



LEGGI E CONSERVA  
QUESTE ISTRUZIONI  
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THESE INSTRUCTIONS

Dimensioni / Dimensions / Dimensions / Abmen / Dimensiones (mm)

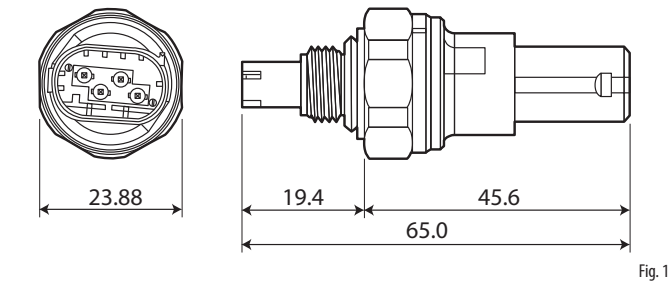


Fig. 1

Tabella di corrispondenza resistenza-temperatura / Resistance-temperature conversion table / Resistance-temperature conversion table / Umwandlungstabelle: Widerstand-Temperatur / Resistencia-temperatura tabla de conversion:

| temp<br>(°C) | R nom<br>(Ω) | R min<br>(Ω) | R max<br>(Ω) | error<br>± (Ω) | temp<br>norm (K) | temp<br>min (K) | temp<br>max (K) | upon<br>Rmin<br>error ±<br>(°C) | upon<br>Rmax<br>error ±<br>(°C) |
|--------------|--------------|--------------|--------------|----------------|------------------|-----------------|-----------------|---------------------------------|---------------------------------|
| -50          | 617589       | 583604       | 651573       | 5.5            | 223.18           | 224.00          | 222.41          | 0.8                             | 0.8                             |
| -40          | 316181       | 301183       | 331179       | 4.7            | 233.15           | 233.90          | 232.44          | 0.8                             | 0.7                             |
| -30          | 169149       | 162304       | 175994       | 4.0            | 243.12           | 243.80          | 242.46          | 0.7                             | 0.7                             |
| -20          | 94143        | 90938        | 97349        | 3.4            | 253.08           | 253.69          | 252.50          | 0.6                             | 0.6                             |
| -10          | 54308        | 52781        | 55836        | 2.8            | 263.06           | 263.59          | 262.54          | 0.5                             | 0.5                             |
| 0            | 32014        | 31290        | 32738        | 2.3            | 273.26           | 273.72          | 272.81          | 0.5                             | 0.4                             |
| 10           | 19691        | 19346        | 20036        | 1.8            | 283.24           | 283.61          | 282.87          | 0.4                             | 0.4                             |
| 20           | 12474        | 12315        | 12633        | 1.3            | 293.18           | 293.47          | 292.90          | 0.3                             | 0.3                             |
| 25           | 10000        | 9900         | 10100        | 1.0            | 298.21           | 298.44          | 297.98          | 0.2                             | 0.2                             |
| 30           | 8080         | 7977         | 8182         | 1.3            | 303.20           | 303.51          | 302.91          | 0.3                             | 0.3                             |
| 40           | 5372         | 5282         | 5462         | 1.7            | 313.18           | 313.60          | 312.76          | 0.4                             | 0.4                             |
| 50           | 3661         | 3585         | 3737         | 2.1            | 323.07           | 323.63          | 322.53          | 0.6                             | 0.5                             |
| 60           | 2536         | 2474         | 2598         | 2.4            | 333.08           | 333.77          | 332.40          | 0.7                             | 0.7                             |
| 70           | 1794         | 1744         | 1844         | 2.8            | 343.02           | 343.85          | 342.21          | 0.8                             | 0.8                             |
| 80           | 1290         | 1250         | 1330         | 3.1            | 352.99           | 353.97          | 352.05          | 1.0                             | 0.9                             |
| 90           | 941.8        | 909.6        | 974          | 3.4            | 363.00           | 364.14          | 361.91          | 1.1                             | 1.1                             |
| 100          | 697.2        | 671.3        | 723.1        | 3.7            | 373.06           | 374.36          | 371.81          | 1.3                             | 1.2                             |
| 110          | 524.9        | 504          | 545.9        | 4.0            | 383.03           | 384.50          | 381.62          | 1.5                             | 1.4                             |
| 120          | 399.6        | 382.6        | 416.6        | 4.3            | 393.08           | 394.72          | 391.51          | 1.6                             | 1.6                             |
| 130          | 308.4        | 294.6        | 322.3        | 4.5            | 403.08           | 404.89          | 401.34          | 1.8                             | 1.7                             |
| 140          | 240.3        | 229          | 251.7        | 4.7            | 413.16           | 415.17          | 411.26          | 2.0                             | 1.9                             |
| 150          | 189          | 179.6        | 198.3        | 5.0            | 423.32           | 425.54          | 421.25          | 2.2                             | 2.1                             |

