ROCKWELL AUTOMATION PROCUREMENT SPECIFICATION

**PROCUREMENT SPECIFICATION**

**GuardLink**

**Integrated Smart Safety**

**Systems**

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GUARDLINK INTEGRATED SMART SAFETY SYSTEMS

1. GENERAL
   1. SUMMARY
      1. The GuardLink Integrated Smart Safety system shall contain all components required to meet the performance, protection, and certification criteria of this specification.
   2. CERTIFICATIONS/REFERENCES
      1. Manufactures shall be **certified to meet the IEC 62443-4-1 security standard and all products shall be developed in accordance with this standard. Certification shall be performed by an independent certification body (i.e. TUV Rheinland).**

**Example:**

<https://literature.rockwellautomation.com/idc/groups/literature/documents/ct/csm-ct001_-en-e.pdf>

* + 1. In-Cabinet (IP20) GuardLink Master shall meet the following certifications and approvals::
       1. c-UL-us
       2. CE
          1. EMC Directive 2104/30/EU

Low Voltage Directive 2014/35/EU

Machinery Directive 2006/42/EC

RoHS Directive 2011/65/EU, compliant with:

EN 61508

EN 62061

EN ISO 13849-1

EN 55011

EN 61000-6-2

EN 61000-6-7

EN 61326-3

* + - 1. ODVA
      2. RCM AS/NZS CISPR11
      3. KCC Article 58-2
  1. SUBMITTALS
     1. Drawings
        1. GuardLink Master Drawings shall include dimensional information
        2. GuardLink Enabled Device shall include dimensional information
     2. Product Data Sheets
        1. GuardLink Master Data Sheets
        2. GuardLink Enabled Device Data Sheets
     3. Product Mechanical Drawings and Models
        1. GuardLink Masters shall have published AutoCAD 2D Drawings and 3D STEP Models
        2. GuardLink Enabled Devices shall have published AutoCAD 2D Drawings and 3D STEP Models
     4. Test procedures shall be per the manufacturer’s standards.
  2. CLOSEOUT SUBMITTALS (OPERATION AND INSTALLATION MANUALS)
     1. Product Data Sheets
        1. GuardLink Master Data Sheets
        2. GuardLink Enabled Device Data Sheets
     2. Test procedures shall be per the manufacturer’s standards.
     3. Operation and Installation Data
        1. GuardLink Master Data Installation Instructions
        2. GuardLink Enabled Device Installation Instructions
  3. QUALITY ASSURANCE
     1. Qualifications:
        1. Suppliers:
           1. All inspection and testing procedures shall be developed and controlled under the guidelines of the supplier’s quality system and must be registered to ISO 9001 and regularly reviewed and audited by a third party registrar.
  4. DELIVERY, STORAGE AND HANDLING
     1. Supplier shall store the equipment in a clean and dry space at an ambient temperature range of -40°C to 85°C (-40°F to 185°F).
     2. The supplier shall protect the units from dirt, water, construction debris and traffic.
  5. WARRANTY
     1. The manufacturer shall provide their standard parts warranty for eighteen (18) months from the date of shipment or twelve (12) months from the date of being energized, whichever occurs first.
     2. This warranty applies to GuardLink Integrated Smart Safety Systems .

1. PRODUCTS
   1. MANUFACTURERS
      1. Allen-Bradley – 440R-DG2R2T GuardLink Safety Relay, 440R-ENETR Guardmaster Ethernet/IP Interface
   2. RATINGS
      1. In-Cabinet (IP20) GuardLink Master shall meet the following ratings:
         1. Isolation Voltage: 50V (continuous)
         2. Field power bus supply 20.4Vdc min.
         3. Field power bus supply 26.4Vdc max
         4. Input ratings: 24Vdc, 12mA
         5. Output ratings; per channel: 24Vdc, 4A
      2. The GuardLink Communication rate shall be:

57.6kB

* + 1. In-Cabinet (IP20) GuardLink Master shall be designed to operate in the following environmental conditions:
       1. Ambient temperature range:
          1. -5°C to 55°C (23°F to 131°F). Operating
       2. Relative humidity range: 0% to 90% non-condensing.
       3. Shock and vibration:
          1. Shock: 10g
          2. Vibration: 10...500 Hz
  1. CONFIGURATION/PROGRAMMING
     1. The GuardLink Integrated Smart Sensing Solution shall be configurable using:
        1. Studio 5000™ Logix Designer – This software, a single development environment for the entire control system, includes add-on profiles which minimize the need to individually program the required parameters and tags:
           1. Auto generation of descriptive tag names and respective tag data types.
           2. Single development environment – minimizes errors associated with multiple software tools.
           3. Configuring entire system from one environment – minimizes I/O mismatch errors.
           4. Auto browse capabilities to automatically discover devices connected to the masters to streamline device system integration
     2. With Studio 5000 software, the following data shall be stored in the project file and in the control system’s Programmable Automation Controller. This will allow configuration to be stored in the ACD file for Studio 5000 Logix Designer and will easily be recoverable in case of a GuardLink master and/or device failure.
        1. Device Output Status
        2. Master Event Timestamp
        3. GuardLink Masters shall be able to be flash-updated with ControlFlash
  2. COMMUNICATIONS
     1. The GuardLink Master shall be capable of communications through standard protocols, and EtherNet/IP shall be the preferred network.
        1. Through its Ethernet port, the GuardLink Master shall be capable of direct connection to a Programmable Automation Controller.
        2. Through its integral Ethernet port, the EtherNet/IP network is supported.
        3. The GuardLink Master Dual port EtherNet/IP will support Device Level Ring topology
  3. CONTROL I/O
     1. The GuardLink Master shall be capable of reading actual device output status and diagnostic information
     2. The GuardLink Master shall read condition levels in actual engineering units (Celsius, DC Voltage)
     3. The GuardLink Master shall send input time stamp to the Programmable Automation Controller upon change of state
  4. DIMENSIONS
     1. The In-Cabinet (IP20) GuardLink Master shall not be larger than 119.14mm x 22.5mm x 113.6mm x (H x W x D)
  5. INSTALLATION
     1. Installation shall be in compliance with all manufacturer requirements, instructions and drawings.

END OF SECTION