

SIEMENS

Ingenuity for life



Engineered with TIA Portal

SIPLUS extreme: Durable and robust

Automation and drive technology
for extreme ambient conditions

[siemens.com/siplus-extreme](https://www.siemens.com/siplus-extreme)

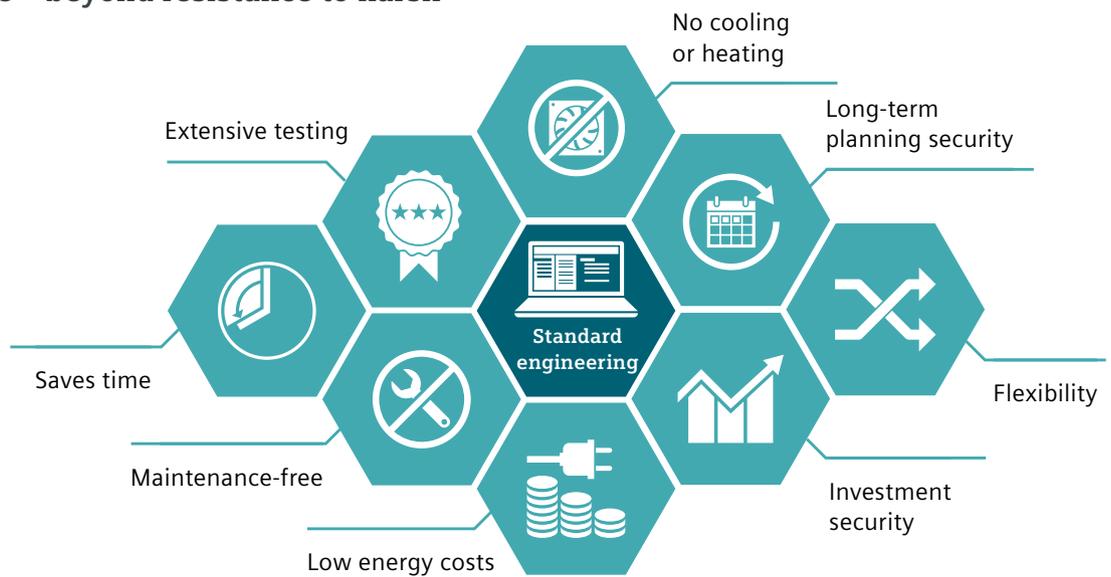
System benefits at a glance

SIPLUS extreme upgrades the advanced automation and drive components from Siemens.

- **Dependability**
No maintenance, thanks to extensive testing of SIPLUS extreme.
- **Energy efficiency**
No additional heating/cooling is necessary, reducing energy costs and increasing climate protection.
- **Standard engineering**
Consistent data storage, thanks to seamless integration into the TIA Portal Engineering Framework.
- **Certification**
Extensively tested for toxic gases, sand and dust, biological substances in a test lab accredited in Germany, or certified by the TÜV technical inspection association for fail-safe applications.



SIPLUS extreme – beyond resistance to harsh environments



Extensive testing

To ensure that the SIPLUS extreme products are fully operational even under the harshest ambient conditions, they undergo numerous tests under high-load and corrosive conditions. They are added to the product family only after passing these tests.

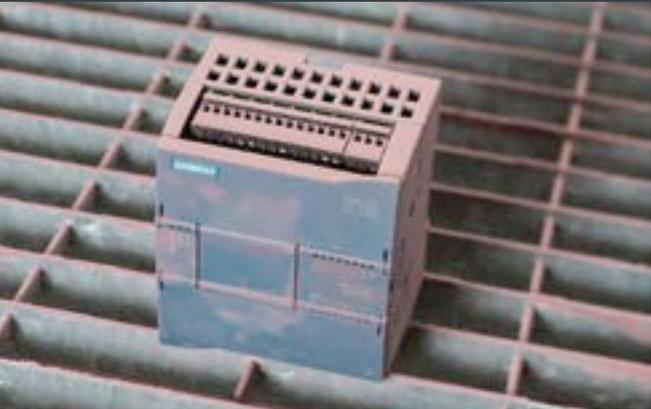
Condensation



Expanded range of temperatures, including icing



Mechanical loads



Chemically and biologically active substances



Videos about the SIPLUS extreme test methods are available on our website



NEW: SIPLUS extreme – dependable protection against dendrite and corrosion. Relative humidity and temperature changes as well as toxic gases can cause condensation, leading to short circuits. Learn all about the resistance of our SIPLUS extreme products online: [siemens.com/siplus-extreme](https://www.siemens.com/siplus-extreme)

SIPLUS extreme – fully tested

Test area/standard			SIPLUS extreme	Siemens Industrie Standard
	Temperature EN 60068-2-2 EN 60068-2-14	Ambient	-40/-25...+60/+70 °C*	0 °C – 55 / 60 °C
		Operation	-40/-25...+60/+70 °C*	0 °C – 55 / 60 °C
	Condensation EN 60068-2-38	Relative humidity	100% RH + condensation + icing	10 to 95% without condensation
	Salt mist EN 60068-2-52	Tested	Severity 3 offshore area	SL
	Mechanical substances EN 60721-3-3	Class	3S4	3S2 (without sand)
		Suspended matter content	4.0 mg/m ³	0.2 mg/m ³
		Precipitation	40 mg/(m ² *h)	1.5 mg/m ³
	Chemical substances EN 60721-3-3	Class	3C4	3C2
		Tested substances	SO ₂ , H ₂ S, Cl, HCl, HF, NH ₃ , O ₃ , NO _x	SO ₂ , H ₂ S at low concentration
	Biological substances EN 60721-3-3	Class	3B2	–
		Tested substances	Mold and fungal spores	SL
	Installation altitude	Height	3000 – 5000 m* 658 – 540 hPa 2000 – 3500 m 795 – 658 hPa	2000 m
		Derating	20 K	SL
	Mechanical load EN 50125-1 *	Vibration	1 g / to 200 Hz	1 g / to 200 Hz
		Shock	15 g / 11 ms	15 g / 11 ms

