if you interface easYgen-3x00-y to 3rd party AVRs make sure that they are not backfiring

Clemens - 2024-09-27 - easYgen-3000XT

Some AVRs on the market have the negative behavior to backfire on easYgen-3000 Voltage regulation PID output. easYgen-3000 controls Speed& voltage PID outputs are galvanic isolated

Some AVR manuals indication an galvanic isolation of 500VAC like this PDF.

https://www.stamford-avk.com/sites/stamfordavk/files/2021-01/STAMFORD-MX321-Automatic-Voltage-Regulator.pdf

For speed controls and ECUs this behavior is not applicable as those are 12/24VDC powered.

[6] Any device connected to the analogue input must be fully floating (galvanically isolated from ground), with an insulation strength of 500 VAC
[7] Non condensing.

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Technical Specification of old easYgen-3x00 analog PID outputs.

Analog outputs 'AO 01-02'

Analog outputs		Galvanically isolated
At rated output		Freely scalable
Insulation voltage (continuously)		100 Vac
Insulation test voltage (1 s)		500 Vac
Versions		±10 Vdc, ±20 mA, PWM
Resolution	±20 mA outputs Configured to ±20 mA	12 bit
	±20 mA outputs Configured to 0 to 20 mA	11 bit
0 to 20 mA output	Load	≤ 500 Ω
±10 V output	Internal resistance	approx. 500 Ω

Technical Specification of new easYgen-3x00XT (no external galvanic isolation required) having higher galvanic isolation level:

Analog outputs 'AO 01' "Speed Biasing" (Type 1: ±20 mA | ±10 V | PWM)

Analog output	Freely scalable Pre-configured to "11.03 Speed bias [%]"	Galvanically isolated
Resolution		min. 12 bit
Configurable as	(bipolar)	±20 mA, ±10 V_{DC}
PWM output		±10 V_{DC}, 500 Hz duty cycle
Shunt resistor		max. 500 Ω
Galvanically isolation to PE		min. 100 V_{AC}

Analog outputs 'AO 02' "Voltage Biasing" (Type 1: ±20 mA | ±10 V | PWM)

Analog output	Freely scalable Pre-configured to "11.02 Voltage bias [%]"	Galvanically isolated
Resolution		min. 12 bit
Configurable as	(bipolar)	±20 mA, ±10 V_{DC}
PWM output		±10 V_{DC}, 500 Hz duty cycle
Shunt resistor		max. 500 Ω
Basic isolation to PE		500 V_{RMS}
Reinforced isolation to PE		300 V_{RMS}