

# 11 Temperature measurement SCT analogue

## Temperature measurement SCT analogue

- High pressure-resistant temperature sensors
- Measurement of temperatures up to 1000 °C
- Flexible use
- Screw-in or rod sensors



Temperature measurements in hydraulics are used for troubleshooting and preventing damage due to excessively high temperatures on critical components such as pumps or proportional valves.

In order to carry out a precise temperature measurement, the temperature is measured directly in the pipe or hose line.

The SCT-190 series screw-in sensors can also be used in the SCFT-xxx-02-02 turbine flow meter for temperature measurement.

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## Functional description



The Parker Service Master CONNECT SCM-600-xx with input module analogue SCMI-600-01 or SCMI-600-03



Parker Serviceman Plus SCM-155-0-02

Connection cable  
SCK-102-xx-02

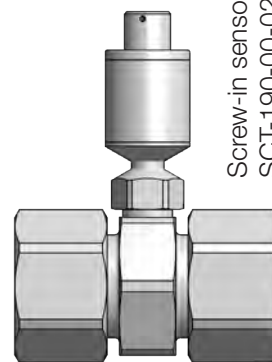
Connection cable  
SCK-102-xx-02



Rod sensor SCT-150-0-02

### Rod sensor SCT-150 (-25 °C...+125 °C)

The SCT-150-0-02 rod sensor measures temperatures in tanks and containers.



Screw-in sensor  
SCT-190-00-02

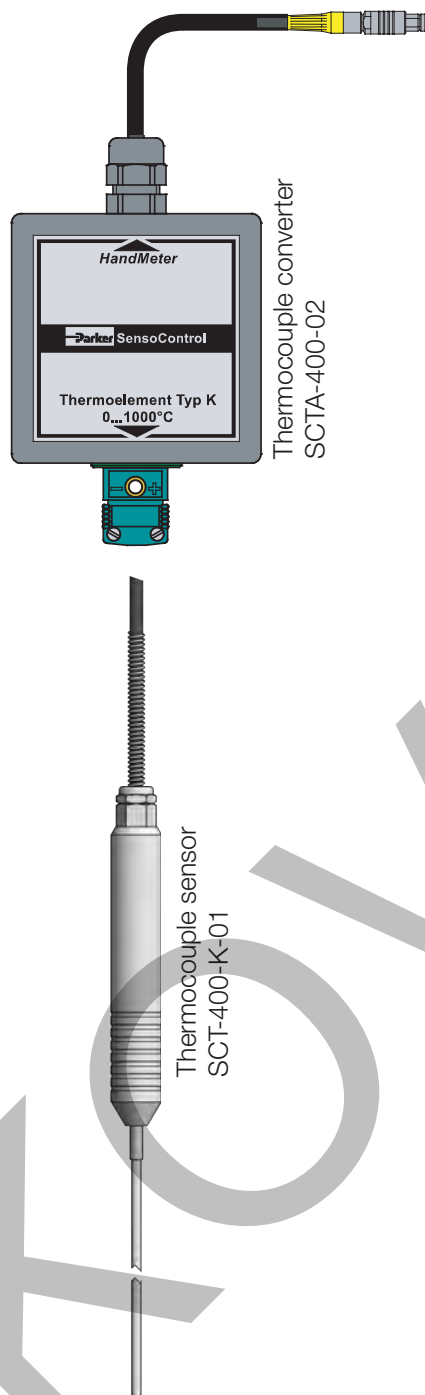
IN-LINE-Adapter  
SCA-GMA3/20S/T

### Screw-in sensor SCT-190 (-40 °C...+150 °C)

The SCT-190-xx-02 screw-in sensor can be adapted to the hydraulic system up to a system pressure of 630 bar. The screw-in plug is compatible with the GMA3/20 series measuring connections, the SCFT-xxx-02-02 turbine flow meter and the SCLV-xxx-02-02 hydraulic tester.

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## Functional description



The Parker Service Master CONNECT  
SCM-600-xx with input module analogue SCMI-600-  
01 or SCMI-600-03

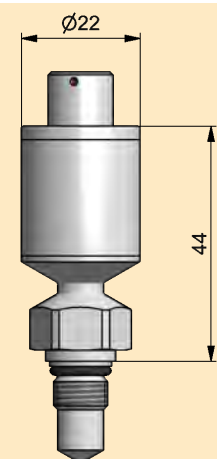
### **Thermocouple sensor SCT-400-K-01 with thermocouple converter SCTA-400-02**

High temperature-resistant thermocouple sensors measure exhaust gas temperatures on diesel engines up to 1,000 °C.