Attenzione: la corrispondenza del sensore NTC resistenza-temperatura è diversa rispetto allo standard Carel. / Attention: the correspondence of NTC resistance-temperature sensor is different to Carel standard. / Attention: La correspondance de la sonde NTC résistance-température est différente par rapport au standard Carel / Achtung: Die Entsprechung des NTC-Widerstand-Temperaturfühlers fällt anders als der Carel-Standard aus. / Atencion: la correspondencia del sensor NTC resistencia-temperatura es diferente de lo standard Carel.

Diagramma: Resistenza-Temperatura / Diagram: Resistance-Temperature / Diagram: Resistance-Temperature / Diagramm: Widerstand-Temperatur/ Diagrama: Resistencia-temperatura

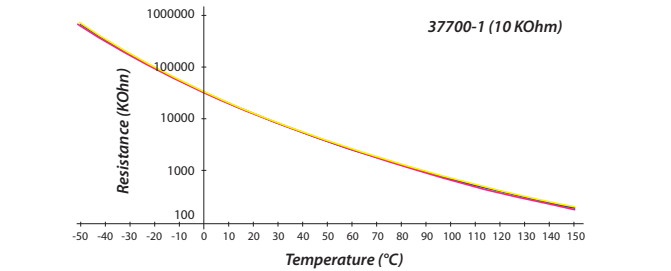


Fig. 2

Diagramma: Precisione-Temperatura / Diagram: Accuracy-Temperature / Diagram: Accuracy-Temperature / Diagram: Accuracy-Temperature/ Diagram: Accuracy-Temperature

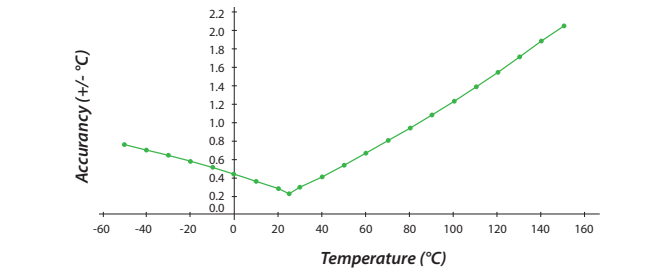


Fig. 3

Accessori / Accessories / Accessori / Accessories / Accessori

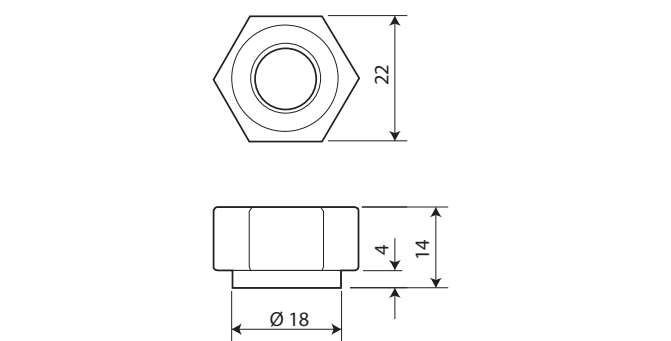


Fig. 4

Assemblaggio / Assembling / Assemblée / Versammlung / Asamblea



Fig. 5

ITA

Caratteristiche generali

Il sensore di pressione e temperatura è stato sviluppato per applicazioni nei settori di refrigerazione e condizionamento. Il sensore-traduttore di pressione è di tipo 0...5 V raziometrico, mentre il sensore di temperatura è un NTC 10 K @ 25 °C (vedi la tabella sotto).

- I vantaggi principali sono:
- Lettura di pressione e di temperatura con un unico componente;
  - Misurazione veloce della temperatura di un flusso;
  - Misurazione precisa del surriscaldamento

Il tipico impiego è in combinazione con un driver per valvola di espansione elettronica in applicazioni di refrigerazione e condizionamento.

