

# FLTSN-N-1K4A1-010

## Temperature probe

The FLTSN-N passive temperature probes feature an outstanding stability of the temperature characteristics due to the platinum sensor element used. The sensor element is resin encapsulated in a stainless steel tube. These temperature sensors have a negative temperature coefficient of resistance: when the temperature rises, the resistance decreases.

### Key features

- Resin encapsulated sensor element in a stainless steel tube
- Alloy lead wires for reduced thermal conductivity
- Negative temperature coefficient
- Long-term stability
- Rapid time response: <1 second in liquids

### Technical specifications

|  |               |                            |
|--|---------------|----------------------------|
| Nominal resistance at 25° C                                  | 10 kΩ         |                            |
| Dissipation Constant in still air at 25° C                   | 0,75 mW/°C    |                            |
| Alpha Value (temperature coefficient of resistance) at 25° C | 4,39 %/°C     |                            |
| Beta Value 25/85   | 3976 K        |                            |
| Tolerance on Beta Value 25/85                                | 0,5 %         |                            |
| Resistance tolerance from 32°C to +44°C                      | ± 0,05 °C     |                            |
| Flying leads   | Length        | 1 m, can be extended*      |
|  | Cross section | 0,5 mm <sup>2</sup>        |
| Ambient conditions   | Temperature   | -40—125 °C                 |
|  | Rel. humidity | < 95 % rH (non-condensing) |

\* Use screened extension wires

### Area of use

- Temperature sensing, control and compensation in HVAC applications

### Standards

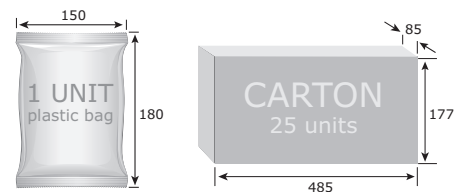
- WEEE Directive 2012/19/EC
- RoHs Directive 2011/65/EC



### Dimensions



### Packaging



| Article           | Packaging        | Length [mm] | Width [mm] | Height [mm] | Net weight | Gross weight |
|-------------------|------------------|-------------|------------|-------------|------------|--------------|
| FLTSN-N-1K4A1-010 | Bag (1 pc.)      | 150         | ≈20        | 180         | 0,032 kg   | 0,033 kg     |
|                   | Carton (25 pcs.) | 485         | 177        | 85          | 0,8 kg     | 0,97 kg      |
|                   | Box (150 pcs.)   | 590         | 280        | 280         | 4,8 kg     | 6,65 kg      |

### Nominal resistance values

| T °C | Ω      | T °C | Ω      | T °C | Ω     | T °C | Ω     | T °C | Ω    | T °C | Ω    | T °C | Ω    | T °C | Ω    | T °C | Ω   | T °C | Ω   |
|------|--------|------|--------|------|-------|------|-------|------|------|------|------|------|------|------|------|------|-----|------|-----|
| -40  | 336098 | -22  | 109032 | -4   | 40151 | 14   | 16465 | 32   | 7402 | 50   | 3601 | 68   | 1876 | 86   | 1037 | 104  | 604 | 122  | 368 |
| -39  | 314553 | -21  | 102824 | -3   | 38110 | 15   | 15714 | 33   | 7097 | 51   | 3467 | 69   | 1813 | 87   | 1005 | 105  | 587 | 123  | 359 |
| -38  | 294524 | -20  | 97006  | -2   | 36184 | 16   | 15001 | 34   | 6807 | 52   | 3339 | 70   | 1752 | 88   | 974  | 106  | 571 | 124  | 350 |
| -37  | 275897 | -19  | 91553  | -1   | 34366 | 17   | 14324 | 35   | 6530 | 53   | 3216 | 71   | 1693 | 89   | 945  | 107  | 555 | 125  | 341 |
| -36  | 258563 | -18  | 86439  | 0    | 32651 | 18   | 13682 | 36   | 6266 | 54   | 3098 | 72   | 1637 | 90   | 916  | 108  | 539 |      |     |
| -35  | 242427 | -17  | 81641  | 1    | 31031 | 19   | 13073 | 37   | 6014 | 55   | 2985 | 73   | 1582 | 91   | 888  | 109  | 524 |      |     |
| -34  | 227398 | -16  | 77138  | 2    | 29500 | 20   | 12493 | 38   | 5774 | 56   | 2877 | 74   | 1530 | 92   | 862  | 110  | 510 |      |     |
| -33  | 213394 | -15  | 72911  | 3    | 28054 | 21   | 11943 | 39   | 5544 | 57   | 2773 | 75   | 1480 | 93   | 836  | 111  | 496 |      |     |
| -32  | 200339 | -14  | 68940  | 4    | 26687 | 22   | 11420 | 40   | 5325 | 58   | 2674 | 76   | 1432 | 94   | 811  | 112  | 482 |      |     |
| -31  | 188163 | -13  | 65209  | 5    | 25395 | 23   | 10923 | 41   | 5116 | 59   | 2579 | 77   | 1385 | 95   | 787  | 113  | 469 |      |     |
| -30  | 176803 | -12  | 61703  | 6    | 24172 | 24   | 10450 | 42   | 4916 | 60   | 2487 | 78   | 1341 | 96   | 764  | 114  | 457 |      |     |
| -29  | 166198 | -11  | 58405  | 7    | 23016 | 25   | 10000 | 43   | 4724 | 61   | 2399 | 79   | 1298 | 97   | 741  | 115  | 444 |      |     |
| -28  | 156294 | -10  | 55304  | 8    | 21921 | 26   | 9572  | 44   | 4542 | 62   | 2315 | 80   | 1256 | 98   | 720  | 116  | 432 |      |     |
| -27  | 147042 | -9   | 52385  | 9    | 20885 | 27   | 9165  | 45   | 4367 | 63   | 2234 | 81   | 1216 | 99   | 699  | 117  | 421 |      |     |
| -26  | 138393 | -8   | 49638  | 10   | 19903 | 28   | 8777  | 46   | 4200 | 64   | 2157 | 82   | 1178 | 100  | 678  | 118  | 410 |      |     |
| -25  | 130306 | -7   | 47050  | 11   | 18973 | 29   | 8408  | 47   | 4040 | 65   | 2082 | 83   | 1141 | 101  | 659  | 119  | 399 |      |     |
| -24  | 122741 | -8   | 49638  | 12   | 18092 | 30   | 8056  | 48   | 3887 | 66   | 2011 | 84   | 1105 | 100  | 678  | 120  | 388 |      |     |
| -23  | 115661 | -5   | 42317  | 13   | 17257 | 31   | 7721  | 49   | 3741 | 67   | 1942 | 85   | 1070 | 103  | 622  | 121  | 378 |      |     |