

5 STEPS TO

CHOOSING THE RIGHT TRANSFORMER



SOUTHERN ELECTRONIC SERVICES
Custom Transformers

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"MEASURE TWICE, CUT ONCE."

A TIMELESS REMINDER TO PLAN CAREFULLY BEFORE MAKING DECISIONS.

Choosing the right transformer is crucial to ensuring efficiency, reliability, and long-term performance in any electrical system. The right choice will minimize downtime, reduce costs, and ensure compliance with industry standards. Here's how to make the right decision in five simple steps.



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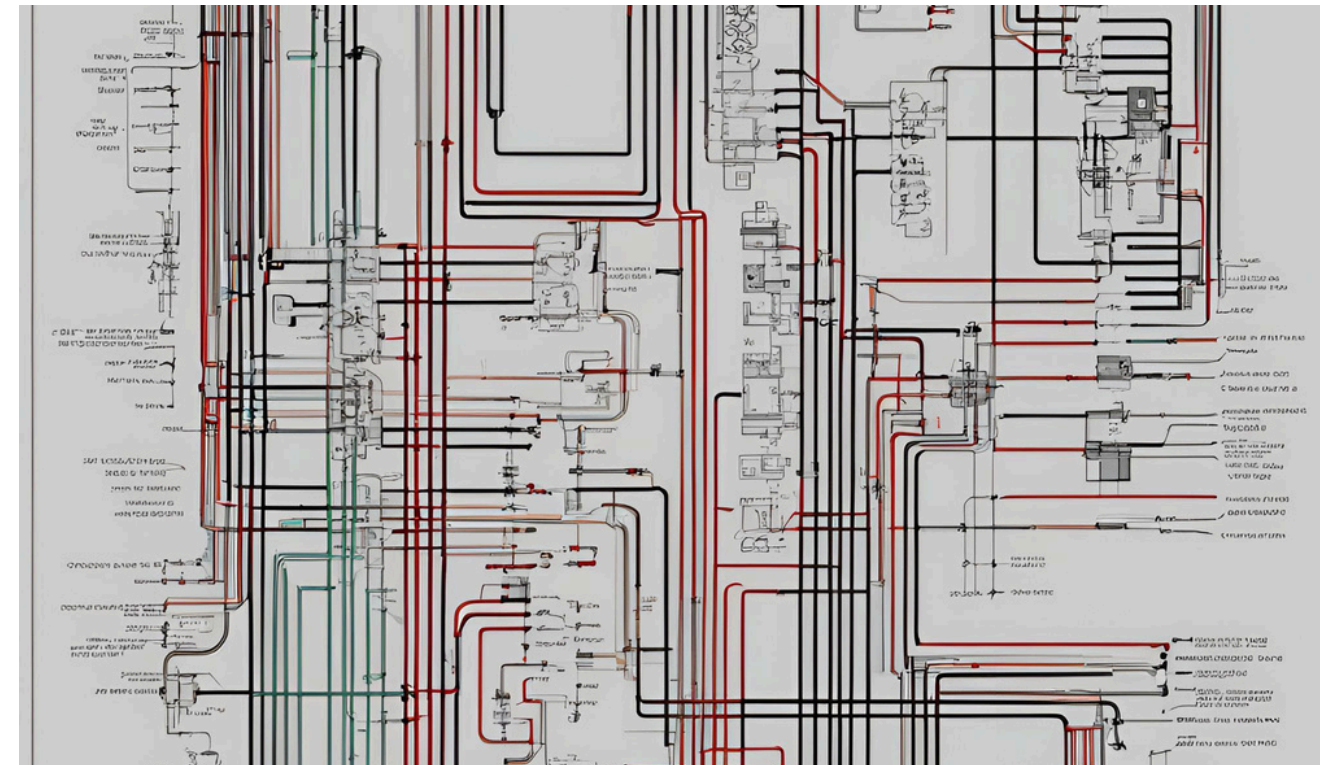
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STEP 01 | DEFINE YOUR ELECTRICAL NEEDS



"Do it right the first time."

A timeless reminder to plan carefully before making decisions.

Start by identifying the specific electrical requirements of your project. Proper assessment ensures your transformer is sized accurately to meet both current and future needs.

LOAD DEMANDS

Typically measured in kVA (kilovolt-amperes), though they are often referred to in amps or kW. SES can assist in calculating the appropriate kVA rating based on your required Amps, kW, or even horsepower.

INPUT & OUTPUT VOLTAGES

Clearly define your input supply and output voltage requirements, while considering external factors that may impact potential voltage variations that may affect performance.

