ROCKWELL AUTOMATION PROCUREMENT SPECIFICATION

**PROCUREMENT SPECIFICATION**

**OptixPanel™ Standard Operator Interface for**

**7-inch to 21.5-inch Displays**

**NOTICE:** The specification guidelines in this document are intended to aid in the specification of products. Specific installations have specific requirements, and Rockwell Automation does not recommend or intend any specific application based solely upon the guidelines provided here. Because of the variety of uses for this information, the user of, and those responsible for applying this information, are responsible for ensuring the acceptability of each application and appropriate use of the guidelines. In no event will Rockwell Automation be liable for misuse, misapplication or reliance on these guidelines in connection with any specific application. Rockwell Automation also disclaims indirect or consequential damages resulting from the use or application of this information.

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**TABLE OF CONTENTS**

[**PART 1 GENERAL** 3](#_Toc145072856)

[1.01 QUALIFICATIONS 3](#_Toc145072857)

[1.02 REFERENCES 3](#_Toc145072858)

[1.03 ENVIRONMENTAL REQUIREMENTS 3](#_Toc145072859)

[1.04 SUBMITTALS 3](#_Toc145072860)

[**PART 2 PRODUCTS** 3](#_Toc145072861)

[2.01 MANUFACTURER–GENERAL 3](#_Toc145072862)

[2.02 CONSTRUCTION–GENERAL 4](#_Toc145072863)

[2.03 DISPLAY FEATURES–GENERAL 4](#_Toc145072864)

[2.04 LOGIC FEATURES–GENERAL 4](#_Toc145072865)

[2.05 PROGRAMMING–GENERAL 5](#_Toc145072866)

[2.06 PROGRAMMING TECHNIQUES–GENERAL 5](#_Toc145072867)

[2.07 RATINGS–GENERAL 6](#_Toc145072868)

[2.08 OPERATOR TERMINAL–SPECIFIC 6](#_Toc145072869)

[**PART 3 EXECUTION** 8](#_Toc145072870)

[3.01 INSTALLATION 8](#_Toc145072871)

[3.02 INTERFACE WITH OTHER PRODUCTS 8](#_Toc145072872)

[3.03 CLEANING 8](#_Toc145072873)

[3.04 SPARE MATERIALS 8](#_Toc145072874)

1. **GENERAL**
	1. QUALIFICATIONS
		1. Manufacturer must:
			1. Specialize in manufacturing products specified in this section with minimum 20 years documented experience.
			2. Have service personnel available 24 hours per day through a toll-free phone number.
			3. Offer local standard and customized training courses.
		2. Supplier must be an authorized distributor of specified manufacturer with minimum three years documented experience.
	2. REFERENCES
		1. The operator interface terminal shall be designed to meet the following agency approvals:
			1. UL/cULs Listed: UL 61010-1, UL61010-2-201, CSA C22.2 61010-1, and CSA C22.2 61010-2-201.
			2. CE marked for applicable EMC directives.
			3. RoHS (UK, Europe).
			4. UKCA marked.
			5. RCM marked for use in continental Australia and New Zealand.
			6. KCC.
			7. ODVA Conformant.
	3. ENVIRONMENTAL REQUIREMENTS
		1. The enclosure rating shall be appropriate for the environment where the OptixPanel™ Standard is to be located.
		2. The supplier shall maintain the area free of dirt and dust during and after installation of products.
	4. SUBMITTALS
		1. The supplier shall provide catalog cut sheets.
2. **PRODUCTS**

Any general specifications (–GENERAL) are design requirements for all OptixPanel™ Standard models covered in this document. Design requirements specific to each model start in section 2.08 and are in addition to the general design requirements.

