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Project 4788869179

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REPORT

on

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

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DESCRIPTION

PRODUCT COVERED:

USL, CNL - Open Type Programmable Controllers for use in Hazardous Locations, Class I Division 2 Groups ABCD

UC20 u-control series Cat. Nos. UC20-WL2000-AC, UC20-SL2000-EC, UC20-SL2000-AC-EC, UC20-SL2000-OLC-EC, UC20-SL2000-OLAC-EC, UC20-SL2000-EC-CAN, UC20-SL2000-AC-EC-CAN, UC20-SL2000-OLC-EC-CAN, UC20-SL2000-OLAC-EC-CAN, UC20-WL2000-IOT, UC20-WL2000-AC-CAN, UC20-WL2000-AC-EC, UC20-WL2000-AC-EC-CAN.

GENERAL:

These modules are intended to be used in combination with programmable controllers and intended to be used for communication and input / output purposes. The system consists of Bus Coupler Modules and Input / Output Modules with different functions. The Input and Output Modules are consisting of a base module with connections to the communication bus and power sources, different electronic modules and a modular terminal block module. The equipment is intended to be supplied by a switched-mode regulated power supply unit (SMPSU).

The modules use two different PCB variants: One variant supporting CAN functionality, one variant without CAN functionality. All other differences are only in the used software.

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

Products designated USL have been investigated using requirements contained in:

Standard No. UL 121201 NONINCENDIVE ELECTRICAL EQUIPMENT FOR USE IN CLASS I AND II, DIVISION 2, AND CLASS III, DIVISIONS 1 AND 2 HAZARDOUS (CLASSIFIED) LOCATIONS - 9th Edition, Issue Date 2017/09/15.

Products designated CNL have been investigated using requirements contained in:

Standard No. 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- 3rd Edition - Issue Date 2017/09/15.

Note - USL - United States Standards Listed.

CNL - Canadian National Standards Listed.

All models of the UC20 u-control series shall comply with ordinary locations File E141197, issued date 2017-01-20, Programmable Controllers, covering for this manufacturer and with the following description. Should the above mentioned Procedure File be withdrawn, labeling under this Procedure must be discontinued until authorization to resume is received.

RATINGS:

Electrical ratings:

Model	Type	Main Input	Auxiliary Input / Output
UC20-WL2000-AC		Input voltage I port: DC 24V	Output voltage system bus: 5Vdc +/-2%
UC20-SL2000-EC			Output current at system bus at full load: 2.56A
UC20-SL2000-AC-EC			
UC20-SL2000-OLC-EC			
UC20-SL2000-OLAC-EC			
UC20-SL2000-EC-CAN			
UC20-SL2000-AC-EC-CAN			
UC20-SL2000-OLC-EC-CAN			
UC20-SL2000-OLAC-EC-CAN			
UC20-WL2000-IOT			
UC20-WL2000-AC-CAN			
UC20-WL2000-AC-EC			
UC20-WL2000-AC-EC-CAN			

Environmental ratings:

Ambient temperature range: $-20^{\circ}\text{C} \leq \text{Ta} \leq +55^{\circ}\text{C}$ for temperature code T4.

All models: For installation in Division 2: Horizontal mounting only.

MARKING:

The following markings shall appear on the device in addition to ordinary locations marking under File E141197, Reports dated 2017-01-20.

1. Listee name or File number
2. Catalog or Model number
3. Electrical ratings: Voltage, frequency and either amperes, volt-amperes, or watts
4. The month and year of manufacture or another suitable method, such as date coding or serial numbers
5. Designation of hazardous locations as indicated under "Product Covered".
6. Operating temperature as indicated under environmental ratings.
7. Ambient temperature range as indicated under "Environmental ratings".

INSTALLATION INSTRUCTIONS:

Installation Instructions are provided with each device and shall include the following in addition to ordinary locations marking under File E141197, Reports dated 2017-01-20.

This equipment is suitable for use in Class I, Division 2, Groups A, B, C and D OR non-hazardous locations only.

WARNING - EXPLOSION HAZARD - Do not disconnect equipment unless power has been removed or the area is known to be non-hazardous.

WARNING - EXPLOSION HAZARD - Substitution of any components may impair suitability for Class I, Division 2.

When installed in a Division 2 environment, the use of the buffer battery is forbidden.

Device is open-type and is to be installed in a tool-locked enclosure suitable for its environment.