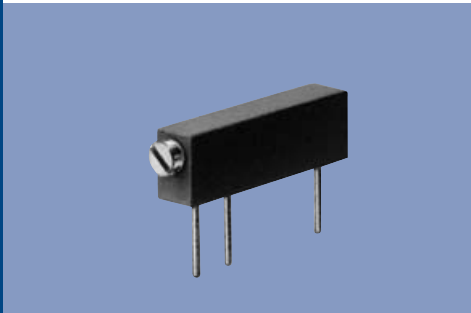


Trimmers

Cermet

absolut

Series TC171R-3A - TC275-2A

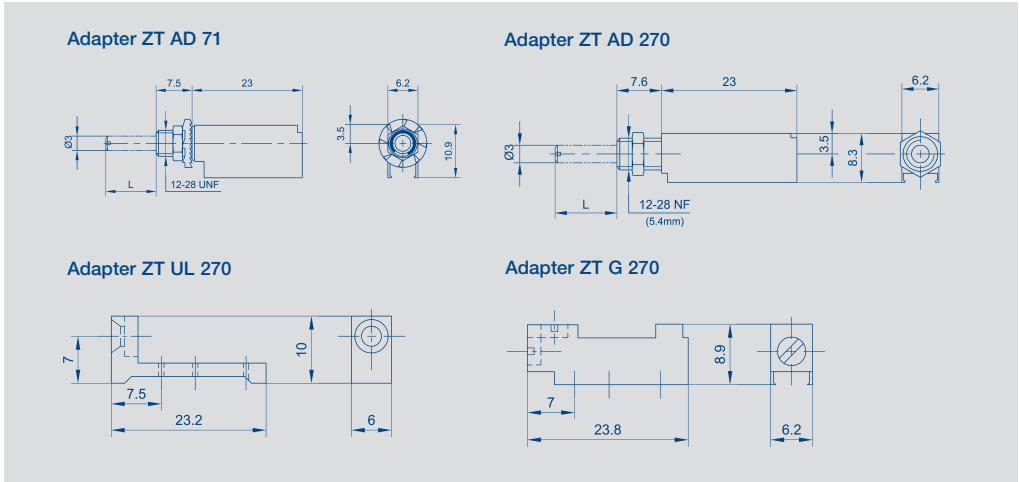
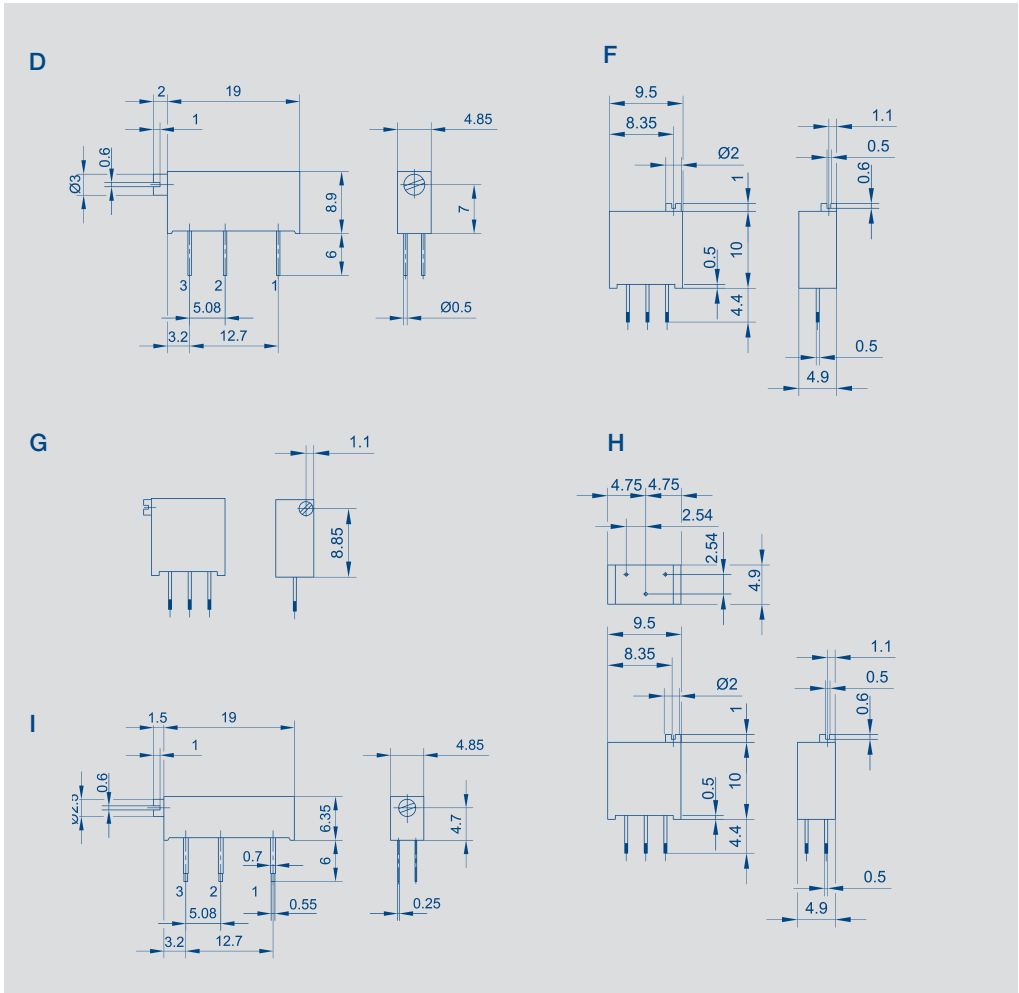


- Special features

  - flow solderable
  - power rating up to 0.75 W
  - protection class IP67
  - very high resolution

Trimmers for adjusting electro-  
nic circuits and assemblies.