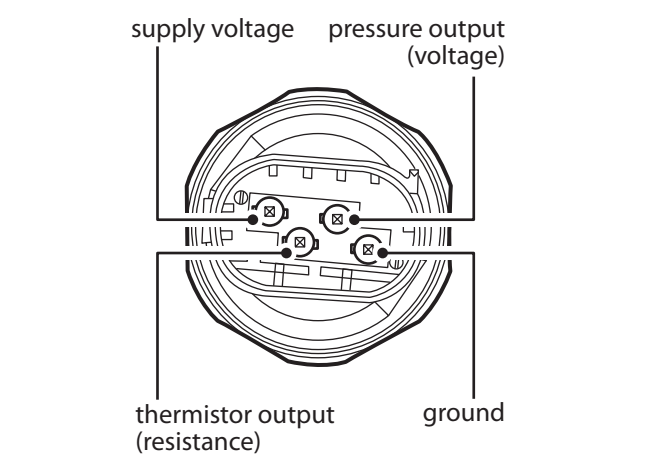
Descrizione dei codici e dei modelli

| Codice     | Pressione<br>(con 5 V) psi |       | Pressione<br>(con 5 V) bar |       | Modello | Materiale<br>del corpo | Pressione<br>di prova | Pressione<br>di scoppio |
|------------|----------------------------|-------|----------------------------|-------|---------|------------------------|-----------------------|-------------------------|
|            | 0,5 V                      | 4,5 V | 0,5 V                      | 4,5 V |         |                        |                       |                         |
| SPKP0017T0 | -5                         | 135   | -0,4                       | 9,30  | Maschio | Ottone                 | ≥ 2 x                 | ≥ 3 x                   |
| SPKP0037T0 | 15                         | 495   | 0,85                       | 34,20 | Maschio | Ottone                 | ≥ 2 x                 | ≥ 3 x                   |
| SPKP0087T0 | 25                         | 625   | 1,86                       | 43,00 | Maschio | Ottone                 | ≥ 2 x                 | ≥ 3 x                   |

Note: tutti i sensori sono di tipo sealed gauge

Collegamenti

La figura sotto rappresenta il diagramma di connessione del sensore con l'attacco maschio:



Colori dei fili e relativo segnale:

1. Il filo bianco corrisponde al segnale in uscita relativo alla pressione letta;
2. Il filo nero corrisponde all'alimentazione (5 Vdc);
3. Il filo verde corrisponde al riferimento (GND) dell'alimentazione.
4. Il filo rosso corrisponde al segnale NTC in uscita

Caratteristiche tecniche

|                         |                                                     |
|-------------------------|-----------------------------------------------------|
| Campo di pressione      | Vedi tabella "Descrizione dei codici e dei modelli" |
| Prestazioni (pressione) |                                                     |
| Precisione:             | ±0,75% F.S. (linearità, isteresi, riproducibilità)  |
| Campo di temperatura    | -40 °C... +120 °C (±0,16% span/°C)                  |

|                           |                 |
|---------------------------|-----------------|
| Prestazioni (temperatura) |                 |
| Precisione:               | ±1% (delta R/R) |
| Resistenza @ 25°C:        | 10 K            |

|                                 |                      |
|---------------------------------|----------------------|
| Caratteristiche elettriche      |                      |
| Tensione d'alimentazione (Vcc): | 4,5...5,5 Vdc        |
| Tensione d'uscita:              | 0,5...4,5 Vdc tipica |
| Corrente d'alimentazione:       | 15,0 mA max          |
| Corrente d'uscita:              | 8,0 mA               |
| Carico di uscita ammesso:       | 10 K - 50 KΩ         |
| Tempo di risposta in uscita:    | 10 mS                |
| Protezione di sovratensione:    | 16 Vdc               |
| Protezione tensione inversa:    | -14 Vdc              |

|                            |                                            |
|----------------------------|--------------------------------------------|
| Caratteristiche meccaniche |                                            |
| Pressione di prova:        | ≥ 2X                                       |
| Pressione di scoppio:      | ≥ 3X                                       |
| Durata:                    | ≥ 1 M cicli                                |
| Vibrazioni:                | 5 g                                        |
| Caduta:                    | 1 m qualsiasi asse                         |
| Collegamento elettrico:    | connettore 4 vie AMP Micro-Quadlok System™ |
| Peso:                      | max. 43 grammi                             |
| IP                         | IP67                                       |

|                                               |                                                                                                                                               |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Attacco meccanico                             | 1/4 NPT ottone                                                                                                                                |
| Coppia di serraggio                           | 20...25Nm                                                                                                                                     |
| Compatibilità refrigeranti con la guarnizione | Refrigeranti R22, R134A, R404A, R407C, R410A, R417A, R507A<br><br><b>Nota:</b> il sensore non è compatibile con refrigerante R717 (ammoniaca) |

Accessori

|                                                                                         |                   |
|-----------------------------------------------------------------------------------------|-------------------|
| Cavo con connettore, L = 2 m IP67                                                       | codice SPKC002600 |
| Cavo con connettore, L = 5 m IP67                                                       | codice SPKC005600 |
| Raccordo esagonale 22x14 da saldare sul tubo per sensore femmina SPKP 12x1,25 in ottone | codice SPKPOPZ110 |

vedi fig. 4

CAREL si riserva la possibilità di apportare modifiche o cambiamenti ai propri prodotti senza alcun preavviso.



