power supply connectivity
K9 - (60 - 250) VDC - alternatively (110 - 230 VAC);
("9": redundant Power supply connectivity not available)
- X: **A combination of 14 letters, dashes or dots which represent the Approvals and Software (for information only)**

NOMENCLATURE BREAKDOWN:

RSP30-	11	03	3Z6	TT	E	CC	XX	HS	H	2R	01.0.	00
I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII

I: MODEL:

RSP20- Rail Switch Power, up to 100 Mbps, Standard

RSP25- Rail Switch Power, up to 100 Mbps, Enhanced Redundancy and PTP

RSP30- Rail Switch Power, up to 1000 Mbps, Standard

RSP35- Rail Switch Power, up to 1000 Mbps, Enhanced Redundancy and PTP

II: No. of Ports Fast Ethernet:

08 - 8x10/100 Mbps Ethernet Ports

11 - 11x10/100 Mbps Ethernet Ports

III: No of Ports Gigabit Ethernet:

00 - 0x10/100/1000 Mbps Ethernet Ports

03 - 3x10/100/1000 Mbps Ethernet Ports

IV: Uplink Port Configuration:

3Z6 - all SFP Slot (100Mbps)

3O6 - all SFP Slot (1000Mbps)

V: Port Configuration:

TT- - all Twisted Pair /RJ45

ZT- - 4x SFP slot (100Mbps); remains Twisted Pair / RJ45

VI: Temperature range:

S - Standard 0°C up to 60°C

T - Extended -40°C up to 70°C

E - Extended -40°C up to 70°C inclusive conformal coating.

VII: Voltage range:

CC - (24 - 48) VDC, with redundant power supply connectivity

K9 - (60 - 250) VDC - alternatively (110 - 230 VAC);

("9": redundant Power supply connectivity not available)

KK - (60 - 250) VDC alternatively (110-230 VAC),

("K": redundant Power supply connectivity)

VIII: Approvals: (for information only)

Z9 - CE; FCC; EN61131; (EN60950 on request only)

Y9 - "Z9" + cUL508;

V9 - "Z9" + IEC 61850; IEEE1613

VY - "V9" + cUL508;

XX - customer specific (X: any number or letter)

Cont:

IX: Redundancy Configuration:

HS - Hirschmann Standard

xx - Depending on customisation (x: any number or letter)

X: Software Configuration:

H - Standard

x - Depending on software configuration (x: any letter)

XI: Software Level

2R - Layer 2 Rail Switch Power Software

xx - Depending on software level (x: any number or letter)

XII: Software version:

01.0. - Software version 01.0.

xx.x. - Software version ... (x : any number)

XIII: Bugfix

00 - Bugfix version 00

xx - Bugfix version ... - (x: any number)

RATINGS:

Electrical:

EAGLE20 and EAGLE30 can be rated as follow:

Eagle Variant	Power Supply	Input Data			
		U _{in DC}	I _{in DC}	U _{in AC}	I _{in AC}
EAGLE20- 0400999TT999...	CC	24V - 48V	0.5A - 0.3A	-	-
	K9	60V - 250V	0.2A - 0.15A	110V - 230V	0.2A - 0.15A
EAGLE30- 0402206TT999...	CC	24V - 48V	0.6A - 0.3A	-	-
	K9	60V - 250V	0.3A - 0.15A	110V - 230V	0.2A - 0.15A

Relay contacts:

The relay connections are to be used within their Entity Parameters (detailed below), as per Control Drawing 000172287DNR (see Ill. 2)

V_{max} = 30V
I_{max} = 90mA
C_i = 2nF
L_i = 1uH

USB Connector:

The USB connections are to be used within their Entity Parameters (detailed below), as per Control Drawing 000172287DNR (see Ill. 2)

V_{OC} = 5.5V
I_{SC} = 1.25A
C_a = 10μF
L_a = 10μH

The Hirschmann USB device type ACA21-USB EEC, Listed under E203960, Vol.1, Sec.7 for Class 1, Division 2, Groups A, B, C and D hazardous location may be used.

