File E175531

Project 07CA33740

2007-11-12

REPORT

on

LISTED

PROGRAMMABLE CONTROLLERS

Hirschmann Automation and Control GmbH
Neckartenzlingen, Germany

DESCRIPTION

PRODUCT COVERED:

USL, CNL - Listed Programmable Controller, Type 1, Name Octopus, models no. OCTOPUS followed by 8 or 16 or 24, followed by M, may be followed by a slash and additional suffixes. They are all intended for installation entirely within a Class 2 circuit.

GENERAL

These devices are for use in Industrial Automation Applications, which receive data may be change it and sends it out again via Ethernet network. The communicate interface can be through wire or fibre optics.

Model differences

The number of ports, 8, 16 or 26 with or without fibreoptic ports.

ELECTRICAL RATINGS:

Power supply: 60V Class 2, 2A max.

Signal contact: 24V, 1A max

Maximum ambient:

75°C max.

Pollution degree: 3

Environmental Type: 1

ENGINEERING CONSIDERATIONS (NOT FOR UL REPRESENTATIVE'S USE):

CNL - Indicates investigation to Canadian National Standard(s) C22.2 No. 142-M1987.

USL - Indicates investigation to the United States Standard UL 508, 17th Edition (Industrial Control Equipment).

Note: CNL = Canadian National Standards - Listed.
USL = United States Standards - Listed.

Nomenclature breakdown

OCTOPUS	24	M	-	2FX	xxx
I	II	III	IV	V	VI

I: - OCTOPUS family module - IP 67 Ethernet Switch
II: - Total number of Ethernet ports
III: - Switch type:
M - managed
IV: - Slash
V: - Number of fibreoptic ports and port type
VI: - Customer specific

CONSTRUCTION DETAILS:

General - The details of construction are covered in the following photographs and accompanying descriptive pages and illustrations.

Corrosion Protection – All ferrous metal parts are suitably protected against corrosion by painting, plating or the equivalent.

Spacings – These devices are intended for use only entirely within a Class 2 Circuit. Spacings are not specified.

MARKINGS

The following shall be marked on the equipment legibly and permanently with either etched, molded, ink-stamped, silk-screened, or label that is a R/C PGDQ2 permanently secured to the enclosure:

1. Listee’s name, Trademark or company identification (file number),
2. Catalog or Model number
3. Electrical ratings
4. Environmental rating: Type 1.
5. “WARNING – HOT SURFACE – RISK OF BURN” or the equivalent.

Note: All of the aforementioned ratings shall be visible when the device is mounted singularly. The marking may be on the side of the device, and need not be visible when the device is mounted next to other devices.

The following marking must be provided on a wiring diagram or instructional manual shipped with the device.

Installation Instructions - Shall be provided and include a wiring diagram.

The following markings are also provided on the device or as part of the installation instructions:

1. “max. Ambient temperature 75°C” or equivalent.

2. “To be supplied by a Class 2 source” or equivalent.

Canadian Marking (CNL) - The month and year of manufacturer shall also be marked on the device. Bar coding, date coding, serial numbers, or equivalent means may be used.

Octopus 8M FIG.1
(Represents All Models)

General – The figure shows the overall view of Optopus 8M.

