

12V40CLE piezo-amplifier

- ◆ 1-channel unit, closed casing
- ◆ 12 Volt power supply (24 Volt optional)
- ◆ integrated closed-loop controller
- ◆ manual and external operation
- ◆ excellent cost effectiveness

applications:

- driving piezoelements with position feedback sensors
- dynamic applications
- OEM-applications



fig.1 12V40 SG
(screw-slot casing)

The voltage amplifier **12V40CLE** is well suited for low voltage piezo elements with external measurement system. Two different types of casings are available. The amplifier requires only 12V DC (optional 24V DC) for supply. The amplifier can be controlled via MOD input (front or back). The output voltage can be supervised on the monitor output. Special circuits are integrated to protect the piezo element from voltage spikes and excessive voltages. This amplifier is well suited for sub-nm positioning tasks due to a very low voltage noise of only $0,3\text{mV}_{\text{RMS}}$. Using the electrical positioning control prevents creep and hysteresis typical of piezos. All sockets are also available on the back so this amplifier can be easily integrated into an OEM-product.

technical data:

power supply
output power
output voltage
output current (permanent)
voltage noise
modulation input
input resistance
DC-Offset
output connector (piezo)
output sensor
monitor output
output resistance
dimensions (L x W x H)
specials

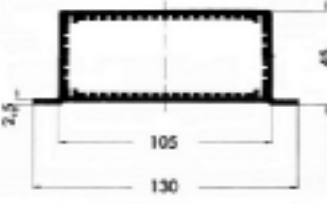
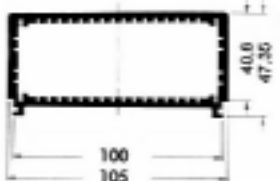
* front ** back

part.-no. **E-440-711 [12V]** (screw-slot)
E-440-712 [12V] (plug-in)
E-440-731 [24V] (screw-slot)
E-440-732 [24V] (plug-in)

+12V (1A); +24V (0,5A) DC
6W
-10...150V
40mA
 $< 0,3\text{mV}_{\text{RMS}} @ 500 \text{ Hz}$
0 ... 10V SMB* / 0 ... 10V**
10 k Ω
3/4 turn potentiometer
LEMO 0S.302
ODU 4pol. series L
0 ... 10V SMB* / 0 ... 10V**
10k Ω SMB* / 10k Ω **
181 x 130/105 x 45mm
turn on delay
overdrive protection (UDL/OVL)

Rev. 07.03.2007DW ÄZ 0

types of casings:

case:	part. no.	dimensions [mm]
screw-slot	E-440-711 [12V] E-440-731 [24V]	
plug-in	E-440-712 [12V] E-440-732 [24V]	

typical parameter of example configurations:

12V40CLE + PA 35/14 SGE (P-154-01E)

nonlinearity*	< 0,7%
repeatability*	< 0,05%
motion open loop (+20/-10%)	35 µm
motion closed loop	28µm
step response @100% motion, 20g load*	< 50 ms

* data for closed loop mode