

Life Is On

Schneider
Electric

Optimize maintenance cost with Harmony, obviously!

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What if your production line stopped because of a single pushbutton?

Imagine the operating loss that may induce the failure of the operator control of your equipment, which nevertheless represents less than 1% of its cost.

John is the captain of the container ship "God of seas." Yesterday a problem occurred on the dashboard of the boat: The pilot light indicating the good status of the overall electric power supply of the boat switched off. Panic on board! This case would normally trigger a security procedure leading to detention of the ship.

The ship owner is clear with John, every delay costs €100,000 per hour. In fact the maintenance department quickly understood the origin of the fault: The power supply was not in question; it was the light indicator bulb that had broken down.



John took it upon himself to wait until the next stopover to fix the problem while calling the service maintenance to maintain an on-call officer 24/7 to monitor the functioning of the power supply. But in doing so he was not fully meeting the safety procedures.

Docked at the port, while scheduled charging was operated, the maintenance manager found a Schneider Electric distributor close to the port that had a replacement LED light in stock with much less chance of having a failure and that cost only a few Euros.



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John was able to start right away — but he did more. He replaced all the pilot lights on the ship dashboard with LED versions that are much more reliable and easier to stock so the ship would never be unprepared.

How could he explain to the ship owner that it would take several days to correct the fault of a single indicator light? Even for a simple device such as a pilot light or a pushbutton, quality and availability are very important

In industry, there is usually a loss of productivity that can exceed 10% due to industrial equipment failures. This is a very important source of economy: To reach this deposit, a sum of precautions must be in place and we must think of every eventuality including the failure of the operator dialogue devices.

Installation stopping because of a banal pilot light or pushbutton is infuriating; a few simple rules can avoid this.

To limit these cases there are not thousands of solutions, but rather three that can be combined:

1. You have to use reliable, high-quality components to minimize the occurrence of failures (failure prevention)
2. We can provide preventive maintenance by replacing a priori devices that may fail (preventive maintenance)
3. You can set up a highly reactive organization to minimize downtime (reactive maintenance)

Today, on average, we know that 30% of maintenance operations are preventive and 70% reactive, but the cursor moves increasingly toward preventive whose profitability is well proven because the cost of a pushbutton switch is very small compared to the potential operating losses.

The **modular range Harmony™ diameter 22** can play optimally on three levers:

1. Harmony: The most reliable on the market — The Harmony range is developed and qualified to achieve the highest possible level of reliability. Our laboratories use the endurance testing standards and robustness to harshest industrial environments.
And our electrical endurance tests are done after component aging.

Harmony range is certified and approved for meeting requirements throughout all continents: EN/IEC, CE marking, UL, CSA, CCC, EAC, JIS, etc., which allows easy exportation of panels and machines using these products in any country around the world. Harmony range also includes emergency stop buttons compliant to higher safety standards, including IEC 60947-5-5.



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The Harmony range is certified for use in severe environments, for example in marine applications with the main worldwide certifications: Lloyd's, BV, DNV/GL. In addition, our laboratory is accredited by UL to certify our products, which means that the high expectancy quality requirements from this well-known independent organism are integrated into the product conception from day 1. Our laboratory is also in charge of validating that Harmony products respect the very strict internal quality requirements of Schneider Electric; for example, for the well-known hammer test of emergency stop buttons, we test our metal products with an impact more than 2.5 times stronger than the 4.9J required by the standards.

We are still improving this strength in offering reinforced waterproof solutions (IP66, 67, 69, and 69K), extending the We are still improving this strength in offering reinforced waterproof solutions (IP66, 67, 69, and 69K), extending the temperature operating range to -40 °C to 70 °C. These improvements not only allow Harmony to be installed in harsher environments, but also guarantee a higher lifetime.

Other unique features are limiting failure rates:

- Special design that eliminates the retightening campaigns for Harmony screw terminals, which are frequently forgotten. This is a good way not to be confronted with a loss of electrical continuity.
 - A complete range of electrical contacts, which covers a very wide range of uses, including standard blocks with high electrical reliability guarantee, power blocks, and gold contacts blocks for low level
 - Electrical contacts hooks with metal locks (including plastic versions)
 - Snap mounting bases by metal clips (including plastic versions)
 - Wide range of protective accessories (not only for product heads in front face, but also for the protection of contacts in the electrical cabinet)
2. With Harmony, you get the tools to optimize your preventive maintenance — Each component's expected lifetime is specified, expressed in "lambda," guaranteed number of operations, or mean time to failure.
 - These periods are generally much higher than the lifetimes of equipment or machinery.
 - But if necessary, to avoid any loss of business, it is cost effective to replace the most proven elements. By comparing the actual conditions of use of the products to these specifications customers can implement a preventative maintenance of good quality.
 - Furthermore, the Schneider Electric™ field service teams can help you make the diagnosis of the installed base to determine the critical equipment to replace preventively or spare parts collections to store in your factories.
 3. With Harmony, limit as much as possible the time to repair of your equipment — Schneider Electric and Harmony offer you faultless support in reactive maintenance materials:
 - With a strong distribution network 17000 outlets in the world, you can find the products to be replaced available near your plant. A "Distributor Locator" is available to find our closest distributors to your industrial facilities.
 - Because of its modular design and the wide application market coverage (also recently strengthened by the extension of the waterproofness characteristics, operating temperature range, and the addition of new features such as timer, connectors USB or RJ45, flush mounting kits, etc.), the Harmony range ensures you can repair with a reduced number of spare parts (stored by our distributors or in your own maintenance stock).

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- We design our own products — and are still the pioneers in this — so they can be mounted in the shortest operating time possible in our customers' facilities. This is advantageous to reduce the cost of machinery and equipment manufacturing, but also to minimize machine downtime.
- Do not waste time searching the component references you miss. Harmony is associated with all efficient research tools you need:
- Electronic catalogs and product selectors (Digi-cat tool)
- Product equivalent research tool for major brands
- Product equivalent research between old Schneider Electric pushbutton ranges and Harmony
- Access to documents and information for product commissioning
- The Customer Care Center (with the “mySchneider mobile apps) and Schneider Electric field service teams are at your side to support you.

Digi-cat

<http://digi-cat.schneider-electric.com/download.html>

Easily find detailed information about our products.

Get 7000 pages of Automation and Industrial control catalogs in one download.

Digi-Cat:

- Is a license-free tool, able to work online and offline
- Gives you access to catalogs in three clicks
- Keeps you informed about updates
- Takes advantage of digital features to facilitate your selection and get direct access to product technical data

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