* 1. MANUFACTURER–GENERAL
		1. Shall be Allen-Bradley®, Model 2800S OptixPanel Standard Terminal.
		2. Substitutions are not permitted.
	2. CONSTRUCTION–GENERAL
		1. The operator interface terminal shall combine the display, and logic communication into one base unit in a fixed hardware configuration.
		2. The operator interface terminal shall be designed for the following environmental parameters:
			1. Operating temperature range of 0 to 50 °C (32 to 122 °F)
			2. Non-operating temperature range of -20 to +60 °C (-4 to 140 °F).
			3. Humidity range of 20 to 90% non-condensing.
		3. The operator interface terminal shall operate on a nominal 24VDC external power supply.
		4. The operator interface terminal shall be provided with clips for installing the display in the enclosure’s cutout. The clips shall compress the bezel gasket to form a permanent seal against the panel.
		5. The operator interface terminal shall be designed to provide free air flow convection cooling without a fan.
		6. The operator interface terminal shall have brandless options.
	3. DISPLAY FEATURES–GENERAL
		1. The operator interface terminal shall have:
			1. An analog-resistive or projective-capacitance, color Thin Film Transistor (TFT) LCD touch screen
			2. An LED backlight.
		2. Touch screen operator interface terminals shall have the entire display available for object usage.
		3. The operator interface terminal shall include status indicators for the following:
			1. Operator interface status.
			2. Ethernet link presence and activity.
			3. Factory reset status.
			4. RX and TX signal for COM interface
	4. LOGIC FEATURES–GENERAL
		1. The operator interface shall provide out-of-the-box connectivity for multiple “Logix” controllers and third-party controllers.
		2. The operator interface terminal memory shall have a minimum total capacity of:
			1. 4 GB of RAM memory.
			2. 64 GB of nonvolatile storage available for projects.
		3. The operator interface shall have a microSD card slot for use as both temporary storage (file transfers, system updates) and permanent memory expansion of the device.
		4. The operator interface terminal shall have two Universal Serial Bus (USB) 3.0 type-A host ports to support removable flash drives for:
			1. external storage.
			2. loading terminal firmware and user projects.
			3. exporting data logs or alarm history.
			4. the connection of keyboards and pointing devices.
		5. The operator interface terminal shall have two RJ45 Ethernet ports supporting gigabit ethernet (GbE) connectivity.
		6. The operator interface shall contain remote gateway capabilities, allowing remote access to other devices connected to the device using FactoryTalk® Remote Access™.
		7. The operator interface terminal shall have an isolated DB9M serial communication port with support for the following protocols:
			1. RS-232C
			2. RS-422
			3. RS-485
	5. PROGRAMMING–GENERAL
		1. The operator interface terminal shall run HMI projects developed in the FactoryTalk® Optix™ software environment and downloaded using removable memory or over VPN using FactoryTalk Remote Access.
		2. The operator interface terminal shall have pre-loaded plug and play capabilities with the FactoryTalk Optix software environment.
		3. The operator interface terminal shall be capable of being flash updated using FactoryTalk® Hub™ through an Ethernet and/or Virtual Private Network (VPN) network.
		4. The operator interface shall be capable of being updated and maintained from anywhere in the world with a connection to the cloud.
		5. The operator interface shall be capable of out-of-the-box connectivity with any OPC UA device.
		6. The operator interface shall support the MQTT (message queue telemetry transport) protocol.
	6. PROGRAMMING TECHNIQUES–GENERAL
		1. The design application shall be accessible using both a desktop application and a browser-based web tool.
		2. The design application shall allow for multiple users to collaborate on a single project in real time and contains version control to trace and track all changes to the project.
		3. The design application shall allow for development visually, without needing extensive coding experience.
		4. The design application shall have the capacity to develop the following high-performance features without cost:
			1. Responsive graphics.
			2. Multi-language support capabilities.
			3. Stylesheets to build consistent interfaces.
			4. Flexible containers.
			5. FactoryTalk® Vault™ and FactoryTalk® Hub™ integration.
			6. Connection to a single “Logix” controller.
			7. Automatic unit conversions.
			8. Full OPC UA support.
		5. The design application shall allow up to eleven of the following functionalities using feature tokens that come bundled with the device.
			1. OPC server.
			2. OPC client.
			3. Data logging with local database.
			4. HMI native graphic rendering.
			5. Connection to one or more third party controllers.
			6. Connection to two or more “Logix” controllers.
			7. Alarming.
			8. Event logging.
			9. Basic PDF reporting.
			10. Security with active directory.
			11. Recipes.
			12. ODBC connectors.
			13. HTML5 HMI graphic rendering.
			14. Audit signatures.
		6. Features not selected by the user will not be deployed to the terminal, thus reducing compute intensity, and boosting performance.
		7. If the user allocates all feature tokens bundled with the device and requires up to four additional features, they can purchase an upgrade kit through Rockwell Automation’s Software Ecommerce Portal.
		8. The design application shall allow for users to create and share C# libraries that add to the functionality of the operator interface terminal.
	7. RATINGS–GENERAL
		1. The operator interface terminal shall be able to withstand:

|  |  |
| --- | --- |
| Vibration (7- to 21.5-inch models) | 10 – 57 Hz, 0.3048 mm peak-to-peak displacement;57 – 500 Hz, 2 g peak acceleration |
| Altitude, Operating | 2000 m (6561 ft) |
| Shock, Operating | 15 g at 11 ms |
| Shock, Non-operating | 30 g at 11 ms |

