

We take care of it.



40 Years of experience in measure and regulation technology

A. Eberle Africa (Pty) Ltd. has been an approved supplier of voltage regulation for power transformers with tap-changers – REG-D and REG-DA – for more than 25 years. These devices have been supplied directly from Germany to various systems integrators in South Africa and to Eskom (Eskom approval!) until today.

A. Eberle Germany has had a distributor of the main product portfolio in Southern Africa – Magnet Electrical Supplies (Pty) Ltd. – to support products in sales and marketing and for new business opportunities. Mr. Till Sybel, CEO of A. Eberle Germany (until end of March 2023), and CEO of A. Eberle Africa (Pty) Ltd., has decided to invest in South Africa and established, together with his friend Mr. Brian Howarth, (ex-)CEO of Magnet Electrical Supplies, preparing retirement, the new business, which is much more customer orientated.

This investment aims to support not only South Africa, but the African continent in general with A. Eberle products, extended by another innovation – TrafoStick (BDV + DGA in one sensor!) – to guarantee and continuously improve the security and availability of power supply of African energy networks.



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Please become a follower of our international newsletter, which is informing about product news, webinars, events and other important topics from our side by signing in: [www.a-eberle.de/newsletter](http://www.a-eberle.de/newsletter)

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	REG-D	REG-DA	TrafoStick TS4x	TrafoStick TS5x	LVRsSys Outdoor	LVRsSys Indoor	EOR-3DS	EOR-IDS
<b>Design</b>	Various Designs 19" plug-in module, surface-mounted and panel-mounted housing	Metal Housing for wall mounting, panel mounting and DIN-rail mounting	Metal Housing Housing: EN-AW-6063 Measuring zone: EN-AW-7075	Metal Housing Housing: EN-AW-6063 Measuring zone: Brass / Gunmetal	Various depending on requirements		Various Designs Panel mounting housing, or alternatively mountable on DIN-rail mounting	
<b>Function 1</b>	Regulation and control of transformers with on-load tap-changers		Condition-based Power Transformer - and OLTC-monitoring		High resistance to over voltages, direct and indirect lightning strikes		Earth-Fault and Short-Circuit Indicator for intelligent sub-stations	Earth-Fault and Short-Circuit Indicator (directed/undirected)
<b>Function 2</b>	Limit value monitoring, parallel operation with ParaGramer, current influence, detection of creeping network failures		ONLINE-measurement of Breakdown Voltage (BDV)! TrafoSticks are unique!		Overload capable like NH fuse		Fault Recorder and Logbook for precise error analysis	
<b>Function 3</b>	Applications: Voltage Regulation, three winding transformer, transformer banks, phase shifting transformers, variable shunt reactor		TrafoStick TS4x: Measurement value and accuracy BDV @20°C (Breakdown voltage [kV]): 1-5 % BDV TM (Breakdown voltage [kV]): 1-5 % Wc (Water content [ppm]): 2.0 % Temp (Temperature [°C]): 0.1 % RS (Relative saturation [%]): 1-5 %		No grid interference causes no flicker or harmonics		Compatible to many low power sensors	Incl. Rogowski Coil Sensors and low power Sensors
<b>Function 4</b>	Voltage control system can be created by adding further options or devices	Configurable hardware with various options	TrafoStick TS5x: Additional measurement of two gases Hydrogen (H <sub>2</sub> ) and Carbon Monoxide (CO)		Highly efficient > 99,5 %		Additional intelligent functions through free programmability	
<b>Function 5</b>	Expandable by customer specific programming		Available accessories: e.g. DN50 - PN 10/16 flange or DN80 - PN 10/16 flange or other on request		Easy installation as a cable distribution cabinet	Intuitive operating concept Simplest parameterization via display	2x Ethernet 100 mm mounting depth	Long-life Capacitor for >4h operation
<b>Function 6</b>	SCADA Protocols: IEC 61850 inkl. GOOSE and Sampled Values, IEC 60870-5-101/103/104, Modbus, DNP 3.0, Spabus, Profibus-DP		Customer feedback: „Change in paradigm!“ – from temporarily and manually to ONLINE and professional.		SCADA Protocols: Modbus TCP, IEC 60870-5-104 Evaluation Software WinLVR		SCADA Protocols: IEC 61850 GOOSE, IEC 60870-5-101/103/104, Modbus, Modbus-Master, DNP 3.0, MQTT IoT, MQTT Management & Operations	Modbus RTU
<b>Software / Function 7</b>	A.Eberle Toolbox®		TRAFOGAUGE visualization and monitoring software		Adjustable response time of the controller < 30 ms to 100 s		A.Eberle Toolbox® (encrypted TCP/IP communication)	No Software save & load parameters via SD-Card



Measure. Regulate. Across all grids.

Shaping the grid infrastructure of tomorrow – this is our goal.

With our future-oriented solutions, we help our customers to face future challenges.

A. Eberle Africa - in Africa, for Africa.

Product Overview

We take care of it.



Comparison Power Quality Tools

Easy to operate,  
highly accurate.

