

## Högtemperaturgivare för insticksvetsat skyddsrör, $t \leq 1150 \text{ }^\circ\text{C}$

### Användningsområde

För mätning av höga temperaturer i applikationer med lågt tryck. Anpassad för mätning i rör, skorstenar och kanaler med rök-och förbränningsgaser upp till  $1150 \text{ }^\circ\text{C}$ . Monteras med antingen skjutbar fläns enligt DIN EN 50446 eller med gastät klämförskruvning. Se avsnittet "Tillbehör".

### Armatyr

Skyddsficka av kromstål / 1.4762, 22 x 2 mm eller av Kanthal AF / 1.4767,  $\varnothing 19 \times 1.3 \text{ mm}$  eller  $\varnothing 22 \times 2 \text{ mm}$ . För mer information om materialens egenskaper se sida 143.

### Mätinsats

Bytbar mätinsats av typ TC 100 i Inconel 600 / 2.4816,  $\varnothing 6 \text{ mm}$ . Isolerad mätpunkt. Insatslängd =  $L + 40 \text{ mm}$ . Mätelemtyp J eller typ K. För utförlig information om mätinsatsen se TC 100.

### Processtemperatur

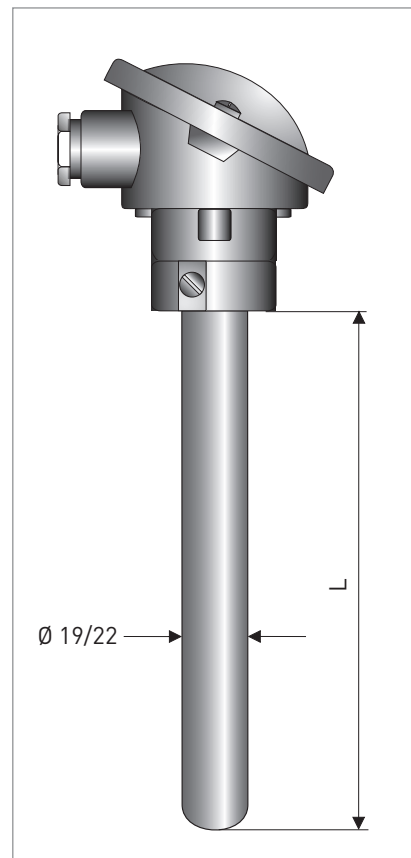
|            | J                    | K                     |
|------------|----------------------|-----------------------|
| Kromstål   | 720 $^\circ\text{C}$ | 1150 $^\circ\text{C}$ |
| Kanthal AF | 720 $^\circ\text{C}$ | 1150 $^\circ\text{C}$ |

### Kapslingsklass

Se avsnitt Kopplingshuvuden på sida 120.

### Svarstider

| Typ                       | Luft 1 m/s |          |
|---------------------------|------------|----------|
|                           | t 0.5      | t 0.9    |
| TCA-P62, $\varnothing 19$ | 3 min      | 10.4 min |
| TCA-P62, $\varnothing 22$ | 3.2 min    | 10.6 min |



Dimensioner i mm

### Beställningskod för TCA-P62 med standardinställningar

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
| V | T | C | 1 | 4 | 2 | 0 | 2 | B | A | 3 | 2 | 0 | 0 | 5  | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |
|   |   |   |   |   |   |   |   | 3 | 4 |   | 6 | 7 | 8 | 10 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |

Detta är ett urval av de valmöjligheter som finns för denna givare. För komplett beställningskod se sidan 69.

#### 3. KOPPLINGSHUVUD

|         |
|---------|
| 2 BUZ-T |
| 4 AA    |

#### 4. MÄTINSATS

|   |                       |
|---|-----------------------|
| A | 1x Termoelement Typ J |
| B | 1x Termoelement Typ K |
| D | 2x Termoelement Typ J |
| E | 2x Termoelement Typ K |

#### 6. MATERIAL SKYDDSFICKA

|   |                     |                          |
|---|---------------------|--------------------------|
| 1 | 1.4767 / Kanthal AF | ( $\varnothing 19, 22$ ) |
| 3 | 1.4762 / Kromstål   | ( $\varnothing 22$ )     |