The careful selection of the  
materials and high quality of  
the components used ensure  
a constant and high level of  
quality throughout the entire  
service life of the angle sen-  
sor.



| Description        |                                              |
|--------------------|----------------------------------------------|
| Housing            | high quality, temperature consistent plastic |
| Setting screw      | brass, nickel plated                         |
| Resistance element | Metalloxyd ceramics (Cermet)                 |
| Wiper assembly     | precious metal                               |

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| Type designations                           | TC171R-3A                                                     | TC175R-3A                                   | TC183-3A      | TC183-3B      | TC183-3E      | TC270-2A                   | TC275-2A                                    |               |
|---------------------------------------------|---------------------------------------------------------------|---------------------------------------------|---------------|---------------|---------------|----------------------------|---------------------------------------------|---------------|
| <b>Mechanical Data</b>                      |                                                               |                                             |               |               |               |                            |                                             |               |
| Dimensions                                  | drawing D                                                     | drawing D                                   | drawing F     | drawing G     | drawing H     | drawing I                  | drawing I                                   |               |
| Size                                        | 19 mm                                                         | 19 mm                                       | RJ24          | RJ24          | RJ24          | 19 mm                      | 19 mm                                       |               |
| Spindle turns                               | 18 ±1                                                         | 18 ±1                                       | 25 ±2         | 25 ±2         | 25 ±2         | 18 ±1                      | 18 ±1                                       | turns         |
| Connections                                 | gold plated                                                   | gold plated                                 | silver plated | silver plated | silver plated | tin plated                 | tin plated                                  |               |
| Housing                                     | Thermoplast                                                   | Thermoplast<br>transparent<br>CKW-resistant | Thermoplast   | Thermoplast   | Thermoplast   | Thermoplast<br>transparent | Thermoplast<br>transparent<br>CKW-resistant |               |
| Weight                                      | 1.3                                                           | 1.3                                         | 0.8           | 0.8           | 0.8           | 1.0                        | 1.0                                         | g             |
| <b>Electrical Data</b>                      |                                                               |                                             |               |               |               |                            |                                             |               |
| Power rating                                | 0.75/40°C                                                     | 0.75/85°C                                   | 0.5/70°C      | 0.5/70°C      | 0.5/70°C      | 0.75/40°C                  | 0.75/40°C                                   | W             |
| Available resistance values                 | 100 - 2 x 10 <sup>6</sup>                                     |                                             |               |               |               |                            |                                             | Ω             |
| Resistance tolerance                        | ± 10                                                          |                                             |               |               |               |                            |                                             | %             |
| Maximum end-resistance                      | 1 (≥ 2Ω)                                                      |                                             |               |               |               |                            |                                             | %             |
| Temperature coefficient of the resistance   | 100                                                           |                                             |               |               |               |                            |                                             | ppm/K         |
| Independent linearity                       | ± 5                                                           |                                             |               |               |               |                            |                                             | %             |
| Max. permissible applied voltage            | U <sub>max</sub> = √ (power rating x resistance value)        |                                             |               |               |               |                            |                                             | V             |
| Max. contact resistance CRV                 | ≤ 3                                                           |                                             |               |               |               |                            |                                             | %             |
| Max. wiper current in case of malfunction   | 50                                                            |                                             |               |               |               |                            |                                             | mA            |
| Insulation resistance (500 VDC, 1 bar, 2 s) | ≥ 10 000                                                      |                                             |               |               |               |                            |                                             | MΩ            |
| Dielectric strength (DC, 1 min)             | 900                                                           |                                             |               |               |               |                            |                                             | V             |
| <b>Environmental Data</b>                   |                                                               |                                             |               |               |               |                            |                                             |               |
| Temperature range                           | -55...+125                                                    |                                             |               |               |               |                            |                                             | °C            |
| Vibration                                   | 30...2000<br>A <sub>max</sub> = 0.75<br>a <sub>max</sub> = 10 |                                             |               |               |               |                            |                                             | Hz<br>mm<br>g |
| Life                                        | 400                                                           |                                             |               |               |               |                            |                                             | movements     |
| Shock (DIN IEC68T2-27)                      | 50<br>7                                                       |                                             |               |               |               |                            |                                             | g<br>ms       |
| Protection class (DIN 40050)                | IP67                                                          |                                             |               |               |               |                            |                                             |               |

#### Order designations (Example)

| Series     | R in Ω                                                |
|------------|-------------------------------------------------------|
| TC 171R-3A | 100K<br>e.g.<br>100R = 100Ω<br>10K = 10kΩ<br>1M = 1MΩ |

#### Order designations / Abbreviations

2A: connecting solder pin square  
3A...3E: connecting solder pin round

#### Recommended accessories

Adapter ZT AD 71  
for trimmer TC170...TC176,  
Adapter ZT AD 270  
for trimmer TC270...TC275,  
Washer ZT UL 270  
for trimmer TC270...TC275,  
Adapter ZT G 270  
for trimmer TC270...TC275  
(vertical setting),  
for extension of above  
adapters L 0 mm; L 7 mm;  
L 14 mm

Subject to changes