BENEFITS.

○ **Cost reduction**: signal condition and galvanic isolation in one device, a separator isolator is unnecessary

○ **More signals**: optional second output for integration into displays, PLCs or end devices for data acquisition

○ **High signal quality**: flexible interference suppression with replaceable filter modules

○ **Speed**: limit frequencies of up to 30 kHz possible

○ **Precision**: high precision and long-term stability

○ **From a single source**: modules available for most analogue sensor signals

○ **Special requests**: tailored solutions possible, even in small quantities

○ **Service-friendly**: plug-in connection terminals ensure easy installation

○ **User-friendly**: no software necessary — plug & play

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**TSA module areas of application**

○ signal condition and conversion of standard signals

○ 3-way isolation

○ replaceable filter modules for each channel

○ power supply via T-bus or front terminal

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**Application examples**

○ test stands for machine construction and the automotive industry

○ status monitoring of machines and systems

○ monitoring of status changes

○ monitoring of wind turbines

○ actuation of servo valves

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We look forward to your enquiry:
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**Pure Analog.**

Signal conditioning with the TSA modules.
Standard modules
- detection of voltage, current, DMS bridges, potentiometers, Pt100, thermocouples, ICP® and IEPE sensors
- conversion of different sensor signals to standard signals
- 3-way isolation
- replaceable signal filters
- amplification and linearization
- sensor feed and bridge extension
- optional second output with dedicated filter

Two-channel modules
Two-channel isolating amplifiers for ICP®/IEPE sensors and standard signal

ICP®/IEPE areas of application
- signal conditioning of piezo electric sensors
- 3-way isolation
- replaceable filter modules for each channel
- switchable amplification
- integrated sensor feed
- disengage-able AC coupling
- power supply via T-bus or front terminal

Advantages
- space-saving 2-channel amplifier
- independently configurable channels for maximum flexibility

Mathematical modules
TSA-RMS & TSA-MATH
- mean value formation (TSA-RMS) of signals of voltage transmitters, DMS bridges, potentiometers, ICP®/IEPE sensors and standard signals
- mathematical linking (addition, subtraction, multiplication (power), division) of two voltage signals (TSA-MATH)

Advantages
- signal conditioning and mathematical preparation in one module

Conversion module TSA-IF
- signal conversion from pulse transmitters to TTL output

Advantages
- pulse conversion with up to three channels in one module
- optional open-collector output

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