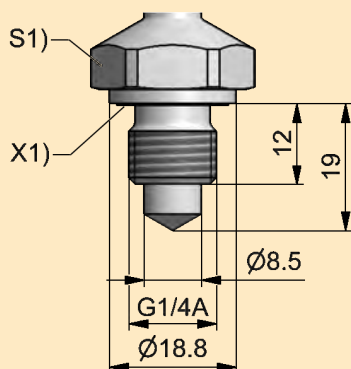
The thermocouple converter SCTA-400-02 is compatible with all type K thermocouple sensors.

# 11 Temperature measurement SCT analogue

## Technical data

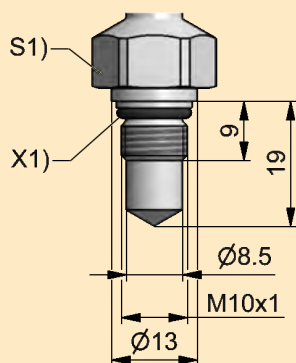


Screw-in sensor



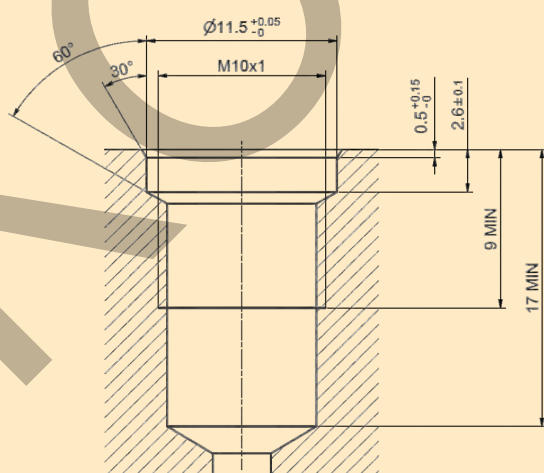
SCT-190-04-02

G1/4"-connection  
S1) = SW22  
X1) = ED-seal 14x1.5

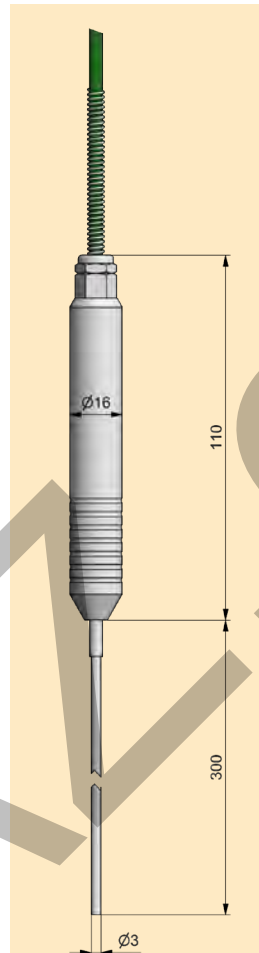


SCT-190-00-02

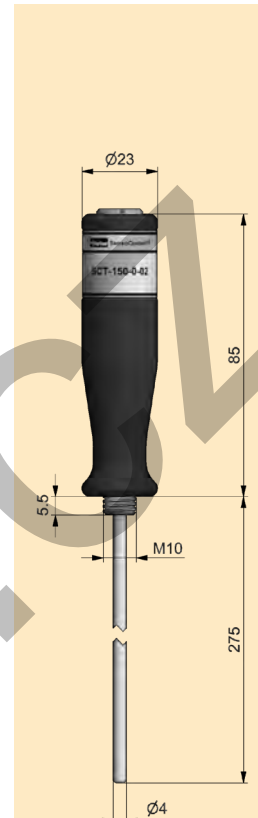
M10x1-connection  
S1) = SW17  
X1) = O-ring 7.65x1.78