#### 7. DIAMETER SKYDDSFICKA ( $\varnothing$ )

|   |             |           |
|---|-------------|-----------|
| 2 | 19 x 1.3 mm | (Kanthal) |
| 3 | 22 x 1.3 mm | (Kanthal) |
| 5 | 22 x 2 mm   | (1.4762)  |

#### 8. PROCESSANSLUTNING

|   |                        |
|---|------------------------|
| 0 | Utan                   |
| 2 | Klämförskruvning G 3/4 |
| 3 | Klämförskruvning G 1   |
| A | Monteringsfläns        |

#### 10. INSTICKSLÄNGD

|   |                    |
|---|--------------------|
| 4 | 500 mm             |
| 5 | 710 mm             |
| 6 | 1000 mm            |
| 7 | 1400 mm            |
| 8 | 2000 mm            |
| Z | Kundanpassad längd |

## Type code for industrial thermometers

| VTC1   |  | 4                                       |                                 | 1. Model             |  |
|--|--|---|---------------------------------|----------------------|--|
| 0  | TCA-P 60   | (TAS15)                                 | plug-in                         |                      |  |
| 1  | TCA-P 61   | (TAS21)                                 | plug-in                         |                      |  |
| 2  | TCA-P 62   | (TAS19/22)                              | plug-in                         |                      |  |
| A  | TCA-P 63   | (TKS10)                                 | plug-in                         | ceramic              |  |
| B  | TCA-P 64   | (TKS15)                                 | plug-in                         | ceramic              |  |
| C  | TCA-P 65   | (TKS24)                                 | plug-in                         | ceramic              |  |
| <b>3. Connection heads</b>                               |  |   |                                 |                      |  |
| 1  | BA   |   | Alu, M20x 1,5, IP 54            | (60, 63)             |  |
| 2  | BUZ-T (screw)                                    | hinged cover                            | Alu, M20x 1,5, IP 54            | (60, 61, 62, 63, 64) |  |
| 3  | BUZ-S (snap)                                     | hinged cover                            | Alu, M20x 1,5, IP 54            | (60, 63)             |  |
| 4  | AA   |   | Alu, M20x 1,5, IP 54            | (61, 62, 64, 65)     |  |
| <b>4. Measuring insert = sensor / wiring</b>             |  |   |                                 |                      |  |
| A  | 1x   | Thermocouple Type J (Fe-CuNi)           |                                 | (60, 61, 62)         |  |
| B  | 1x   | Thermocouple Type K (NiCr-Ni)           |                                 | (60, 61, 62, 63, 64) |  |
| D  | 2x   | Thermocouple Type J (Fe-CuNi)           |                                 | (60, 61, 62)         |  |
| E  | 2x   | Thermocouple Type K (NiCr-Ni)           |                                 | (60, 61, 62, 63, 64) |  |
| G  | 1x   | Thermocouple Type S Ø 0,35 mm (RhPt-Pt) |                                 | (63, 64, 65)         |  |
| H  | 1x   | Thermocouple Type S Ø 0,50 mm (RhPt-Pt) |                                 | (63, 64, 65)         |  |
| K  | 2x   | Thermocouple Type S Ø 0,35 mm (RhPt-Pt) |                                 | (63, 64, 65)         |  |
| L  | 2x   | Thermocouple Type S Ø 0,50 mm (RhPt-Pt) |                                 | (63, 64, 65)         |  |
| <b>6. Thermowell material</b>                            |  |   |                                 |                      |  |
| 1  | 1.4767, Kanthal AF (Ø 15, 19, 22)                |   |                                 | (60) (Ø15)           |  |
| 2  | 1.4835, 253MA (Ø 21,3), Barstock tip 1.4835      |   |                                 | (61)                 |  |
| 3  | 1.4762, Chrome steel (Ø 22)                      |   |                                 | (62)                 |  |
| 4  | 1.4835, 253MA (Ø 21,3), Barstock tip 1.4841      |   |                                 | (61)                 |  |
| A  | C610, ceramic (63) (Ø 10) (64) (Ø15)             |   |                                 | (63, 64)             |  |
| B  | C799, ceramic (63) (Ø 10) (64) (Ø15) (65) (Ø 24) |   |                                 | (63...65)            |  |
| <b>7. Thermowell diameter</b>                            |  |   |                                 |                      |  |
| 1  | 15 x 1,3 mm                                      | (Kanthal)                               |                                 | (60)                 |  |
| 2  | 19 x 1,3 mm                                      | (Kanthal)                               |                                 | (62)                 |  |
| 3  | 22 x 2 mm  | (Kanthal)                               |                                 | (62)                 |  |
| 5  | 22 x 2 mm  | (1.4762)                                |                                 | (62)                 |  |
| 8  | 21,3 x 7,2 mm                                    | (1.4835)                                | Barstock tip (1.4841 or 1.4835) | (61)                 |  |
| A  | 10 x 1,5 mm                                      | (C610)                                  |                                 | (63)                 |  |
| B  | 15 x 2 mm  | (C610)                                  |                                 | (64)                 |  |
| D  | 10 x 2 mm  | (C799)                                  |                                 | (63)                 |  |
| E  | 15 x 2,5 mm                                      | (C799)                                  |                                 | (64)                 |  |
| F  | 24x3 / 15x2,5                                    | (C799)                                  |                                 | (65)                 |  |