1. Enclosure – Cast Aluminum. Approximate size 335 x 180 x 50 mm. Min. 3.2mm thick.

2. External Interconnections - Provided with threaded collar to ensure reliable connecton.

3. Relay (K201) – R/C NRNT2, TK1-3V by Matsushita (E43149), rated 2A, 30Vdc.

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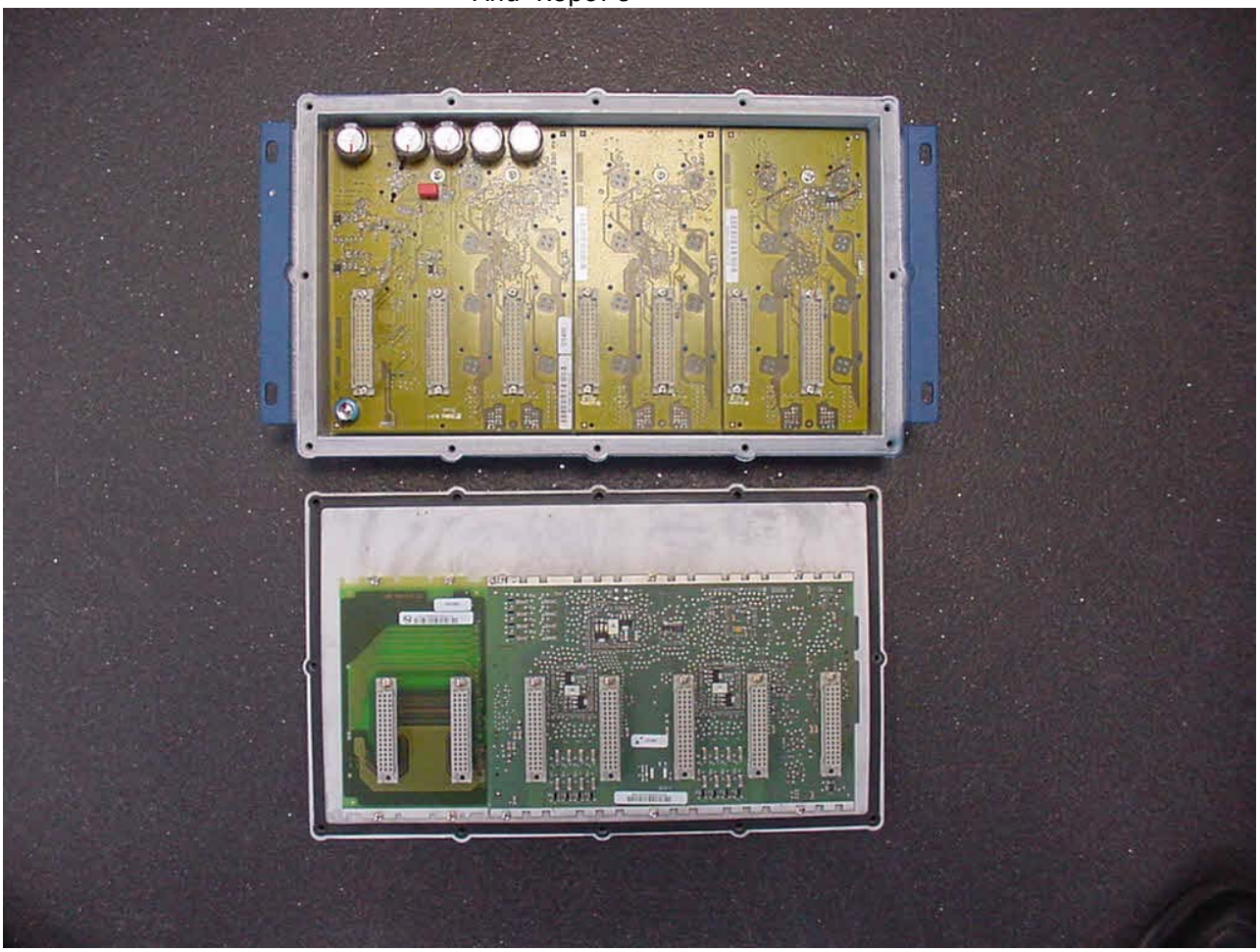

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TEST RECORD NO. 1

SAMPLES:

Representative production samples of the Optopus 8,16 or 24 series constructed as described herein, were submitted by the manufacturer for examination and test.

GENERAL:

Test results relate only to the items tested.

The following tests were conducted in respect to UL 508 17th edition and C22.2 No. 142-M1987.

Test Model	Test	Reference
24M-2FX	Temperature Test	UL 508, Sec. 43, 184 (Clause 6.2)
	Dielectric Voltage Withstand Test Dielectric Strength (Can/Csa C22.2 No. 142-M1987)	UL 508, Par. 49.1, 188 (Clause 6.8)

Test Record Summary:

The results of this investigation indicate that the products evaluated comply with the applicable requirements and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

CONCLUSION

Samples of the products covered by this Report have been found to comply with the requirements covering the class and the products are judged to be eligible for Listing and Follow-Up Service. The manufacturer is authorized to use the UL Mark on such products, which comply with the Follow-Up Service Procedure and any other applicable requirements of Underwriters Laboratories Inc. Only those products, which properly bear the UL Mark, are considered as Listed by Underwriters Laboratories Inc.

Test Record by:	Reviewed by:
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Project Engineer	Staff Engineer
UL International (UK) Ltd	UL International (UK) Ltd