File E203960
Project 10CA64829

February 29, 2012

REPORT

on

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

Hirschmann Automation and Control GmbH
Neckartenzlingen, Germany

DESCRIPTION

PRODUCT COVERED:

        USL, CNL - open type, programmable controllers, Ethernet switch
ruggedized, cat. no. MAR10- or MAR11- followed by 20, 22, 30 or 32,
followed by 99 or CC or 4O or 4T or OT,
followed by 99 or two letters,
followed by 99 or two letters,
followed by 99 or two letters,
followed by 99 or two letters,
followed by 99 or two letters,
followed by 99 or two letters,
followed by 99 or two letters,
followed by 99 or two letters,
followed by 99 or two letters,
followed by 99 or two letters,
followed by 99 or two letters,
followed by S **or C** or U or F,
followed by C or G or L or M,
followed by C or G or L or M or 9,
followed by a letter,
may be followed by additional suffixes for use in
Class I, Division 2, Groups A, B, C and D Hazardous Locations when installed
in accordance with Control Drawing No. 000159391DNR.


GENERAL

        These devices are open type Ethernet switches intended for use in
industrial 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 23, issued
date 2009-08-06 and the following description.  The file covers Programmable
Controllers for this manufacturer. In the case of any discrepancy between
this File and E175531, Volume 1, Section 23 this file has precedence.

ELECTRICAL RATINGS:

Input ratings:

| Input 1 | | Input 2 | | Cat. Nos. |
|---|---|---|---|---|
| Ratings | Power Supply Unit Model No. | Ratings | Power Supply Unit Model No. | |
| 24-48 V, 1.4-0.7 A, DC | **PSU-1141-0y** | – | – | MAR1xx0-xxxxxxxxxxxxxxxxxxxxxxxxxxxxC9xxx MAR1xx0-xxxxxxxxxxxxxxxxxxxxxxxxxxxxL9xxx |
| 24-48 V, 1.4-0.7 A, DC | **PSU-1141-0y** | 24-48 V, 1.4-0.7 A, DC | **PSU-1141-0y** | MAR1xx0-xxxxxxxxxxxxxxxxxxxxxxxxxxxxCCxxx MAR1xx0-xxxxxxxxxxxxxxxxxxxxxxxxxxxxLLxxx |
| 24-48 V, 1.4-0.7 A, DC | **PSU-1141-0y** | 100-240 V, 0.7-0.4 A, 50/60 Hz | **PSU-0141-0y** | MAR1xx0-xxxxxxxxxxxxxxxxxxxxxxxxxxxxCGxxx MAR1xx0-xxxxxxxxxxxxxxxxxxxxxxxxxxxxLMxxx |
| *24-48 V, 1.4-0.7 A, DC | **PSU-1141-0y** | 100-240 V, 0.7-0.4 A, 50/60 Hz | **PSU-0151-0z** | MAR1xx2-xxxxxxxxxxxxxxxxxxxxxxxxxxxxCGxxx MAR1xx2-xxxxxxxxxxxxxxxxxxxxxxxxxxxxLMxxx |
| 100-240 V, 0.7-0.4 A, 50/60 Hz | **PSU-0141-0y** | – | – | MAR1xx0-xxxxxxxxxxxxxxxxxxxxxxxxxxxxG9xxx MAR1xx0-xxxxxxxxxxxxxxxxxxxxxxxxxxxxM9xxx |
| 100-240 V, 0.7-0.4 A, 50/60 Hz | **PSU-0141-0y** | 100-240 V, 0.7-0.4 A, 50/60 Hz | **PSU-0141-0y** | MAR1xx0-xxxxxxxxxxxxxxxxxxxxxxxxxxxxGGxxx MAR1xx0-xxxxxxxxxxxxxxxxxxxxxxxxxxxxMMxxx |
| 100-240 V, 0.7-0.4 A, 50/60 Hz | **PSU-0141-0y** | 24-48 V, 1.4-0.7 A, DC | **PSU-1141-0y** | MAR1xx0-xxxxxxxxxxxxxxxxxxxxxxxxxxxxGCxxx MAR1xx0-xxxxxxxxxxxxxxxxxxxxxxxxxxxxMLxxx |
| *100-240 V, 0.7-0.4 A, 50/60 Hz | PSU-0141-y | 100-240 V, 0.7-0.4 A, 50/60 Hz | **PSU-0151-0z** | MAR1xx2-xxxxxxxxxxxxxxxxxxxxxxxxxxxxGGxxx MAR1xx2-xxxxxxxxxxxxxxxxxxxxxxxxxxxxMMxxx |

where x stand for letters or numbers according to the Nomenclature,
where y stand for 1 – without coating or 2 – with coating
**where z stand for 2 – without coating or 3 – with coating**

Output ratings:

Relay contacts:

The relay connections are to be used within their Entity Parameters (detailed
below), as per Control Drawing 000159391DNR (see Ill. 03)

Vmax: 30V
Imax: 90mA
Ci: 50pF
Li: 2uH