**WARNING:** separate as much as possible the probe and digital input signal cables from the cables carrying inductive loads and power cables to avoid possible electromagnetic disturbance. Never run power cables (including the electrical panel wiring) and signal cables in the same conduits.

ENG

General characteristics

The pressure and temperature sensor have been developed for the application in the refrigeration and air conditioning sectors. The sensor pressure transducer is a radiometric version 0 to 5 V, and the NTC 10 K @ 25 °C (see table below).

- The major benefits are:
- Both pressure and temperature measurement in one package;
  - Fast In-stream temperature measurement;
  - Precise superheat measurement

The typical application is combined together with the of electronic expansion valve driver use in air Conditioning & Refrigeration.

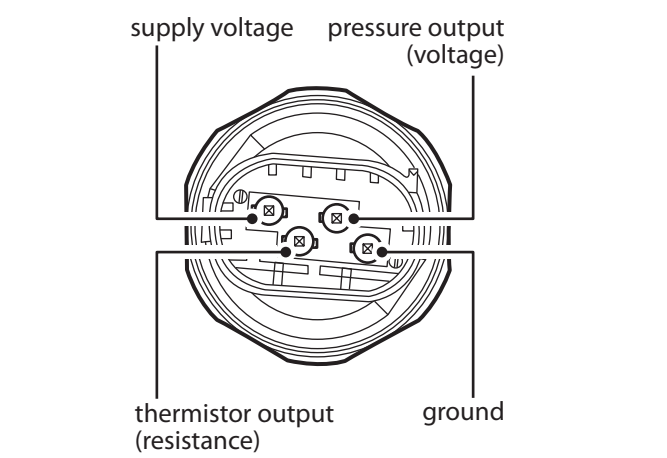
Description of codes and models

| Code       | Pressure<br>(with 5 V) psi |       | Pressure<br>(with 5 V) bar |       | Model | Body material | Proof<br>pressure | Burst<br>pressure |
|------------|----------------------------|-------|----------------------------|-------|-------|---------------|-------------------|-------------------|
|            | 0.5 V                      | 4.5 V | 0.5 V                      | 4.5 V |       |               |                   |                   |
| SPKP0017T0 | -5                         | 135   | -0.4                       | 9.30  | Male  | brass         | ≥ 2 x             | ≥ 3 x             |
| SPKP0037T0 | 15                         | 495   | 0.85                       | 34.20 | Male  | brass         | ≥ 2 x             | ≥ 3 x             |
| SPKP0087T0 | 25                         | 625   | 1.86                       | 43.00 | Male  | Ottone        | ≥ 2 x             | ≥ 3 x             |

Note: all models are sealed gauge sensors

Connections

Fig. below illustrates the connection diagram of the probe with the male connector:



Cable colours and signal:

1. White cable is the output signal relevant to the read pressure;
2. Black cable receives power supply (5 Vdc);
3. Green cable refers to the GND power supply.
4. Red cable is the output NTC signal

Technical Specifications

|                        |                                                    |
|------------------------|----------------------------------------------------|
| Pressure Ranges        | See table "Description of codes and models"        |
| Performance (pressure) |                                                    |
| Accuracy:              | ±0.75% F.S. (linearity, hysteresis, repeatability) |
| Temperature range      | -40 °C to +120 °C (±0.16% span/°C)                 |

|                           |                 |
|---------------------------|-----------------|
| Performance (temperature) |                 |
| Accuracy:                 | ±1% (delta R/R) |
| Resistance @ 25°C:        | 10 K            |

|                             |                        |
|-----------------------------|------------------------|
| Electrical                  |                        |
| Supply Voltage (Vcc):       | 4.5 to 5.5 Vdc         |
| Output Voltage:             | 0.5 to 4.5 Vdc typical |
| Supply Current:             | 15.0 mA max            |
| Output Current:             | 8.0 mA                 |
| Output Load Range:          | 10 K - 50 KΩ           |
| Output Response Time:       | 10 mS                  |
| Overvoltage Protection:     | 16 Vdc                 |
| Reverse Voltage Protection: | -14 Vdc                |

|                        |                                           |
|------------------------|-------------------------------------------|
| Physical               |                                           |
| Proof Pressure:        | ≥ 2X                                      |
| Burst Pressure:        | ≥ 3X                                      |
| Cycle Life:            | ≥ 1 M Cycles                              |
| Vibration:             | 5 g                                       |
| Drop:                  | 1 m any axis                              |
| Electrical Connection: | 4 pin AMP Micro-Quadlok System™ connector |
| Weight:                | 1.5 oz. max                               |
| IP                     | IP67                                      |