* only for certain products



Control Cabinet for indoor and outdoor use

Applications with SIPLUS extreme operate smoothly under all conditions – without any cooling or heating systems. The field installation for cabinets with SIPLUS extreme products are EN 60721-3-3 conform.

Fit for use under extreme conditions

Production automation

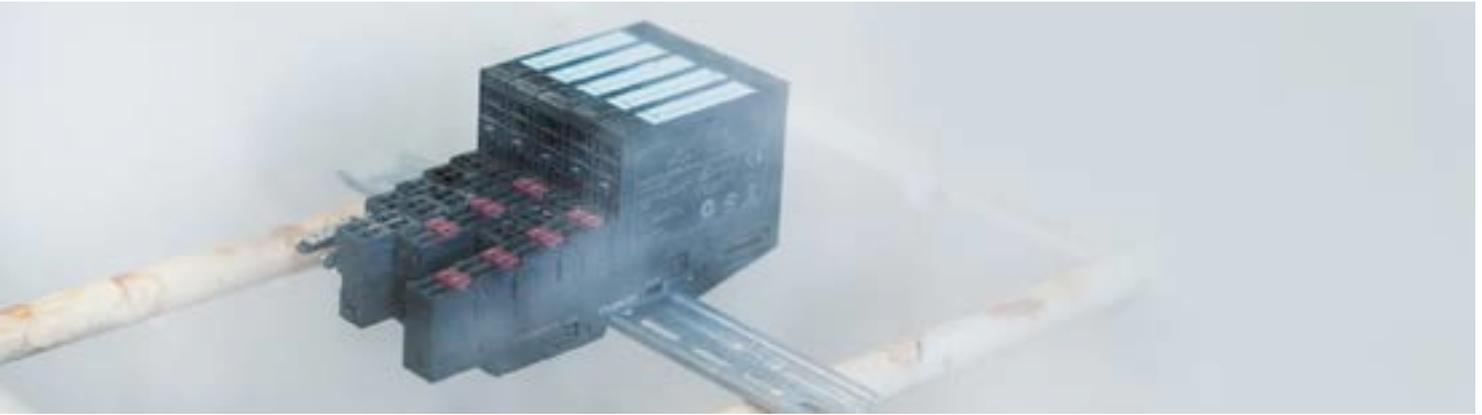
In production automation, SIPLUS extreme components are used for special machinery and other purposes, ranging from meat processing to toxic atmospheres in tire production to cooling logistics.

- Textile machines
- Tires
- Wood processing
- Processing industry
- Logistics
- Food and beverage
- Packaging systems

Many industries require technologies that resist heat and cold, gases and moisture in routine industrial situations and operate reliably and dependable. They all benefit from SIPLUS extreme products, which can be handled just like any standard Siemens product but withstand a lot more stress.



Please visit:
[siemens.com/siplus-extreme](https://www.siemens.com/siplus-extreme)



Hybrid industries

In the hybrid industries, there are many applications in which SIPLUS extreme's weather resistance pays off, such as railway signaling systems and sports and recreation facilities.

- Special vehicles
- Trains
- Cranes
- Tunnels
- Wind power

Process automation

Process automation makes versatile use of SIPLUS extreme technologies in a wide range of fields. Stand-alone maritime solutions, cooling systems for converters and gas distribution systems all use the many benefits of the coating.

- Minerals
- Water and wastewater
- Oil and gas
- Marine
- Cement
- Seawater desalination
- Mining
- Pulp & paper



For more information, please visit:

[siemens.com/siplus-extreme](https://www.siemens.com/siplus-extreme)

Learn all about SIPLUS extreme:

- Videos on test methods for SIPLUS extreme
- Overview of typical industries that use SIPLUS extreme
- Conversion tool that lets you quickly find standard and SIPLUS extreme products

Want to switch from a standard to a SIPLUS extreme product?

Use the conversion tool!

**Find out more
about SIPLUS
extreme!**



Follow us on:

twitter.com/siemensindustry

youtube.com/siemens

Published by
Siemens AG 2016

Digital Factory
Factory Automation
P.O. Box 48 48
90026 Nuremberg, Germany

Article No. DFFA-B10094-01-7600
Dispo 46371
80386 BR 05161.5
Printed in Germany

Subject to changes and errors. The information provided in this document contains descriptions or characteristics of performance which in case of actual use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract.

SIPLUS extreme and Siemens Industrie Standard are registered trademarks of Siemens AG. They may not be used without authorization. All other designations in this document may be trademarks whose use by third parties for their own purposes may violate the rights of the trademark holders.

For more information, please visit:
[siemens.com/siplus-extreme](https://www.siemens.com/siplus-extreme)