





Preset Potentiometers

Carbon and Cermet

| | Carbon, 10 mm | | Cermet, 10 mm | |
|---|--|--|--|---|
| |  |  |  |  |
| Series | ECP 10 | OCP 10 | EMP 10 | OMP 10 |
| Overall dimensions | 10 x 12 mm | 10 x 12 mm | 10 x 12 mm | 10 x 12 mm |
| Technology | carbon resistive layer on a phenolic paper base | | metal-glaze resistive layer on a ceramic base | |
| Mounting options | vertical horizontal | vertical horizontal | vertical horizontal | vertical horizontal |
| Features | enclosed type double-finger wiper cross or hexagonal slot (for automatic adjustment) straight or snap-in pins rail packaging for automatic insertion available | open type double-finger wiper longitudinal or cross slot straight or snap-in pins | enclosed type double-finger wiper cross or hexagonal slot (for automatic adjustment) straight or snap-in pins rail packaging for automatic insertion available | open type double-finger wiper longitudinal or cross slot straight pins |
| Resistance range | 100 Ω - 4.7 MΩ E3-series (10-22-47) | 47 Ω - 4.7 MΩ E3-series(10-22-47) | 47 Ω - 10 MΩ preferred : E3-series (10-22-47) additional : E6-series (15-33-68) | 100 Ω - 10 MΩ preferred : E3-series (10-22-47) additional: E6-series (15-33-68) |
| Tolerance | ± 20%, ± 10% | ± 20% | ± 20%, ± 10% | ± 20%, ± 10% |
| Maximum dissipation | 0.1 W / 40 °C 0.05 W / 70 °C | 0.1 W / 40 °C 0.05 W / 70 °C | 0.5 W / 70 °C | 0.5 W / 70 °C |
| Total mechanical angle of rotation | 300° ± 5° | 260° ± 5° | 300° ± 5° | 235° ± 5° |
| Temperature coefficient | ± 300 × 10 ⁻⁶ /K (1 kΩ - 2.2 MΩ) | - 500 to + 300 × 10 ⁻⁶ /K | ± 200 × 10 ⁻⁶ /K (≤ 100 Ω) ± 50 × 10 ⁻⁶ /K (> 100 Ω to < 1 MΩ) ± 100 × 10 ⁻⁶ /K (≥ 1 MΩ) | ± 50 × 10 ⁻⁶ /K (≤ 1 MΩ) ± 100 × 10 ⁻⁶ /K (> 1 MΩ) |
| Climatic category | 25/085/10 | 25/070/21 | 55/125/56 | 55/125/56 |
| Remarks | for ordering information preferred types see page 109 | | for ordering information preferred types see page 110 | |

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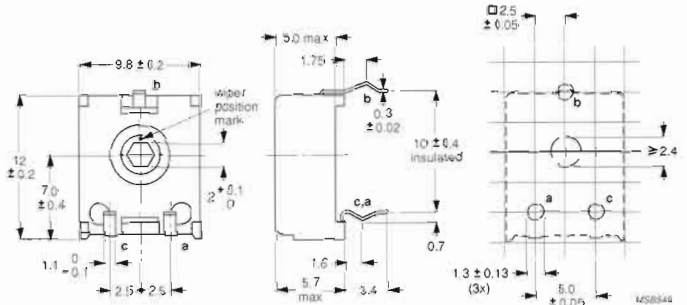
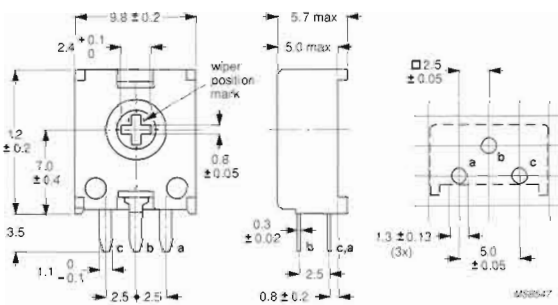
Carbon, 10 mm

