Microprocessor Controlled Universal Simulator for Most Common Process Quantities in Automotive and Machine Manufacturing Applications

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- The test standard is ideally suited for **testing measuring circuits** from the sensor over the cable up to the amplifier by simulating the following sensors: **strain gauges** (full and half-bridge), **potentiometers**, **thermocouples** (types K, J and L), **Pt100**, **current** and **voltage sensors**, and **tachometer generators**
- **Physically correct** simulation of strain gauges, potentiometers and Pt100 sensors with **fixed-value resistors**
- The microprocessor handles direct entry of sensor values as physical quantities (e.g. 50 bar or 30 N). Calibration and nominal values are accounted for as well
- "DVM" option allows voltage measurements in the ±10 V range
- Easy operation with help of a clear-cut flexible multilayer keyboard
- Settings are displayed by high-contrast LCD with 2 lines including 16 characters each
- Rechargeable battery operation for flexible, mobile use. Mains operation is possible as well
- The test standard is equipped with various connectors for different process quantities, allowing easy adaptation to customer-specific requirements (see block diagram)

Technical Data:

Strain Gauge	Off-resonance settings [mV/V]	$0.0 / \pm 0.25 / \pm 0.5 / \pm 1.0 / \pm 2.0 / \pm 4.0 / \pm 20.0 / \pm 40.0$
(force, torque,	Bridge resistance	350 Ω
pressure)	Accuracy	0.1% (of display value) relative to off-resonance \geq 1 mV/V
	Output	6-wire connection (with Lemo plug only)
		 Power supply to A+ and C-
		 Signal to D+ and B-
		- Sense to Sens+ and Sens-
		No sensing leads with other plugs
Potentiometer	Off-resonance settings	0% / 20% / 40% / 60% / 80% / 100%
	Total resistance	5 kΩ
	Accuracy	0.1% (of display value)
	Output	5-wire connection (with Lemo plug only)
		- Power supply to A+ and C-
		- Signal to B-
		- Sense to Sens+ und Sens-
Dt 400	Calestable temperatures	
Pt 100	Selectable temperatures	-50° C / 0° C / 50° C / 100° C / 150° C / 200° C
	A 221/201/	$\frac{(80.31 \ \Omega}{100 \ \Omega} / \frac{100 \ \Omega}{119.4 \ \Omega} / \frac{138.5 \ \Omega}{138.5 \ \Omega} / \frac{157.3 \ \Omega}{157.3 \ \Omega} / \frac{175.8 \ \Omega}{175.8 \ \Omega}$
	Output	0.2% (of display value)
	Oulpul	4-wire connection Power supply to A L and C signal to DL and R
Fraguanay	Salaatabla fraguanaiaa	Power supply to A + and C , signal to D + and B -
(RPM)	Selectable frequencies	0.5 HZ / 2 HZ / 10 HZ / 50 HZ / 200 HZ / 1 KHZ / 5 KHZ / 10 kHz / 15 kHz* / 20 kHz / 62 kHz* / 100 kHz / 138 kHz*
	Туре	TTL square wave with mark-to-space ratio of 1:1
	Accuracy	+ 0.02% (of display value) $* 0.1%$
	Output	Signal to D+ and B-
Voltage	Selectable voltages	100 mV / 200 mV / 500 mV / 1 V / 2 V / 5 V / 10 V
· ·····g·	(scroll keys)	
	Selectable voltages	Any value within a range of ± 10 V (= FSR)
	(numeric keypad)	
	Accuracy	± 0.05% of FSR (after auto-balancing)
	Temperature drift	0.2 mV / °C (after auto-balancing)
	Output	Signal to D+ and B-
Thermocouples	Selectable temperatures	-50° C / 0° C / 50° C / 100° C / 150° C / 200° C
(L and K)		(please enquire regarding cold spot compensation)
	Accuracy	± 0.2% (of display value)
	Output	Signal to D+ and C-
Current	Selectable current values	0 mA / 4 mA / 10 mA / 20 mA / 40 mA
	(scroll keys)	
	Selectable current values	Any value within a range of 0 to 50 mA (= FSR)
	(numeric keypad)	(max. voitage approx. 10 V)
	Accuracy	± 0.03% OF FSK (atter auto-balancing)
Maltana		Current between D+ and B-
Voltage	ivieasuring range	\pm 10 V (= FSR) (order option: "DVM, Volt")
weasurement	Accuracy	\pm 0.02% OF FSK \pm 1 digit (after auto-balancing)
	ivieasured valué	perween D+ and B-



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