optimize! softing

AS08.1

Output Module for SMT Systems for Generating Electrical Analog and Digital Signals

The AS08.1 adds electric outputs to the measurement data acquisition system. Analog voltages and currents as well as frequency and PWM signals can be output.

Areas of Application

- Stimulation of analog inputs of electronic control units
- Activating of light and sound signals
- Sensor simulation
- Driving of actuators

Advantages

- Synchronized output of target values and measurement data acquisition
- Phase-locked modification of target values of frequency signals
- Optical indication of channel and module state

Analog Signals

Analog voltages can be output and currents applied over the eight channels of the module. The measuring software PEA updates the outputs in an equidistant time pattern defined in advance by the user. Together with short latency times, this makes it possible to deploy the module in time-critical applications, for example if defined voltage or current profiles are to be output or reference variables are required for control applications.

Digital Signals

Alongside the direct control of certain voltage or current levels, it is possible to generate dynamic signals on the basis of variable characteristic parameters. The voltage curves required in each case are generated by the module, guaranteeing the reliable output of fast frequency or high-resolution PWM signals. Modified target values are always adopted phase-locked to the output signal.

Technical Data

General		
Number of channels		8
Operating modes		Voltage / current / frequency / PWM, can be set per channel
Data rate		1 SPS … 2 kSPS online, can be set per module
Galvanic isolation		Per channel
Power-on state		Outputs high-impedance (>1 MΩ)

Operating Modes: Voltage & Current		
U	Output voltage	±10 V
	Short-circuit current	≥10 mA, current-limited, short-circuit-proof
I	Output current	±24 mA
	Open-circuit voltage	≥12 V
Updating time		Value modification synchronized to data rate
Resolution		16 bit
Reconstruction filter		Butterworth, 6th order, 16 kHz, can be switched on per channel
External voltage resistance		Permanent active protection circuit for |100| V, transient protection

Operating Modes: Frequency & PWM		
f	Frequency range	10 Hz … 100 kHz
	Duty cycle	50 %
PWM	Frequency range	10 Hz … 5 kHz
	Duty cycle	1 % … 99 %
Signal form		Rectangular
Updating time		Value modification phase-locked to output signal
Counter resolution		200 ns
Counter width		24 bit
Output driver		Open Collector (15 V, 80 mA)
Internal pull-up		Open / 1 kΩ against +5 V / 3.3 kΩ against +15 V
External voltage resistance		Permanent active protection circuit for |100| V, transient protection

Environmental Conditions	
Storage	-30 °C … +85 °C, 10 % … 90 % rel. humidity, non-condensing
Operation	-30 °C … +70 °C, 10 % … 90 % rel. humidity, non-condensing

Order Numbers

AS08.1	Output module for SMT systems for generating electrical analog and digital signals (8 channels)
AS08.1-CAL	AS08.1 calibration
AS08.1-ADJ	AS08.1 adjustment

Softing Messen & Testen GmbH · Einhornstraße 10, 71238 Kirchentellinsfurt – Germany
Phone +49-7121-9937-0 · **Fax** +49-7121-9937-266 · **Internet** www.automotive.softing.com