FUTURE PROOF YOUR PROJECT

Consider the project's future. Is the current required load sufficient for any foreseeable increases in demand?



Understanding transformer specifications is crucial to ensuring optimal performance. Not only will this ensure accurate performance, this ensures your equipment, project, and personnel are safe.

ISOLATION VS AUTO

Determine whether your application requires electrical isolation. Isolation transformers protect sensitive equipment by separating the input from the output. Whereas a standard autotransformer is smaller and more cost-effective, and may suffice when isolation isn't critical / already provided in the existing circuit.

ADDITIONAL FEATURES

Consider whether your transformer requires any additional functionality / protection. Common features include Primary $\pm\%$ tapplings and electrostatic shields.

STANDARDS

Ensure you understand the regional and industry-specific requirements of the project, ensuring that you advise the supplier of these, providing specification numbers and details.

“The difference between something good and something great is attention to detail.”

The installation environment is a crucial factor in transformer selection. Ensuring the correct transformer and enclosure type for the intended installation environment maximizes performance and extends the lifespan of the transformer.

INDOOR

For indoor applications, an IP23 enclosure is typically sufficient and provides protection against solid objects over 12.5mm and vertical water droplets. They allow air to flow freely in and around the transformer.

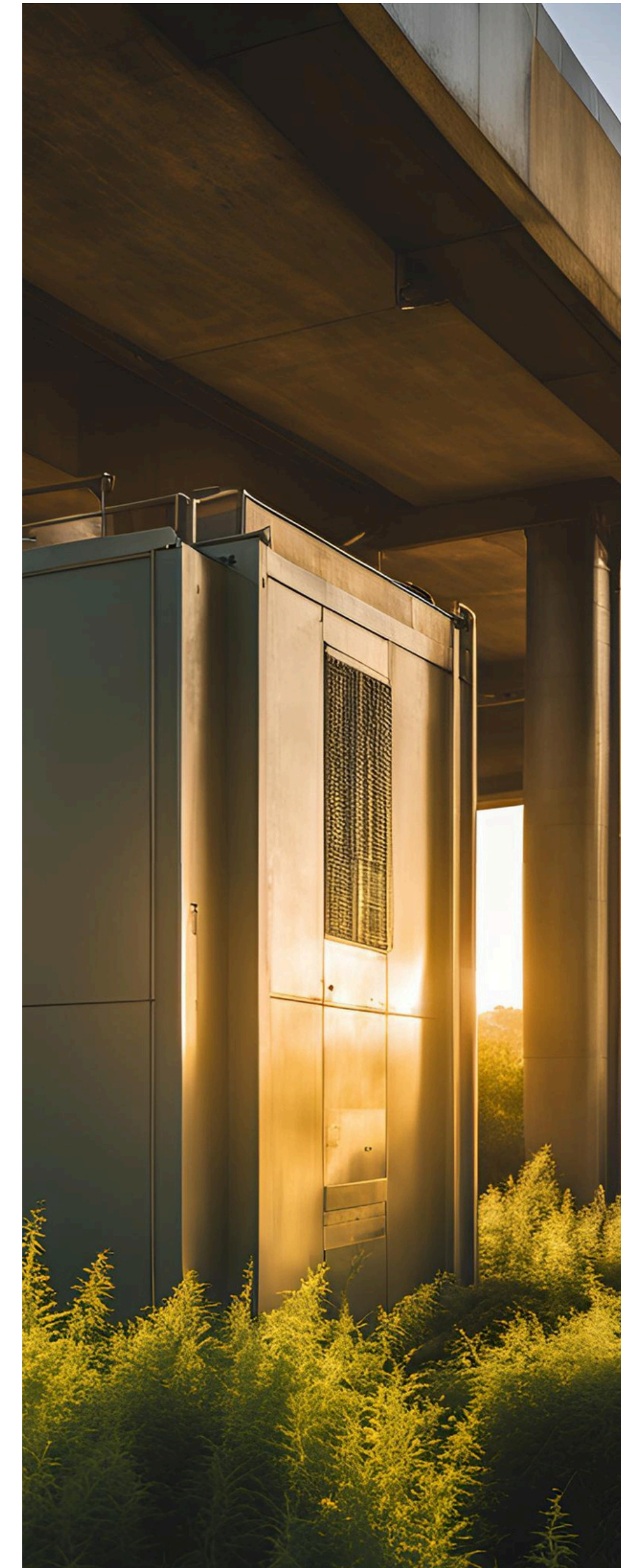
OUTDOOR

An IP65 enclosure is ideal for outdoor installations as it offers dust-tight and high level water-resistance. These may restrict heat dissipation due to its sealed design, and are typically larger than IP23 equivalents.