Ordering information Preferred types

ECP 10, linear, 20% tolerance

Catalogue number 2322 483

| Vertical mounting | | | | Horizontal mounting | | | | |
|--------------------------|---|----------------------------------|------------------------------------|--------------------------|--|---|-----------------------------------|------------------------------------|
| Nominal resistance R_N | Non insulated cross slot straight pins (see figure) | Insulated hex. slot snap-in pins | Insulated cross slot straight pins | Nominal resistance R_N | Non insulated cross slot straight pins | Insulated hex. slot snap-in pins (see figure) | Insulated hex. slot straight pins | Insulated cross slot straight pins |
| 100 Ω | 04101 | 12101 | 24101 | 100 Ω | 54101 | 62101 | 64101 | 74101 |
| 220 Ω | 04221 | 12221 | 24221 | 220 Ω | 54221 | 62221 | 64221 | 74221 |
| 470 Ω | 04471 | 12471 | 24471 | 470 Ω | 54471 | 62471 | 64471 | 74471 |
| 1 k Ω | 04102 | 12102 | 24102 | 1 k Ω | 54102 | 62102 | 64102 | 74102 |
| 2.2k Ω | 04222 | 12222 | 24222 | 2.2k Ω | 54222 | 62222 | 64222 | 74222 |
| 4.7k Ω | 04472 | 12472 | 24472 | 4.7k Ω | 54472 | 62472 | 64472 | 74472 |
| 10 k Ω | 04103 | 12103 | 24103 | 10 k Ω | 54103 | 62103 | 64103 | 74103 |
| 22 k Ω | 04223 | 12223 | 24223 | 22 k Ω | 54223 | 62223 | 64223 | 74223 |
| 47 k Ω | 04473 | 12473 | 24473 | 47 k Ω | 54473 | 62473 | 64473 | 74473 |
| 100 k Ω | 04104 | 12104 | 24104 | 100 k Ω | 54104 | 62104 | 64104 | 74104 |
| 220 k Ω | 04224 | 12224 | 24224 | 220 k Ω | 54224 | 62224 | 64224 | 74224 |
| 470 k Ω | 04474 | 12474 | 24474 | 470 k Ω | 54474 | 62474 | 64474 | 74474 |
| 1 M Ω | 04105 | 12105 | 24105 | 1 M Ω | 54105 | 62105 | 64105 | 74105 |
| 2.2 M Ω | 04225 | 12225 | 24225 | 2.2 M Ω | 54225 | 62225 | 64225 | 74225 |
| 4.7 M Ω | 04475 | 12475 | 24475 | 4.7 M Ω | 54475 | 62475 | 64475 | 74475 |

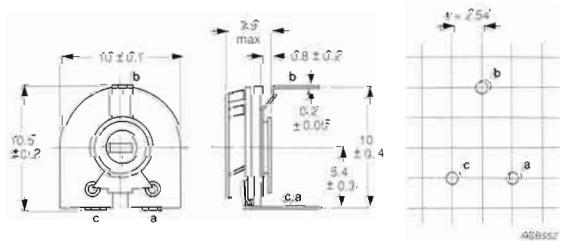
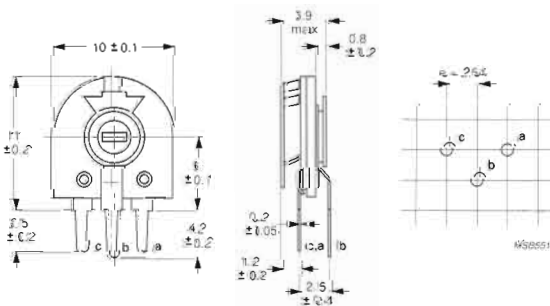


Preferred packing: 1000 pcs in cardboard box

OCP 10, linear, 20% tolerance

Catalogue number 2322 410

| Vertical mounting | | | | Horizontal mounting | | | |
|--------------------------|-------|--------------------------|-------|--------------------------|-------|--------------------------|-------|
| Nominal resistance R_N | | Nominal resistance R_N | | Nominal resistance R_N | | Nominal resistance R_N | |
| 47 Ω | 01191 | 22 k Ω | 01158 | 47 Ω | 03391 | 22 k Ω | 03358 |
| 100 Ω | 01151 | 47 k Ω | 01159 | 100 Ω | 03351 | 47 k Ω | 03359 |
| 220 Ω | 01152 | 100 k Ω | 01161 | 220 Ω | 03352 | 100 k Ω | 03361 |
| 330 Ω | 01169 | 220 k Ω | 01162 | 330 Ω | 03369 | 220 k Ω | 03362 |
| 470 Ω | 01153 | 470 k Ω | 01163 | 470 Ω | 03353 | 470 k Ω | 03363 |
| 1 k Ω | 01154 | 1 M Ω | 01164 | 1 k Ω | 03354 | 1 M Ω | 03364 |
| 2.2 k Ω | 01155 | 2.2 M Ω | 01165 | 2.2 k Ω | 03355 | 2.2 M Ω | 03365 |
| 4.7 k Ω | 01156 | 4.7 M Ω | 01166 | 4.7 k Ω | 03356 | 4.7 M Ω | 03366 |
| 10 k Ω | 01157 | | | 10 k Ω | 03357 | | |



Preferred packing: 1000 pcs in cardboard box

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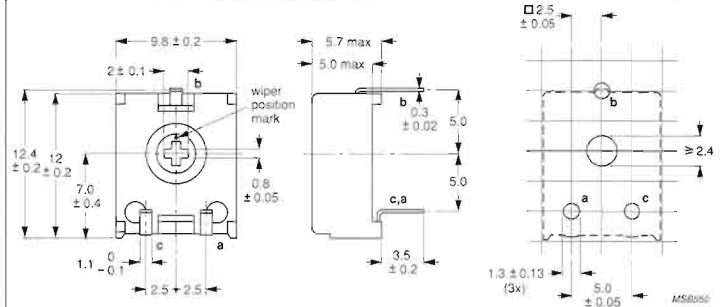
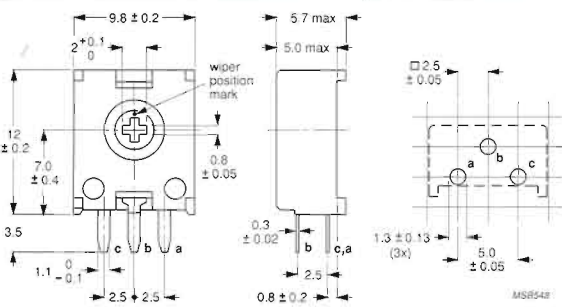
Cermet, 10 mm (see reference page 108)