| <b>8. Process connection</b>                             |  |   |                                 |                      |  |
| 0  | without  |   |                                 |                      |  |
| 1  | Compression fitting G1/2"                        |   |                                 | (60, 63)             |  |
| 2  | Compression fitting G3/4"                        |   |                                 | (60, 62, 63)         |  |
| 3  | Compression fitting G1"                          |   |                                 | (60, 61, 62, 63, 64) |  |
| <b>A Mounting bracket</b>                                |  |   |                                 |                      |  |
| <b>10. Immersion length a</b>                            |  |   |                                 |                      |  |
| 1  | 180 mm   |   |                                 |                      |  |
| 2  | 250 mm   |   |                                 |                      |  |
| 3  | 355 mm   |   |                                 |                      |  |
| 4  | 500 mm   |   |                                 |                      |  |
| 5  | 710 mm   |   |                                 |                      |  |
| 6  | 1000 mm  |   |                                 |                      |  |
| 7  | 1400 mm  |   |                                 |                      |  |
| 8  | 2000 mm  |   |                                 |                      |  |
| TCA-P61 tip thermowell material (61) 1.4835 or 1.4841    |  |   |                                 |                      |  |
| A  | 710 mm   | L/U (U=200)                             |                                 |                      |  |
| B  | 1000 mm  | L/U (U=200)                             |                                 |                      |  |
| C  | 1400 mm  | L/U (U=200)                             |                                 |                      |  |
| E  | 710 mm   | L/U (U=300)                             |                                 |                      |  |
| F  | 1000 mm  | L/U (U=300)                             |                                 |                      |  |
| G  | 1400 mm  | L/U (U=300)                             |                                 |                      |  |
| L  | 1000 mm  | L/U (U=500)                             |                                 |                      |  |
| M  | 1400 mm  | L/U (U=500)                             |                                 |                      |  |
| N  | 2000 mm  | L/U (U=500)                             |                                 |                      |  |
| ↗ customised length                                      |  |   |                                 |                      |  |
| <b>11. Support tube length c</b>                         |  |   |                                 |                      |  |
| 0*   | without  |   |                                 | (60, 61, 62)         |  |
| 1  | 80 mm  |   |                                 | (63)                 |  |
| 2  | 150 mm   |   |                                 | (64)                 |  |
| 3  | 200 mm   |   |                                 | (65)                 |  |
| Z  | customised length                                |   |                                 |                      |  |
| <b>12. Type of connection / head mounted transmitter</b> |  |   |                                 |                      |  |
| 0  | with flying leads for transmitter mounting       |   |                                 |                      |  |
| 1  | Standard version with ceramic terminal block     |   |                                 |                      |  |
| L  | with head mounted transmitter TT 12 C            | // APAQ C130                            | Basic, TC                       |                      |  |
| C  | with head mounted transmitter TT 33 C            | // IPAQ C330                            | Universal                       | [Ex]                 |  |
| E  | with head mounted transmitter TT 51 C            | // IPAQ C520                            | Smart, HART, SIL2               | [Ex]                 |  |
| M  | with head mounted transmitter TT 53 C            | // IPAQ C530                            | Smart, HART                     | [Ex]                 |  |
| <b>13. Type of connection / rail mounted transmitter</b> |  |   |                                 |                      |  |
| 0  | without  |   |                                 |                      |  |
| L  | with rail mounted transmitter TT 12 R            | // APAQ R130                            | Basic, TC                       |                      |  |
| A  | with rail mounted transmitter TT 32 R            | // IPAQ-4L                              | Universal, 90 - 250 VAC         |                      |  |
| B  | with rail mounted transmitter TT 32 R            | // IPAQ-4L                              | Universal, 20 - 30 VDC          |                      |  |
| C  | with rail mounted transmitter TT 33 R            | // IPAQ R330                            | Universal                       | [Ex]                 |  |
| H  | with rail mounted transmitter TT 51 R            | // IPAQ R520                            | Smart, HART, SIL2               | [Ex]                 |  |
| M  | with rail mounted transmitter TT 53 R            | // IPAQ R530                            | Smart, HART                     | [Ex]                 |  |