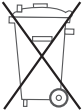
|                      |                                                                                                                                       |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Pressure Connections | 1/4 NPT brass                                                                                                                         |
| Torque force         | 20...25Nm                                                                                                                             |
| Seal compatibility   | Refrigerants R22, R134A, R404A, R407C, R410A, R417A, R507A<br><br><b>Note: sensor isn't compatible with R717 Refrigerat (ammonia)</b> |

Accessories

|                                                                                 |                 |
|---------------------------------------------------------------------------------|-----------------|
| Cable with connector 2 m IP67                                                   | code SPKC002600 |
| Cable with connector 5 m IP67                                                   | code SPKC005600 |
| Hexagonal fitting 22x14 to weld on the pipe for SPKP sensor Femle 12x1.25 Brass | code SPKPOPZ110 |

see fig. 4

CAREL reserves the right to modify the features of its products without prior notice.



**Disposal of the product**  
The appliance (or the product) must be disposed of separately in accordance with the local waste disposal legislation in force.

FRE

Caractéristiques générales

Le capteur de pression et de température a été développé pour des applications dans les secteurs de réfrigération et climatisation. Le capteur-transducteur de pression est de type 0...5 V ratiométrique, tandis que le capteur de température est un NTC 10 K @ 25 °C (voir le tableau ci-dessous), disponible en 2 différentes gammes de mesure, comme décrit ci-dessous.

Les principaux avantages sont:

- Lecture de pression et de température avec un unique composant ;
- Mesurage rapide de la température d'un flux ;
- Mesurage précis du surchauffage

L'emploi typique est en combinaison avec un driver pour détendeur électronique sur des applications de réfrigération et climatisation.

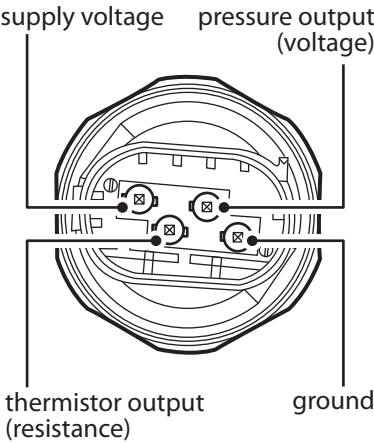
Description des codes et des modèles

| Code       | Pression<br>(avec 5 V)<br>psi |       | Pression<br>(avec 5 V)<br>bar |       | Modèle | Matériau<br>du corps | Pression<br>d'essai | Pression<br>d'éclatement |
|------------|-------------------------------|-------|-------------------------------|-------|--------|----------------------|---------------------|--------------------------|
|            | 0,5 V                         | 4,5 V | 0,5 V                         | 4,5 V |        |                      |                     |                          |
|            | -5                            | 135   | -0,4                          | 9,30  |        |                      |                     |                          |
| SPKP0017T0 | -5                            | 135   | -0,4                          | 9,30  | Mâle   | laiton               | ≥ 2 x               | ≥ 3 x                    |
| SPKP0037T0 | 15                            | 495   | 0,85                          | 34,20 | Mâle   | laiton               | ≥ 2 x               | ≥ 3 x                    |
| SPKP00B7T0 | 25                            | 625   | 1,86                          | 43,00 | Mâle   | laiton               | ≥ 2 x               | ≥ 3 x                    |

Notes: Tous les capteurs sont de type "Sealed Gauge"

Connexions

La figure ci-dessous représente le diagramme de connexion du capteur avec le raccord mâle:



Couleurs des fils et relatif signal:

1. Le fil blanc correspond au signal en sortie relatif à la pression lue ;
2. Le fil noir correspond à l'alimentation (5 Vdc) ;
3. Le fil vert correspond à la référence (GND) de l'alimentation.
4. Le fil rouge correspond au signal NTC en sortie

