

12V40SG series – OEM piezo controller

Compact analog piezo controller

Concept:

The 12V40SG and 24V40SG piezo controller series from **piezosystem jena** are especially made for piezoelectric actuators used for nan positioning tasks in the industrial field.

The SG version of the controller series comes with a sensor controller module. The 12V40 and 24V40 SG versions are especially made for use in combination with piezoelectric actuators equipped with an integrated feedback sensor. Piezoelectric actuators can be controlled with the highest positioning accuracy possible and repeatability in the nanometer range. The piezo controller offers the user the choice to control a piezoelectric element manually or via an analog modulation input with a signal of 0 to 10 VDC with a nearly unlimited step resolution. To support industrial use, all operational elements from the front panel are also available on the rear side. Due to their design and small dimensions, the piezo controllers from the 12V40 and 24V40 series are well suited for nan positioning tasks for industrial applications as well as for simpler laboratory setups made for scientific applications.

Specials:

The piezo controllers in the 12V40 and 24V40 series have a robust metal casing. The casings are available as a screw slot version to support stand-alone application and as a 19"-Rack mount version for system integration.

The DC offset level used to control the piezoelectric actuator is adjustable with a $\frac{3}{4}$ turn potentiometer on the front side and by an analog modulation input signal of 0 to 10 VDC.



Image: 12V40SG (screw slot casing)

Product Highlights:

- 1-channel OEM piezo controller
- sensor feedback controller inside
- compact dimensions
- protected by a robust metal casing
- 40 mA permanent output current
- 12 VDC or 24 VDC main voltage
- modulation input
- monitor output

Application:

- pick & place automation
- OEM integration
- valve and gripper technology
- fiber alignment

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Technical data:

| OEM piezo controller | unit | 12V40 SG (with sensor feedback controller) | | | |
|--|----------------|--|--------------------------|---|--------------------------|
| description | | 12V40 SG | 12V40 SG | 24V40 SG | 24V40 SG |
| part number | | E-440-111 | E-440-112 | E-440-131 | E-440-132 |
| casing style | - | screw slot ver- sion | 19"-rack mount module | screw slot ver- sion | 19"-rack mount module |
| number of channels | - | 1 | 1 | 1 | 1 |
| display | - | no | no | no | no |
| main supply voltage | V | 12VDC | 12VDC | 24VDC | 24VDC |
| output voltage signal | V | | | -10...150V | |
| output current (permanent) | mA | | | 40mA | |
| voltage noise | mV | | | < 0.3mV _{RMS} @500Hz | |
| piezo connector | voltage | | | LEMO 0S.302 | |
| | sensor | | | LEMO 0S.304 | |
| sensor controller | - | | | yes | |
| PC interface | - | | | no | |
| DC Offset | - | | | ¾ turn potentiometer front panel | |
| modulation input | V | | | 0...+10V (front and rear panel) | |
| modulation input impedance | Ohm | | | 10kOhm | |
| monitor output impedance (typ.) | Ohm | | | 50Ohm | |
| monitor output | V | | | -1...+15V front panel / 0...+10V rear panel | |
| working temperature range | - | | | 5°C to 35°C (41F to 95F) | |
| specials | - | | | power on delay, overdrive protection | |
| dimensions (lxwxh) | mm | 182.5x130x45 | 182.5x105x48 | 182.5x130x45 | 182.5x105x48 |

Specifications subject to change without notice!