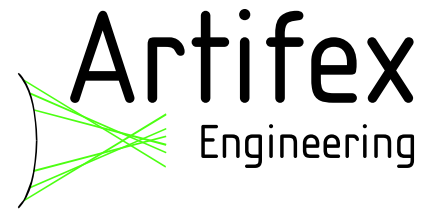


Fast and Sensitive!

## Transimpedance Amp TZA400



### Highlights:

- Fast
- Wide dynamic range
- Compact

### Our offer in Detail:

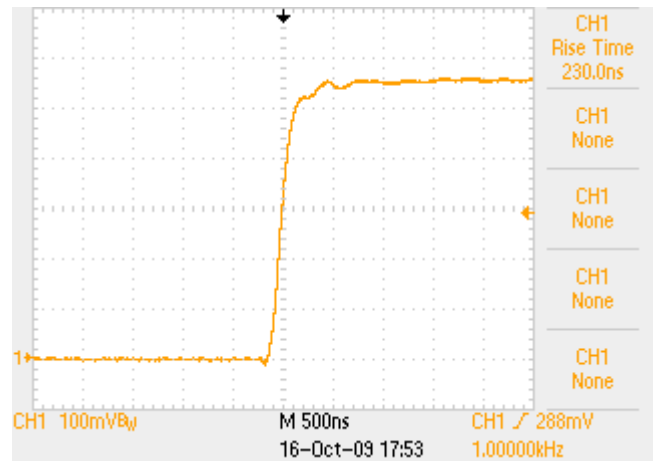
The TZA400 is a fast, sensitive, wide dynamic range transimpedance amplifier for measuring the current output of a variety of sources. There are 16 gain ranges covering 5 decades of gain in a 1-2-5 pattern. The gain-to-gain accuracy of <1% allows confident measurements of power curves over the full range of sensitivity of the device: 6½ decades of measurement range. Thus even very demanding measurements such as the accurate and high speed, real-time determination of polarization extinction ratio becomes a simple task.

The compact design allows use direct at the source for low noise and pickup. The sturdy enclosure with mounting wings serves use in the lab as well as for OEM applications.

Functional control is via a DB25 hardwire interface for direct, sub  $\mu$ s control of all parameters. This feature is useful for OEM implementation in feedback loops such as fibre alignment applications.

### Highlights

- Wide dynamic range: 500pA – 4mA
- Fast: <1 $\mu$ s rise time ( $10^3$ - $5 \times 10^3$ V/A); <4 $\mu$ s ( $>5 \times 10^3$ V/A)
- Two versions available: 16 gain ranges (1-2-5 pattern) or 4 gain ranges (decade pattern)
- Optional channel counts: 1, 2, 3 or 4 channels per enclosure, all with the same footprint



### Your problem is our challenge – flexibility is our standard:

We will gladly adapt, for example, the current range or the case style to suit your application. Let us know your requirements.

## Ordering Information

Full order code: TZA 400 c g S n

|                            | Option  | Description                         |
|----------------------------|---------|-------------------------------------|
| Case style (c):            | G<br>L  | OEM style <sup>1</sup><br>Lab style |
| Number of gain ranges (g): | 4<br>16 |                                     |
| Input topology:            | S       | Single ended                        |
| Number of channels (n):    | 1 to 4  |                                     |

## Specifications

| Parameter                                      | Conditions                                                       | Min                                             | Typ      | Max            | Units            |
|------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------|----------|----------------|------------------|
| <b>Input</b>                                   |                                                                  |                                                 |          |                |                  |
| Current ranges (full scale)                    | Maximum range<br>Minimum range                                   |                                                 | 4<br>40  |                | mA<br>nA         |
| Noise equivalent current (NEI <sub>RMS</sub> ) | Range: 4mA<br>40nA                                               |                                                 |          | 2.5<br>500     | µA<br>pA         |
| Impedance                                      |                                                                  | 0<br>(virtual short circuit)                    |          |                | Ω                |
| Connectors                                     |                                                                  | BNC                                             |          |                |                  |
| <b>Output</b>                                  |                                                                  |                                                 |          |                |                  |
| Function                                       |                                                                  | Linear analogue $V_{out} = scale \times I_{in}$ |          |                |                  |
| Output scale with 16 gain range option         | Range: 4mA<br>40nA                                               |                                                 | 1<br>0.1 |                | V / mA<br>V / nA |
| Output scale with 4 gain range option          | Range: 4mA<br>4µA                                                |                                                 | 1<br>1   |                | V / mA<br>V / µA |
| Connectors                                     |                                                                  | BNC and DB25                                    |          |                |                  |
| Output range (full scale)                      |                                                                  |                                                 |          | 4              | V                |
| Rise / Fall time (10% - 90%)                   | Gain: $10^3$ - $5 \times 10^3$ V/A<br>Gain: $>5 \times 10^3$ V/A |                                                 | 0.25     | 1<br>4         | µs               |
| Accuracy                                       |                                                                  | ± 1                                             |          |                | %                |
| Linearity                                      |                                                                  |                                                 | ± 0.1    | ± 0.2          | dB               |
| Output impedance                               |                                                                  |                                                 |          | 50             | Ω                |
| <b>Logic</b>                                   |                                                                  |                                                 |          |                |                  |
| Current required for switching (5V)            |                                                                  | -100                                            | 5        | 100            | nA               |
| Switching time                                 |                                                                  |                                                 |          | 2 <sup>2</sup> | µs               |
| <b>Power Supply</b>                            |                                                                  |                                                 |          |                |                  |
| Type                                           |                                                                  | Wall plug (supplied)                            |          |                |                  |
| <b>Dimensions</b>                              | 130 x 106 x 116 mm (w x h x l)                                   |                                                 |          |                |                  |

<sup>1</sup> Compact OEM-style case with gull wings for mounting

<sup>2</sup> Logic switching < 1µs. Effective switching time limited by settling time.