OTHER FACTORS

Some installations call for more specific protection. Eg. food production facilities may require stainless steel enclosures. Some industries, such as some rail applications, call for transformers to be isolated from its enclosure. Elevation can also cause transformers to perform differently, so ensure you advise supplier of any particulars.

"Environment shapes performance; adapt wisely."



A high-quality transformer ensures long-term reliability and safety.

A well-made, high quality transformer should perform for well over 25 years under normal operation and rated load.

MATERIALS

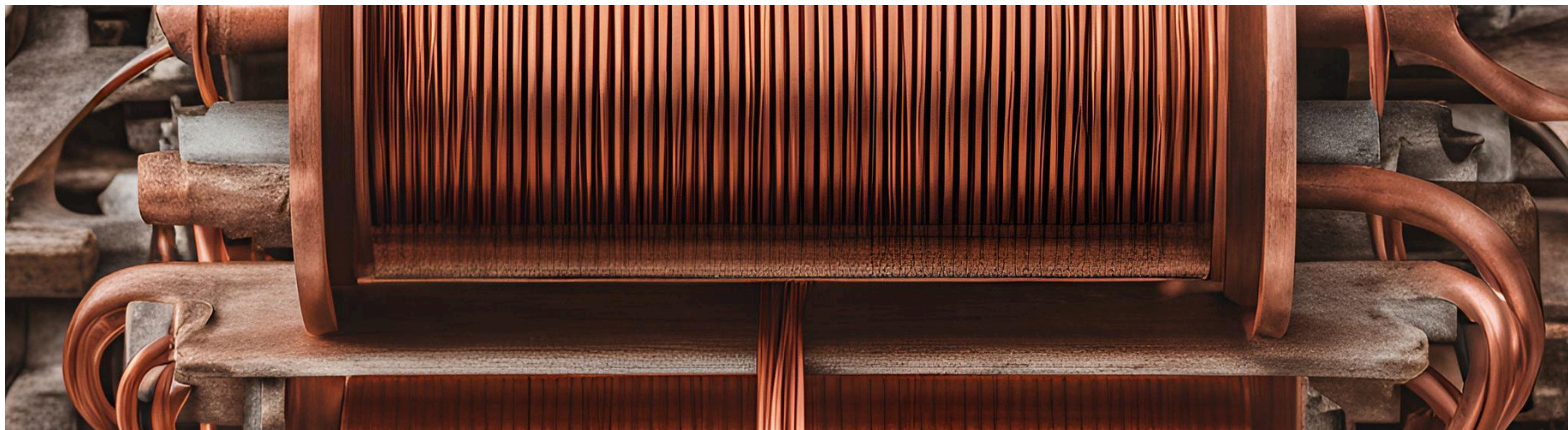
Look for transformers manufactured with premium materials. Insulation is the most critical factor to your transformer's longevity, whereas the winding and core material can impact the efficiency of the transformer in operation.

STANDARDS

There are standards that all transformers should adhere to. Then , there are industry-specific regulations that go above and beyond those Standards. Understanding these, and advising your supplier of these will ensure you get an appropriate transformer for your application.

