

Product Agency Approvals, Standards, and General Specifications for the OCS Product Line*

These products are global products, which are designed and manufactured for applications in industrial environments throughout the world. They need to be installed and used in conformance with product specific guidelines. The Control Station Product Line, including OCS, MiniOCS, RCS, and SmartStack I/O, have been tested to the following approvals and standards:

Agency Approvals Overview

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|---|----------------------------|--|
| Safety for Industrial Control Equipment | UL/CUL | Certification by Underwriters Laboratories |
| Safety for Hazardous Locations Class I, Div II, Groups A, B, C, D | UL/CUL Hazardous Locations | Certification by Underwriters Laboratories |
| FCC Electromagnetic Compatibility | FCC, 47 CFR Part 15 | Verification of Class A/B Digital Devices |
| European Electromagnetic Compatibility and Low Voltage Directives | CE Marking** | Certification by Self Declaration for EMC and LVD Directives for selective modules |

Standards Overview

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|-------------------------|------------------------|--|
| Environmental | | |
| Vibration | IEC 68-2-6 | 1G @ 57-150Hz, 0.012in p-p @ 10-57Hz |
| Shock | IEC 68-2-27 | 15G, 11ms |
| Operating Temperature | | 0°C to 60°C for all products except Mini OCS which is 0°C to 50°C |
| Storage Temperature | | -40°C to +85°C |
| Humidity | | 5% to 95%, non-condensing |
| Enclosure Protection | NEMA 250 | Design Criteria for protection from dust and splashing water to NEMA 4 and 12 for most products. Additional design criteria for protections from corrosion to NEMA 4X for Mini OCS. |
| EMC Emissions | EN 50081-2 | Industrial, Scientific, and Medical |
| Radiated/Conducted RF | EN 55011 ANSI C63.4 | Industrial, Scientific, Medical Group 1. FCC, 47 CFR Part 15 for Digital Devices. All products meet Class A, some Class B. |
| EMC Immunity | EN 61000-6-2 | Applies to CE Marked modules |
| Electrostatic Discharge | EN 61000-4-2 | 8kV Air, 4kV Contact |
| RF Susceptibility | EN 61000-4-3 | 10V/m, 80MHz to 1GHz, 80% AM |
| Fast Transient Burst | EN 61000-4-4 | ±2KV: power ports, ±1KV I/O and communications ports |
| Surge | EN 61000-4-5 | ±0.5KV DC power ports ±1KV I/O ports ±2KV AC power ports |
| Conducted RF | EN 61000-4-6 | 10V, 150KHz to 80MHz, 80% AM |
| Product Safety | | |
| | UL 508 | Industrial Control Equipment |
| | UL 1604 | Hazardous Locations |
| | EN 61131-2 | Low Voltage Directive 73/23/EEC |
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* All OCS products are evaluated against this list of agency approvals and standards. All products meet the minimum criteria required for the agency marking applied. Some products are subjected to levels above those required and some exceed minimum performance criteria specified. Specific test limits and performance data, above those required, are generally not published but are available on a product by product basis.

** **Negative Logic (current sinking) Outputs.** European Union guidelines do not allow negative logic output products to bear the CE marking. This EU safety policy precludes otherwise perfectly safe products from sale within that market. However, we still design all our negative logic products to meet the same levels of safety, quality, and reliability as the remainder of the OCS product line. To this end, we subject all negative logic output products to the same standards as other products, but do not affix the CE marking to them.