Environmental:

Max. temperature range: 0°C ... +60°C for parameter "S"
 -40°C ... +70°C for parameter "T" or "E"

Electrical:

All Cat. Nos. RSP20, RSP25, RSP30, RSP35 can be rated as follow:

Power Supply Type KK		Power Supply Type CC		Power Supply Type K9	
Supply voltage	Input current	Supply voltage	Input current	Supply voltage	Input current
110-230Vac 50-60Hz, alternatively 60-250 Vdc	0.2-0.15 A (ac)	24-48 Vdc Class 2	0.7-0.4 A	110-230Vac 50-60Hz, alternatively 60-250 Vdc	0.2-0.1 A (ac)
	0.3-0.15 A (dc)		0.8-0.4 A		0.3-0.1 A (dc)
	0.2-0.1 A (ac)		0.8-0.4 A		0.2-0.1 A (ac)
	0.4-0.1 A (dc)		1.0-0.5 A		0.4-0.1 A (dc)

The relay connections are to be used within their Entity Parameters (detailed below), as per Control Drawing 000189237DNR (see Ill. 3)

:

$V_i = 30V$
 $I_i = 90mA$
 $C_i = 2nF$
 $L_i = 1\mu H$

Environmental:

Ambient temperature range:

0°C ... +60°C for parameter "S"
-40°C ... +70°C for parameter "T" or "E"

MARKING:

The following markings shall appear on the device. Markings may be provided in French or English for Canadian markets. Ink-stamped label permanently secured to the device. Products that are intended for sale in Canada and marked with a "#" are required to have all Markings appear in both English and French Languages.

1. Listee's name, trademark, or identifier.
2. Electrical ratings.
3. Catalog number or equivalent.
4. Operating temperature code - "T4".
- * 5. **Ambient temperature range, as under RATINGS..**
- * 6. Hazardous location designation Class I, Division 2, Groups A, B, C, D.
- * 7. Date code or serial number referencing date of manufacture.
- * 8. USB and relay markings to include Tri-Ex symbol (adjacent to USB and relay connection) and statement "In Hazardous Locations, Non-Incendive only when installed per Control Drawing 000172287DNR" **for model Eagle 20/30.**

USB and relay markings to include Tri-Ex symbol (adjacent to USB and relay connection) and statement "In Hazardous Locations, Non-Incendive only when installed per Control Drawing 000189237DNR" for model RSP20, RSP25, RSP30, RSP35.

- *9. For Models with Type CC Power Supply must be marked, "For Use In Class 2 Circuits," "Class 2" or an equivalent statement. This may be provided in the installation instructions.
- *10. WARNING - EXPLOSION HAZARD - DO NOT DISCONNECT EQUIPMENT WHILE THE CIRCUIT IS LIVE OR UNLESS THE AREA IS KNOWN TO BE FREE OF IGNITABLE CONCENTRATIONS. #

INSTALLATION INSTRUCTIONS:

An installation manual shall be provided with each unit to direct the user on proper installation and operation of the device. **It shall include the following in addition to ordinary locations content under File E175531, issued date 2012-12-15:**

SUITABLE FOR USE IN CLASS I, DIVISION 2, GROUPS A, B, C AND D HAZARDOUS LOCATIONS, OR NONHAZARDOUS LOCATIONS ONLY.

WARNING - EXPLOSION HAZARD - DO NOT DISCONNECT EQUIPMENT WHILE THE CIRCUIT IS LIVE OR UNLESS THE AREA IS KNOWN TO BE FREE OF IGNITABLE CONCENTRATIONS.

WARNING - EXPLOSION HAZARD - SUBSTITUTION OF ANY COMPONENT MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2.

For USB and Relay:

For Model EAGLE20 and EAGLE30 "Install per Control Drawing 000172287DNR"

**For Model RSP20, RSP25, RSP30, RSP35
"Install per Control Drawing 000189237DNR"**

* **For Model EAGLE20 and EAGLE30 the following statements and information must be included in regards to the Relay and USB Devices:**

The relay connections are to be used within their Entity Parameters (detailed below), as per Control Drawing 000172287DNR (see Ill. 2)

$V_{max} = 30V$
 $I_{max} = 90mA$
 $C_i = 2nF$
 $L_i = 1\mu H$

The USB connections are to be used within their Entity Parameters (detailed below), as per Control Drawing 000172287DNR (see Ill. 2)

$V_{oc} = 5.5V$
 $I_{sc} = 1.25A$
 $C_a = 10\mu F$
 $L_a = 10\mu H$

For Model RSP20, RSP25, RSP30, RSP35 the following statement and information must be included in regards to the Relay:

The relay connections are to be used within their Entity Parameters (detailed below), as per Control Drawing 000189237DNR (see Ill. 3)

Vi = 30V
Ii = 90mA
Ci = 2nF
Li = 1 μ H