Caractéristiques techniques

|                                  |                                                       |
|----------------------------------|-------------------------------------------------------|
| <i>Champ de pression</i>         | Voir tableau "Description des codes et des modèles"   |
| <i>Prestations (pression)</i>    |                                                       |
| Précision:                       | ±0,75% F.S. (linéarité, hystérésis, reproductibilité) |
| Champ de température             | -40 °C... +120 °C (±0,16% span/°C)                    |
| <i>Prestations (température)</i> |                                                       |
| Précision:                       | ±1% (delta R/R)                                       |
| Résistance @ 25°C:               | 10 K ou 100 Ω                                         |

|                                     |                       |
|-------------------------------------|-----------------------|
| <i>Caractéristiques électriques</i> |                       |
| Tension d'alimentation (Vcc):       | 4,5...5,5 Vdc         |
| Tension de sortie:                  | 0,5...4,5 Vdc typique |
| Courant d'alimentation:             | 15,0 mA max           |
| Courant de sortie:                  | 8,0 mA                |
| Charge de sortie admise:            | 10 K                  |
| Temps de réponse en sortie:         | 10 mS                 |
| Protection de surtension:           | 16 Vdc                |
| Protection tension inverse:         | -14 Vdc               |

|                                    |                                              |
|------------------------------------|----------------------------------------------|
| <i>Caractéristiques mécaniques</i> |                                              |
| Pression d'essai:                  | ≥ 2X                                         |
| Pression d'éclatement:             | ≥ 3X                                         |
| Durée:                             | ≥ 1 M cycles                                 |
| Vibrations:                        | 5 g                                          |
| Chute:                             | 1 m n'importe quel axe                       |
| Branchement électrique:            | connecteur 4 voies AMP Micro-Quadlok System™ |
| Poids:                             | max. 43 grammes                              |
| IP                                 | IP67                                         |

|                                                     |                                                                                                                                                       |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Raccord mécanique</i>                            | 1/4 NPT laiton                                                                                                                                        |
| Couple de rotation                                  | 20...25Nm                                                                                                                                             |
| <i>Compatibilité des réfrigérants avec le joint</i> | Réfrigérants R22, R134A, R404A, R407C, R410A, R417A, R507A<br><br><b>Remarque:</b> le capteur n'est pas compatible avec réfrigérant R717 (ammoniaque) |

Accessoires

|                                                                                          |                 |
|------------------------------------------------------------------------------------------|-----------------|
| Câble avec connecteur, L = 2 m IP67                                                      | code SPKC002600 |
| Câble avec connecteur, L = 5 m IP67                                                      | code SPKC005600 |
| Raccord hexagonal 22x14 à souder sur le tube pour capteur femelle SPKP 12x1,25 en laiton | code SPKPOPZ110 |

voir fig. 4

GER

Allgemeine Beschreibung

Der Druck- und Temperaturfühler wurde für Kälte- und Klimatechnikanwendungen entwickelt. Der Druckfühler-/wandler entspricht dem Typ 0...5 V ratiometrisch, der Temperaturfühler ist vom Typ NTC 10 K @ 25 °C (siehe Tabelle unten).

Die grundlegenden Vorteile sind:

- Druck- und Temperaturmessung mit einem einzigen Bauteil;
- schnelle Messung einer Flusstemperatur;
- genaue Messung der Überhitzung.

Typischerweise wird er in Kälte- und Klimaanwendungen kombiniert mit einem Treiber für elektronische Expansionsventile eingesetzt.

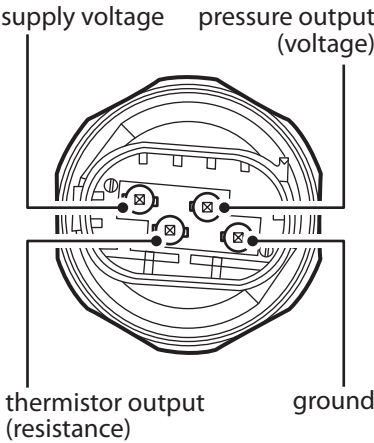
Produktcodes und Modelle

| Code       | Druck<br>(mit 5 V) psi |       | Druck<br>(mit 5 V) bar |       | Modell            | Bau-<br>material | Prüf-<br>druck | Berst-<br>druck |
|------------|------------------------|-------|------------------------|-------|-------------------|------------------|----------------|-----------------|
|            | 0,5 V                  | 4,5 V | 0,5 V                  | 4,5 V |                   |                  |                |                 |
| SPKP0017T0 | -5                     | 135   | -0,4                   | 9,30  | Außen-<br>anschl. | messing          | ≥ 2 x          | ≥ 3 x           |
| SPKP0037T0 | 15                     | 495   | 0,85                   | 34,20 | Außen-<br>anschl. | messing          | ≥ 2 x          | ≥ 3 x           |
| SPKP00B7T0 | 25                     | 625   | 1,86                   | 43,00 | Außen-<br>anschl. | messing          | ≥ 2 x          | ≥ 3 x           |

N.B.: Alle Fühler sind "Sealed Gauge"-Typ

Anschlüsse

Die nachstehende Abbildung ist der Schaltplan des Fühlers mit Außenanschluss:



Farbe der Drähte und entsprechendes Signal:

1. Der weiße Draht entspricht dem Ausgangssignal des Druckmesswertes.
2. Der schwarze Draht entspricht der Spannungsversorgung (5 Vdc).
3. Der grüne Draht entspricht der Masse (GND) der Versorgung.
4. Der rote Draht entspricht dem NTC-Ausgangssignal.

