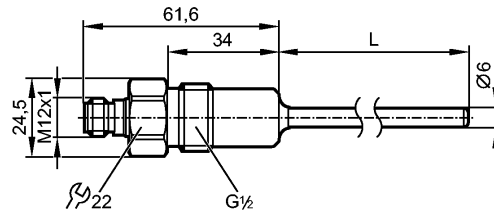


TM4591

TM-020KFER12- /US/

Temperature sensors



L = probe length (corresponds to installation length EL)



Product characteristics

| |
|--|
| Temperature sensor for connection to a control monitor with a max. operating voltage of 32 V |
| Quick disconnect |
| Process connection: G $\frac{1}{2}$ with sealing cone |
| Installation length EL: 20 mm |
| gold-plated contacts |
| Connection to control monitor TP / TR |
| Measuring range: -40...150 °C / -40...302 °F |
| Measuring element: 1 x Pt 100, to DIN EN 60751, class A |

Application

| | |
|---------------------------------|---|
| Application | liquids and gases |
| Pressure rating [bar] | 160; only applies to the sensor; for installation in adapters the indications in the adapter data sheet shall apply |
| Minimum installation depth [mm] | 15 |

Electrical data

| | |
|-------------------------------|---------|
| Connection to control monitor | TP / TR |
| Protection class | III |

Measuring / setting range

| | | |
|-----------------|--------------|--------------|
| Measuring range | -40...150 °C | -40...302 °F |
|-----------------|--------------|--------------|

Accuracy / deviations

| | |
|----------|-----------------------------------|
| Accuracy | $\pm (0.15 K + 0.002 \times t)$ |
|----------|-----------------------------------|

Reaction times

| | |
|--------------------------------|----------|
| Dynamic response T05 / T09 [s] | 1 / 3 *) |
|--------------------------------|----------|

Environment

| | |
|--------------------------|----------------|
| Ambient temperature [°C] | -25...80 |
| Protection | IP 68 / IP 69K |

Tests / approvals

| | | |
|----------------------|----------------------|---------------------|
| Shock resistance | DIN EN 60068-2-2-27: | 50 g (11 ms) |
| Vibration resistance | DIN EN 60068-2-6 | 10 g (10...2000 Hz) |
| MTTF [Years] | | 22831.05 |

Mechanical data

| | |
|-----------------------------|--|
| Process connection | G $\frac{1}{2}$ with sealing cone |
| Materials (wetted parts) | stainless steel 316L / 1.4404; surface characteristics: Ra < 0.8 / electropolished |
| Probe diameter [mm] | 6 |
| Probe length L [mm] | 20 |
| Installation length EL [mm] | 20 |
| Housing materials | stainless steel 316L / 1.4404 |

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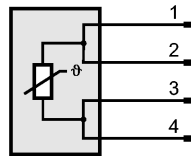
Temperature sensors

| | | |
|-------------------|------|---------|
| Tightening torque | [Nm] | 30...50 |
| Weight | [kg] | 0.132 |

Electrical connection

| | |
|------------|-------------------------------------|
| Connection | M12 connector; gold-plated contacts |
|------------|-------------------------------------|

Wiring



Remarks

| | |
|---------|--|
| Remarks | cULus - Class 2 source required *) according to DIN EN 60751 The values for accuracy apply to flowing water. |
|---------|--|

| | | |
|---------------|---------|---|
| Pack quantity | [piece] | 1 |
|---------------|---------|---|