* + 1. The operator interface terminal shall have enclosure ratings of NEMA/UL Type 1, 4X (Indoor use only), and IP65 as classified by UL.
	1. OPERATOR TERMINAL–SPECIFIC
		1. 7-INCH WIDESCREEN DISPLAY
			1. The operator interface terminal shall be Allen-Bradley® Series 2800S, OptixPanel Standard.
			2. The cutout area shall be 196 mm wide by 140 mm high (7.72 x 5.51 inch).
			3. The operator display/input shall be a color graphic display with touch screen.
			4. The 7-inch widescreen display unit shall be available with an optional projective capacitance (PCAP) touchscreen with gesture control.
		2. 10.1-INCH WIDESCREEN DISPLAY
			1. The operator interface terminal shall be Allen-Bradley Series 2800S, OptixPanel Standard.
			2. The cutout area shall be 255.5 mm wide by 174 mm high (10.06 x 6.85 inch).
			3. The operator display/input shall be a color graphic display with touch screen.
			4. The 10.1-inch widescreen display unit shall be available with an optional 316 stainless-steel bezel which is rated for IP69K ingress protection with a field-replaceable gasket.
			5. The 10.1-inch widescreen display unit shall be available with an optional projective capacitance (PCAP) touchscreen with gesture control.
		3. 10.4-INCH DISPLAY
			1. The operator interface terminal shall be Allen-Bradley Series 2800S, OptixPanel Standard.
			2. The cutout area shall be 283 mm wide by 219 mm high (11.14 x 8.62 inch).
			3. The operator display/input shall be a color graphic display with touch screen.
			4. The operator display shall be available with an optional display that sits flush with the bezel.
		4. 12.0-INCH DISPLAY
			1. The operator interface terminal shall be Allen-Bradley Series 2800S, OptixPanel Standard.
			2. The cutout area shall be 315 mm wide by 250 mm high (12.40 x 9.84 inch).
			3. The operator display/input shall be a color graphic display with touch screen.
			4. The operator display shall be available with an optional display that sits flush with the bezel.
		5. 12.1-INCH WIDESCREEN DISPLAY
			1. The operator interface terminal shall be Allen-Bradley Series 2800S, OptixPanel Standard.
			2. The cutout area shall be 301 mm wide by 203 mm high (11.85 x 7.99 inch).
			3. The operator display/input shall be a color graphic display with touch screen.
			4. The 12.1-inch widescreen display unit shall be available with an optional 316 stainless-steel bezel which is rated for IP69K ingress protection with a field-replaceable gasket.
			5. The 12.1-inch widescreen display unit shall be available with an optional projective capacitance (PCAP) touchscreen with gesture control.
		6. 15-INCH DISPLAY
			1. The operator interface terminal shall be Allen-Bradley Series 2800S, OptixPanel Standard.
			2. The cutout area shall be 380 mm wide by 295 mm high (14.96 x 11.61 inch).
			3. The operator display/input shall be a color graphic display with touch screen.
			4. The operator display shall be available with an optional display that sits flush with the bezel.
		7. 15.6-INCH WIDESCREEN DISPLAY
			1. The operator interface terminal shall be Allen-Bradley Series 2800S, OptixPanel Standard.
			2. The cutout area shall be 388 mm wide by 238 mm high (15.28 x 9.37 inch).
			3. The operator display/input shall be a color graphic display with touch screen.
			4. The 15.6-inch widescreen display unit shall be available with an optional 316 stainless-steel bezel which is rated for IP69K ingress protection with a field-replaceable gasket.
			5. The 15.6-inch widescreen display unit shall be available with an optional projective capacitance (PCAP) touchscreen with gesture control.
		8. 18.5-INCH WIDESCREEN DISPLAY
			1. The operator interface terminal shall be Allen-Bradley Series 2800S, OptixPanel Standard.
			2. The cutout area shall be 453 mm wide by 274 mm high (17.83 x 10.79 inch).
			3. The operator display/input shall be a color graphic display with touch screen.
			4. The 18.5-inch widescreen display unit shall be available with an optional 316 stainless-steel bezel which is rated for IP69K ingress protection with a field-replaceable gasket.
			5. The 18.5-inch widescreen display unit shall be available with an optional projective capacitance (PCAP) touchscreen with gesture control.
		9. 21.5-INCH WIDESCREEN DISPLAY
			1. The operator interface terminal shall be Allen-Bradley Series 2800S, OptixPanel Standard.
			2. The cutout area shall be 520 mm wide by 312 mm high (20.47 x 12.28 inch).
			3. The operator display/input shall be a color graphic display with touch screen.
			4. The 21.5-inch widescreen display unit shall be available with an optional 316 stainless-steel bezel which is rated for IP69K ingress protection with a field-replaceable gasket.
			5. The 21.5-inch widescreen display unit shall be available with an optional projective capacitance (PCAP) touchscreen with gesture control.
1. **EXECUTION**
	1. INSTALLATION
		1. The supplier shall install in accordance with manufacturer’s instructions.
		2. The supplier shall unload, unpack, and transport equipment to prevent damage or loss.
		3. The supplier shall replace damaged components as directed by engineer.
		4. The equipment shall be protected from dust and other harmful materials.
	2. INTERFACE WITH OTHER PRODUCTS
		1. The supplier shall provide all required cables, cords, and connections for interface with other control system components.
		2. The supplier shall coordinate size and configuration of enclosure to meet project requirements.
	3. CLEANING
		1. The supplier shall clean units as recommended by manufacturer.
	4. SPARE MATERIALS
		1. For each size operator interface terminal being installed, the supplier shall provide:
			1. Real-time clock replacement battery.

END OF SECTION