»PQMobile« – mobile Power Quality analysers



Option	PQ-Box ONE		PQ-Box 50		PQ-Box 150			PQ-Box 200		PQ-Box 300	
	Basic	Expert	Basic	Light	Expert	Basic	Basic+	Light	Expert	T0	T1
Data memory (memory optional)	1 GB		1 GB		4 (32) GB			8 (32) GB		8 (32) GB	
Sampling frequency voltage / transient measurement	20,48 kHz / –		20,48 kHz / –		20,48 kHz / –			40,96 kHz / 4 MHz		409,60 kHz / 409,60 kHz	
Sampling frequency current	20,48 kHz		20,48 kHz		20,48 kHz			40,96 kHz		40,96 kHz	
Input voltage (resolution)	2		4 (16-bit)		4 (24-bit)			4 (24-bit)		4 (24-bit)	
Input current (resolution)	4		4 (16-bit)		4 (24-bit)			5 (24-bit)		5 (24-bit)	
Bridging energy failure	–		1,5 h		4,0 h			4,0 h		3,5 h	
IP protection	IP30		IP65		IP65			IP65		IP65	
Voltage harmonics according to IEC 61000-4-30 Ed.4 Class A	•		–		•			•		•	
Voltage harmonics 200 Hz frequency bands - 2 kHz to 9 kHz (IEC 61000-4-7)	–		–		–			•		•	
Display (Inch)	–		–		• (4,5)			• (4,5)		• (4,5)	
Digital In- and Outputs (Trigger)	–		–		–			1/0		1/0	
Residual Current Monitoring RCM & FCM	–		–		–			• (accessories)		• (accessories)	
Temperature input for PT100 / PT1000 / KTY	–		–		–			• (accessories)		• (accessories)	
Automatic evaluation according to norms	•		–		•			•		•	
Magnitude V, A	< 0,1 %		< 0,1 %		< 0,05 %			< 0,05 %		< 0,05 %	
Voltage and current harmonics up to	H50		H50		9 kHz			20 kHz		160 kHz	
WiFi Option	•		•		•			•		•	
FFT bandwidth up to	–		10 kHz		10 kHz			20 kHz		170 kHz	

»PQSys« – fixed-installed Power Quality analysers



PQI-LV	PQI-DA smart	PQI-DE	I-Sense
<b>Voltage Level</b> Low Voltage	<b>Voltage Level</b> Low, Medium and High Voltage	<b>Voltage Level</b> Low, Medium and High Voltage	With the new »I-Sense« technology for our fixed installed power quality analysers PQI-LV, PQI-DE & PQI-DA smart, it is now possible to measure feeder current in the secondary substation securely, easily and economically for up to 16 feeders. The installation is easy and quick using Rogowski coils and, in addition to current measurement in the feeders, the system also offers the option of highly sophisticated power quality monitoring at the secondary substation transformer.
<b>Application</b> Secondary substations, Depth of the grid, Industrial power grids, Retrofits	<b>Application</b> Point of Common Coupling, Point of Connection, Secondary substations, Industrial applications	<b>Application</b> Substations, Industrial applications, Grid code compliance, High precision frequency measurements, Residual Current Monitoring	
<b>SCADA – License Options</b> IEC 60870-5-104 (P1), IEC 61850 (P2), Modbus Master (P3) MQTT			
<b>IT Security</b> Radius, RBAC, URM, encryption			
<b>Memory</b> 1 GB ~ 140 weeks with standard template			
<b>Voltage Measurement</b> Direct 230/400/690 V	<b>Voltage Measurement</b> Direct and transducer measurement 100/230/400/690 V	<b>Voltage Measurement</b> Direct and transducer measurement, Small signal transducer (E3) 3.25/100/230/400/690 V	
<b>Current Measurement</b> Rogowski coils & current sensors 350 mV input	<b>Current Measurement</b> 1/5 A measuring transformer (C30) 1/5 A protection transformer (C30) Rogowski coils (C40) Sensor technology (C44) DC (C45)	<b>Current Measurement</b> 1/5 A measuring transformer (C30) 1/5 A protection transformer (C30) Rogowski coils (C40) Mini current clamps (C44) DC (C45)	
<b>Fault Recorder / Transient Recorder</b> Optional	<b>Fault Recorder / Transient Recorder</b>	<b>Fault Recorder / Transient Recorder</b>	
<b>Digital Inputs / Outputs (Triggers and Alarms)</b> – / –	<b>Digital Inputs / Outputs (Triggers and Alarms)</b> 2 / 2	<b>Digital Inputs / Outputs (Triggers and Alarms)</b> 8 / 4	
<b>Measurement:</b> 4x Voltage, 4x Current 10,24 kHz / Optional 40.96 kHz (B1)	<b>Measurement:</b> 4x Voltage, 4x Current 10,24 kHz / Optional 40.96 kHz (B1)	<b>Measurement:</b> 4x Voltage, 4x Current 10,24 kHz / Optional 40.96 kHz (B1)	

Do you have any questions or do you need advice on our technical solutions?  
Please feel free to contact us under [info@a-eberle.co.za](mailto:info@a-eberle.co.za)

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»PQSys« – Software

»WebPQ«

The central database solution for all fault recorders, power quality monitoring devices and mobile grid analysers from A. Eberle. Permanent power quality monitoring – from high voltage to the depths of the grid in one system. Intuitive operation and fast navigation for analysing your measurement data.

- Simultaneous parallel reading of all devices. This ensures a fast system response time.
- Automatic reporting for fault records and power quality reports with measuring point principle.
- Drill-in evaluation process – recognise trends with a click of the mouse.



»PQMobile« – Software

»WinPQ mobile«

- Extensive evaluation functions such as load analysis or the ability to determine the cause of network faults
- Automatic report creation to preset or freely adjustable standard settings
- Free software and free updates of the evaluation software and device firmware

PQ-Box App for Android and iOS

A free app for Android and iOS operating systems allows all PQ-Boxes with integrated WLAN/WiFi interfaces to be operated wirelessly. All measuring devices can also be parameterised very easily using smartphone or tablet.