Vissa kombinationer är inte möjliga. Vänligen kontakta KROHNE Inor för ytterligare information.

|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  |                               |   |   |   |            |
|------|---|---|--|---|--|--|--|--|--|--|--|--|--|--|--|--|-------------------------------|---|---|---|------------|
| VTC1 |   | 0 |  | A |  |  |  |  |  |  |  |  |  |  |  |  | 14. Transmitter configuration |   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 0                             | without   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 1                             | Configuration   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 15. Calibration report        |   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 0                             | without   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 2                             | 2 points: 0% and 100% (single-sensor)                                   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 3                             | 2 points: 0% and 100% (double-sensor)                                   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 4                             | 3 points: 0, 50 and 100% (single-sensor)                                |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 5                             | 3 points: 0, 50 and 100% (double-sensor)                                |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 6                             | acc. to customer (single-sensor)  |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 7                             | acc. to customer (double-sensor)  |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | A                             | 2 points: 0 and 100% (single-sensor & transmitter)                      |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | B                             | 3 points: 0, 50 and 100% (single-sensor & transmitter)                  |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | C                             | 5 points: 0, 25, ..., 100% (single-sensor & transmitter)                |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | E                             | 2 points: 0 and 100% (single-sensor & transmitter, incl. adjust.)       |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | F                             | 3 points: 0, 50 and 100% (single-sensor & transmitter, incl. adjust.)   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | G                             | 5 points: 0, 25, ..., 100% (single-sensor & transmitter, incl. adjust.) |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | H                             | acc. to customer (single-sensor & transmitter, incl. adjust.)           |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 16. Test certificate          |   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 0                             | without   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 1                             | Declaration of compliance with order 2.1 according to EN 10204          |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 17. Pressure test             |   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 0                             | without   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 18. Material certification    |   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 0                             | without   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 2                             | PMI test metall. pressurized wetted parts, certificate 3.1              |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 19. Marking                   |   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 0                             | without   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 1                             | Stainless steel tag plate (40 x 20 mm)                                  |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 2                             | Stainless steel tag plate (120 x 46 mm)                                 |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 20. Operating instructions    |   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 0                             | without   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 1                             | German (DE)   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 3                             | English (GB)  |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 4                             | French (FR)   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 5                             | Spanish (ES)  |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | G                             | English/German  |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 21. Private Label             |   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 0                             | KROHNE Standard Version   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 1                             | INOR Standard Version   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 22. Version                   |   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 0                             | without   |   |   |            |
|      |   |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  | 1                             | SIL2, EU- Manufacturer's declaration [TT51]                             |   |   |            |
| VTC1 | 4 | 0 |  | A |  |  |  |  |  |  |  |  |  |  |  |  | 0                             | 0   | 0 | 0 | Order code |

Exempel konfigurering

VTC14204BA330500000000010000

Hög temperatur givare

Termoelement typ K klass 1  
 Mineral isolerad Ø6 mm mät insats  
 Ø33 c 710 mm skyddsror i EN 1.4762  
 Kopplings huvud i Aluminium form A



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