

APPLICATIONS

- > Actuators position control
- > Active control of vibrations
- > Embedded solutions

KEY FEATURES

- > All-in-one piezo-driver and controller
- > 2 channels, with push-pull capability
- > PID control with stabilizing filters, tunable with GUI
- > Integrated SG conditioner or external sensor option

RELATED PRODUCT

- > Piezo actuators
- > Piezo mechanisms



SPECIFICATIONS

| PARAMETER | TYPICAL VALUE | UNIT |
|--|--|------|
| > General | | |
| Function | All-in-one piezo-driver and controller | |
| Number of control channels | 2 | |
| Integrated sensor conditioning | Strain Gages | |
| Digital communication | RS422 | |
| Graphical User Interface | CTEC HDPM | |
| > Digital control | | |
| Control strategy | Tunable PID + Stabilizing filters | |
| Stabilising filters | Tunable lowpass and notch | |
| List of stabilising filters configurations | No filter 2nd order lowpass filter 2nd order notch filter 2 × 2nd order notch filters 4th order notch filter | |
| Sampling rate | 20 | kSps |
| Digital resolution | 16 | bits |
| > Analog inputs | | |
| Number of analog inputs | 2 | |
| Analog inputs Voltage range | -10 ... +10 | V |
| Small signals bandwidth (-3 dB) | 34 | kHz |

> Strain gages (SG) conditioner

| | | |
|----------------------------------|-------------|-----|
| Number of channels | 2 | |
| Reference output voltage | 5 | Vdc |
| Maximum reference output current | 30 | mA |
| Typical bridge impedance | 350 | Ohm |
| Output voltage range | -10 ... +10 | V |
| Output impedance | 20k | Ohm |
| Real gain | 546.45 | V/V |
| Small signals bandwidth (-3 dB) | >150 | kHz |

> Piezo driver

| | | |
|-----------------------------------|--------------|------|
| Number of channels | 2 | |
| Push-pull rail nominal voltage | 130 | V |
| Nominal output voltage range | -20 ... +150 | V |
| Peak output current | 0.2 | A |
| RMS output current ⁽¹⁾ | 0.035 | Arms |
| Ideal gain | 20 | V/V |
| Small signals bandwidth (-6 dB) | 32 | kHz |

> Protections

| | | |
|-------------------|--|--|
| Overtemperature | | |
| Overload | | |
| Missing connector | | |

> Power supply

| | | |
|-------------------------------|-------------|------|
| Recommended supply voltage | +28 | Vdc |
| Supply voltage range | +24 ... +28 | Vdc |
| Supply current ⁽²⁾ | 0.2 ... 1 | Arms |
| Power consumption | 5 ... 28 | W |

MISCELLANEOUS

| | | |
|--|---|-----|
| Mass | 0.25 | kg |
| Dimensions | 91 × 77 × 35.2 | mm3 |
| Cooling | Natural convection + Heat-sinking surface | |
| Maximum dissipated power | 28 | W |
| Operating temperature range ⁽⁴⁾ | -40 ... +70 | °C |
| Storage temperature range | -40 ... +85 | °C |
| Warm up time | 15 | min |

INTERFACES

- > **Main connector** HARWIN M80-5102042
- > **Mechanism connector** HARWIN M80-5101642

INCLUDED ACCESSORIES

- > **HDP45 Graphical User Interface** Windows compatibility

EXTERNAL SENSOR OPTION ⁽⁵⁾

> **Input voltage range** -10 ... +10 V

ANNOTATIONS

- (1) At +28 Vdc supply. Lower output current has to be considered for lower supply voltages
- (2) At recommended supply voltage
- (4) Additional heatsink might be required
- (5) Applies to both channels. Replaces the integrated SG conditioner

DRAWINGS