Ordering information Preferred types

EMP 10, linear

Catalogue number 2322 484

| Vertical mounting | | | Horizontal mounting | | | |
|--------------------------|--|--|--------------------------|--|---|--|
| Nominal resistance R_N | Insulated cross slot Snap-in pins 20 % tolerance | Insulated cross slot straight pins 10 % tolerance (see figure) | Nominal resistance R_N | Insulated cross slot Snap-in pins 20 % tolerance | Insulated hex. slot Snap-in pins 20 % tolerance | Insulated cross slot straight pins 10 % tolerance (see figure) |
| 47 Ω | 22479 | 25479 | 47 Ω | 72479 | 62479 | 75479 |
| 100 Ω | 22101 | 25101 | 100 Ω | 72101 | 62101 | 75101 |
| 220 Ω | 22221 | 25221 | 220 Ω | 72221 | 62221 | 75221 |
| 470 Ω | 22471 | 25471 | 470 Ω | 72471 | 62471 | 75471 |
| 1 k Ω | 22102 | 25102 | 1 k Ω | 72102 | 62102 | 75102 |
| 2.2 k Ω | 22222 | 25222 | 2.2 k Ω | 72222 | 62222 | 75222 |
| 4.7 k Ω | 22472 | 25472 | 4.7 k Ω | 72472 | 62472 | 75472 |
| 10 k Ω | 22103 | 25103 | 10 k Ω | 72103 | 62103 | 75103 |
| 22 k Ω | 22223 | 25223 | 22 k Ω | 72223 | 62223 | 75223 |
| 47 k Ω | 22473 | 25473 | 47 k Ω | 72473 | 62473 | 75473 |
| 100 k Ω | 22104 | 25104 | 100 k Ω | 72104 | 62104 | 75104 |
| 220 k Ω | 22224 | 25224 | 220 k Ω | 72224 | 62224 | 75224 |
| 470 k Ω | 22474 | 25474 | 470 k Ω | 72474 | 62474 | 75474 |
| 1 M Ω | 22105 | 25105 | 1 M Ω | 72105 | 62105 | 75105 |
| 2.2 M Ω | 22225 | 25225 | 2.2 M Ω | 72225 | 62225 | 75225 |
| 4.7 M Ω | 22475 | 25475 | 4.7 M Ω | 72475 | 62475 | 75475 |
| 10 M Ω | 22106 | 25106 | 10 M Ω | 72106 | 62106 | 75106 |

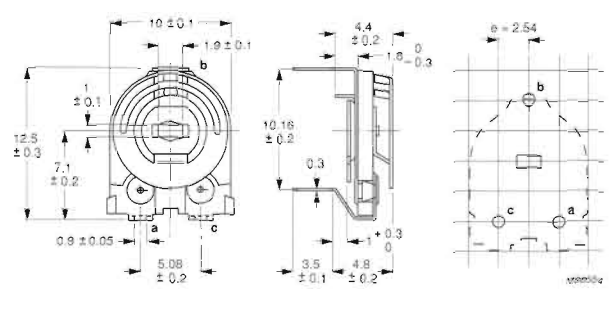
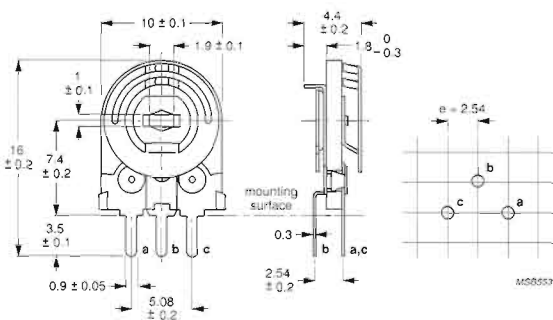


Preferred packing: 1000 pcs in cardboard box

OMP 10, linear, 20% tolerance

Catalogue number 2322 482

| Vertical mounting | | Horizontal mounting | |
|--------------------------|--------------------------|--------------------------|--------------------------|
| Nominal resistance R_N | Nominal resistance R_N | Nominal resistance R_N | Nominal resistance R_N |
| 100 Ω | 30101 | 47 k Ω | 30473 |
| 220 Ω | 30221 | 100 k Ω | 30104 |
| 470 Ω | 30471 | 220 k Ω | 30224 |
| 1 k Ω | 30102 | 470 k Ω | 30474 |
| 2.2 k Ω | 30222 | 1 M Ω | 30105 |
| 4.7 k Ω | 30472 | 2.2 M Ω | 30225 |
| 10 k Ω | 30103 | 4.7 M Ω | 30475 |
| 22 k Ω | 30223 | 10 M Ω | 30106 |



Preferred packing: 1000 pcs in blister packing (50 pcs per blister)