Technische Daten

|                                  |                                                                |
|----------------------------------|----------------------------------------------------------------|
| <i>Druckbereich</i>              | Siehe Tabelle "Produktcodes und Modelle"                       |
| <i>(Leistungen (Druck))</i>      |                                                                |
| Genauigkeit:                     | ±0,75% des Endwertes (Linearität, Hysterese, Wiederholbarkeit) |
| Temperaturbereich                | -40 °C... +120 °C (±0,16% span/°C)                             |
| <i>(Leistungen (Temperatur))</i> |                                                                |
| Genauigkeit:                     | ±1% (Delta R/R)                                                |
| Widerstand @ 25°C:               | 10 K o 100 Ω                                                   |

|                            |                       |
|----------------------------|-----------------------|
| <i>Elektrische Daten</i>   |                       |
| Versorgungsspannung (Vcc): | 4,5...5,5 Vdc         |
| Ausgangsspannung:          | 0,5...4,5 Vdc typisch |
| Versorgungsstrom:          | 15,0 mA max           |
| Ausgangsstrom:             | 8,0 mA                |
| Zulässige Ausgangslast:    | 10 K                  |
| Reaktionszeit im Ausgang:  | 10 mS                 |
| Schutz gegen Überspannung: | 16 Vdc                |
| Gegenspannungsschutz:      | -14 Vdc               |

|                          |                                                    |
|--------------------------|----------------------------------------------------|
| <i>Mechanische Daten</i> |                                                    |
| Prüfdruck:               | ≥ 2X                                               |
| Berstdruck:              | ≥ 3X                                               |
| Dauer:                   | ≥ 1 M Zyklen                                       |
| Vibrationen:             | 5 g                                                |
| Abfall:                  | 1 m jede Achse                                     |
| Elektroanschluss:        | 4-poliger Steckverbinder AMP Micro-Quadlok System™ |
| Gewicht:                 | Max. 43 g                                          |
| IP                       | IP67                                               |

|                                               |                                                                                                                                                 |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Mechanischer Anschluss</i>                 | 1/4 NPT messing                                                                                                                                 |
| Drehmoment                                    | 20...25Nm                                                                                                                                       |
| <i>Kältemittelkompatibilität mit Dichtung</i> | Kältemittel R22, R134A, R404A, R407C, R410A, R417A, R507A<br><br><b>NB:</b> Der Sensor ist nicht kompatibel mit dem Kältemittel R717 (Ammoniak) |

Zubehör

|                                                                                                                  |                 |
|------------------------------------------------------------------------------------------------------------------|-----------------|
| Kabel mit Steckverbinder, L = 2 m IP67                                                                           | Code SPKC002600 |
| Kabel mit Steckverbinder, L = 5 m IP67                                                                           | Code SPKC005600 |
| Sechseckiger Anschluss 22x14, auf der Leitung für Fühler mit Innenanschluss zu verlöten, SPKP 12x1,25 in Messing | Code SPKPOPZ110 |

Siehe Fig. 4

CAREL behält sich das Recht vor an seinen eigenen Produkten ohne Vorankündigungen Verbesserungen oder änderungen vorzunehmen.

SPA

Características generales

El sensor de presión y temperatura ha sido desarrollado para aplicaciones en los sectores de la refrigeración y acondicionamiento. El sensor traductor de presión es del tipo 0...5 V proporcional, mientras que el sensor de temperatura es un NTC 10 K @ 25 °C (ver la tabla de abajo).

Las ventajas principales son:

- Lectura de presión y de temperatura con un único componente;
- Medición rápida de la temperatura de un fluido;
- Medición precisa del sobrecalentamiento.

El uso típico es en combinación con un actuador para válvula de expansión electrónica en aplicaciones de refrigeración y acondicionamiento.