SUPPLIERS

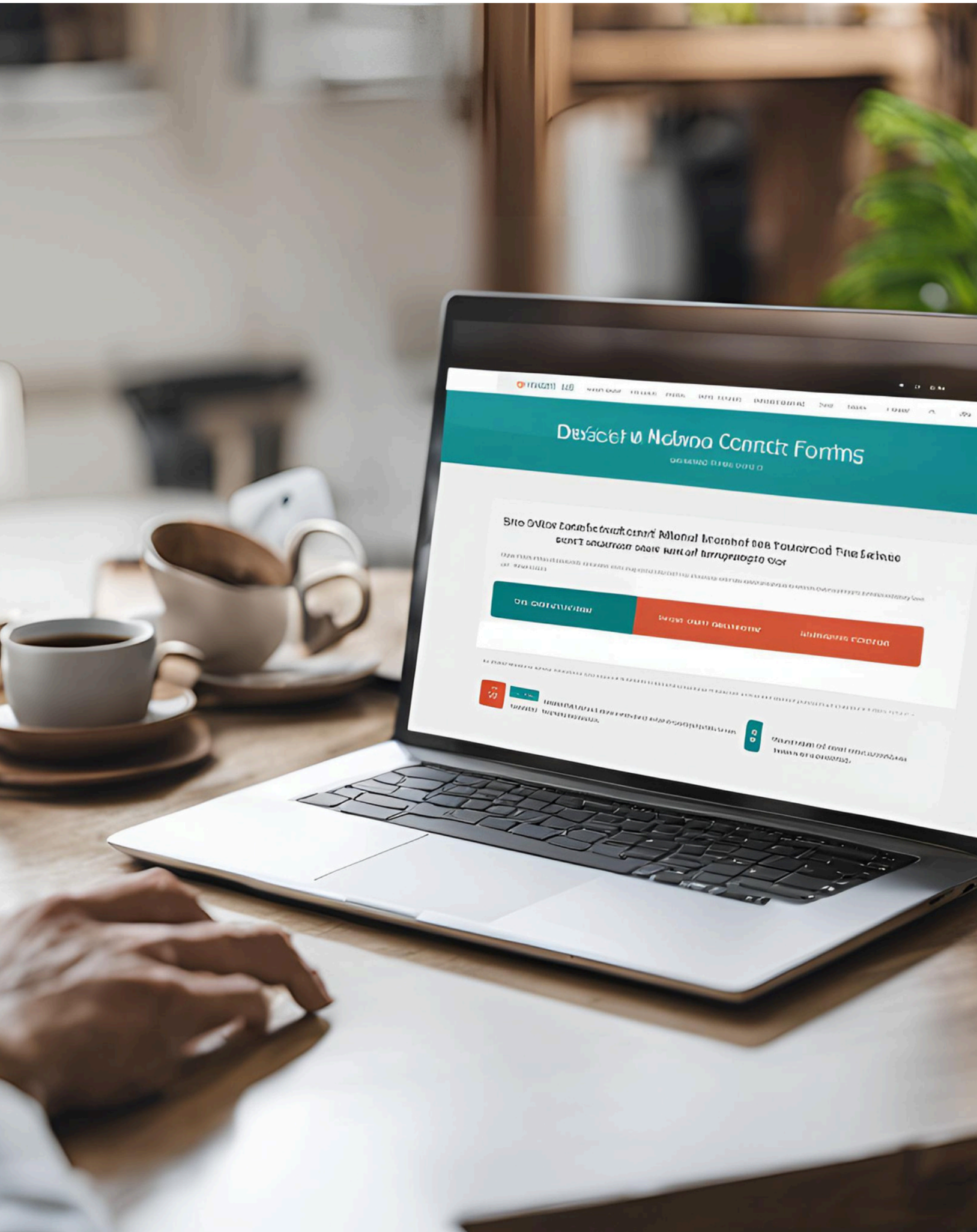
Choose a supplier that provides excellent technical support, reliable customer service, and a strong industry reputation. They should be able to provide schematics, GA's, Test Reports and Certificates of Compliance upon request for your specific transformers.



"Quality means
doing it right
when no one is
looking."
- Henry Ford

STEP 5 |

MAKE AN INFORMED DECISION



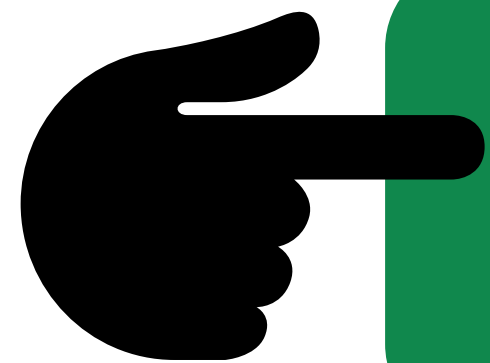
WEIGHING SPECIFICATIONS, ENVIRONMENTAL FACTORS, SUPPLIER CREDIBILITY.

After gathering all necessary information, compare technical specifications, environmental factors, and supplier reputations against your budget.

Making an informed decision ensures that your transformer will meet both immediate and long-term operational goals. A comprehensive approach reduces risks, enhances efficiency, and positions your project for sustained success.

By defining your electrical needs, researching technical specifications, considering environmental factors, evaluating quality and supplier support, and making an informed decision, you can confidently select the right transformer for your project. These steps ensure your installation remains safe, efficient, and reliable.

“be informed - knowledge is power”



GET IN TOUCH

FOR HIGH-QUALITY TRANSFORMER SOLUTIONS BACKED BY INDUSTRY EXPERTISE, **CONTACT SES TODAY** AND LET US POWER YOUR NEXT PROJECT WITH PRECISION AND RELIABILITY.



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