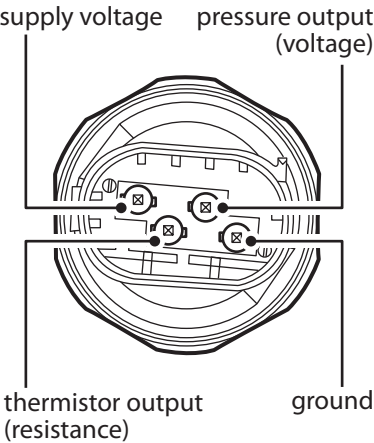
Descripción de los códigos y de los modelos

| Código     | Presión<br>(con 5 V) psi |       | Presión<br>(con 5 V) bar |       | Modelo | Material<br>del cuerpo | Presión<br>de prueba | Presión<br>de explosión |
|------------|--------------------------|-------|--------------------------|-------|--------|------------------------|----------------------|-------------------------|
|            | 0,5 V                    | 4,5 V | 0,5 V                    | 4,5 V |        |                        |                      |                         |
| SPKP0017T0 | -5                       | 135   | -0,4                     | 9,30  | Macho  | latón                  | ≥ 2 x                | ≥ 3 x                   |
| SPKP0037T0 | 15                       | 495   | 0,85                     | 34,20 | Macho  | latón                  | ≥ 2 x                | ≥ 3 x                   |
| SPKP00B7T0 | 25                       | 625   | 1,86                     | 43,00 | Macho  | latón                  | ≥ 2 x                | ≥ 3 x                   |

Notas: Todos los sensores son de tipo "sealed gauge"

Conexiones

La figura de abajo representa el diagrama de conexión del sensor con el conector macho:



Colores de los hilos y señal correspondiente:

1. El hilo blanco corresponde a la señal de salida, que es la presión leída;
2. El hilo negro corresponde a la alimentación (5 Vcc);
3. El hilo verde corresponde a la referencia (GND) de la alimentación.
4. El hilo rojo corresponde a la señal NTC en salida.

Características técnicas

|                                   |                                                         |
|-----------------------------------|---------------------------------------------------------|
| <i>Campo de presión</i>           | Ver tabla "Descripción de los códigos y de los modelos" |
| <i>Prestaciones (presión)</i>     |                                                         |
| Précision:                        | ±0,75% F.S. (linealidad, histéresis, reproductibilidad) |
| Campo de temperatura              | -40 °C... +120 °C (±0,16% banda/°C)                     |
| <i>Prestaciones (temperatura)</i> |                                                         |
| Précision:                        | ±1% (delta R/R)                                         |
| Resistencia @ 25°C:               | 10 K ó 100 Ω                                            |

|                                   |                      |
|-----------------------------------|----------------------|
| <i>Características eléctricas</i> |                      |
| Tensión de alimentación (Vcc):    | 4,5...5,5 Vcc        |
| Tensión de salida:                | 0,5...4,5 Vcc típica |
| Corriente de alimentación:        | 15,0 mA máx          |
| Corriente de salida admitida:     | 8,0 mA               |
| Resistencia de salida:            | 10 K                 |
| Tiempo de respuesta en salida:    | 10 mS                |
| Protección contra sobretensión:   | 16 Vcc               |
| Protección tensión inversa:       | -14 Vcc              |

|                                  |                                           |
|----------------------------------|-------------------------------------------|
| <i>Características mecánicas</i> |                                           |
| Presión de prueba:               | ≥ 2X                                      |
| Presión de explosión:            | ≥ 3X                                      |
| Duración:                        | ≥ 1 M ciclos                              |
| Vibraciones:                     | 5 g                                       |
| Caída:                           | 1 m cualquier eje                         |
| Conexión eléctrica:              | Conector 4 vías AMP Micro-Quadlok System™ |
| Peso:                            | Máx. 43 gramos                            |
| IP                               | IP67                                      |

|                                                     |                                                                                                                                                |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Conexiones de presión</i>                        | 1/4 NPT latón                                                                                                                                  |
| Fuerza                                              | 20...25Nm                                                                                                                                      |
| <i>Compatibilidad de refrigerantes con la junta</i> | Refrigerantes R22, R134A, R404A, R407C, R410A, R417A, R507A<br><br><b>Nota:</b> el sensor no es compatible con el refrigerante R717 (amoníaco) |

Accesorios

|                                                                                       |                   |
|---------------------------------------------------------------------------------------|-------------------|
| Cable con conector, L = 2 m IP67                                                      | código SPKC002600 |
| Cable con conector, L = 5 m IP67                                                      | código SPKC005600 |
| Rácor hexagonal 22x14 para soldar en el tubo para sensor hembra SPKP 12x1,25 de latón | código SPKPOPZ110 |

ver fig. 4

CAREL se reserva la posibilidad de modificar o cambiar las características de sus productos, sin previo aviso.