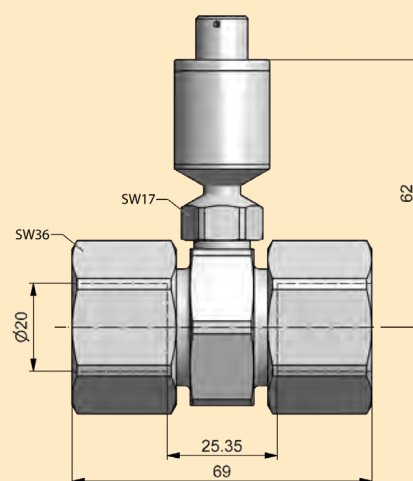
Port M10X1



Thermocouple sensor  
SCT-400-K-01

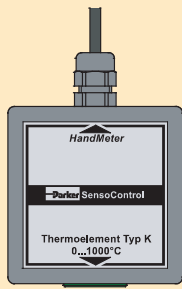


Rod sensor  
SCT-150-0-02



Screw-in sensor  
SCT-190-00-02  
with IN-LINE adapter SCA-GMA3/20S/T

# 11 Temperature measurement SCT analogue



Thermocouple converter  
SCTA-400-02

Type	SCT-190-04-02	SCT-190-00-02	SCT-150-0-02	SCT-400-K-01	SCTA-400-02
Measuring range (°C)	-40...+150	-40...+150	-25...+125	0...+1000	0...+1000
(°F)	-40...+302	-40...+302	-13...+257	0...+1832	0...+1832
Accuracy	± 1.0% FS*	± 1.0% FS*	± 1.5 K	± 1.5 K	± 1.0 % FS*
Response time	T <sub>50</sub> ≤ 4s, T <sub>90</sub> ≤ 14s	T <sub>50</sub> ≤ 4s, T <sub>90</sub> ≤ 12s	T <sub>90</sub> ≤ 9.1s	T <sub>90</sub> ≤ 5s	-
Process con- nection	G1/4"	M10x1	-	-	-
<b>Material</b>					
Housing	Stainless steel	Stainless steel	Rod: Stainless steel handle: Delrin	Stainless steel with 2 m fixed cable	ABS with 30 cm fixed cable
Seal	FKM**	FKM**	-	-	-
Weight (g)	70	55	120	150	-
Media-contact- ing parts	Stainless steel	Stainless steel	Stainless steel	Stainless steel	-
<b>Ambient conditions</b>					
Ambient temperature (°C)	-40...+85	-40...+85	-25...+85	-20...+150	0...+50
(°F)	@T <sub>Meas</sub> ≤ 85 -40...+185 @T <sub>Meas</sub> ≤ 185	@T <sub>Meas</sub> ≤ 85 -40...+185 @T <sub>Meas</sub> ≤ 185	-13...185	-4...302	+32...122
Storage temper- ature (°C)	-40...+85	-40...+85	-25...+80	-20...+80	-25...+60
(°F)	-40...+185	-40...+185	-13...+176	-13...+176	+32...+140
Operating pres- sure (bar)	630	630	-	-	-
(psi)	9100	9100	-	-	-
Overload pres- sure (bar)	800	800	-	-	-
(psi)	11600	11600	-	-	-
Burst pressure (bar)	2000	2000	-	-	-
(psi)	29000	29000	-	-	-

\* FS = FullScale (full scale value)

\*\* for temperatures -25...+150 °C, other materials on request

# 11 Temperature measurement SCT analogue

## Supply range and accessories

SCT temperature sensors	Order designation
Screw-in sensor (M10x1)	SCT-190-00-02
Screw-in sensor(G1/4" BSPP male)	SCT-190-04-02
Rod sensor	SCT-150-0-02
IN-LINE adapter pipe mounting (M10x1)	SCA-GMA3/20S/T

SCT temperature sensor ( $T_{Max} = 1,000\text{ }^{\circ}\text{C}$ )	Order designation
Thermocouple converter	SCTA-400-02
Thermocouple sensor	SCT-400-K-01

SCT temperature sensor with calibration certificate as per ISO 9001*	Order designation
Screw-in sensor (M10x1)	K-SCT-190-00-02
Screw-in sensor(G1/4" BSPP male)	K-SCT-190-04-02
Rod sensor	K-SCT-150-0-02
* calibrated range -25 ... + 100 °C	

SCK connection cables analogue	Order designation
3 m (male 5 pin - male 5 pin)	SCK-102-03-02
5 m (male 5 pin - male 5 pin)	SCK-102-05-02
5-m extension cable (male 5 pin - female 5 pin)	SCK-102-05-12

## 12 Temperature measurement SCT CAN

### Temperature measurement SCT CAN

- High pressure-resistant temperature sensors for measurements in hydraulics
- Measurement of temperatures up to 150 °C
- Flexible use
- Screw-in sensor
- Sensor identification light ring
- Accuracy  $\pm 0.66\%$
- SPEEDCON® quick plug-in screw connection
- Suitable for long cables
- Laser-welded and labelled



Temperature measurements in hydraulics are used for troubleshooting and preventing damage due to excessively high temperatures on critical components such as pumps or proportional valves.

In order to carry out a precise temperature measurement, the temperature is measured directly in the pipe or hose line.

The SCT-190 screw-in sensors series can also be used in the SCFT turbine flow meters for temperature measurement.

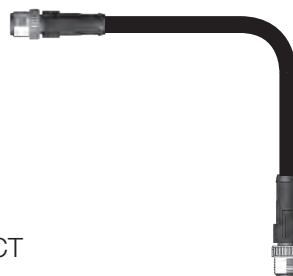
# 12 Temperature measurement SCT CAN

## Functional description



The Parker Service Master CONNECT  
SCM-600-00 or SCM-600-0A

Connection cable  
SCK-401-xx-4F-4M



Connection cable  
SCK-401-xx-4F-4M



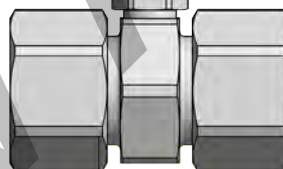
Parker Serviceman  
Plus SCM-155-2-05



Terminating  
resistor  
SCK-401-R



Turbine flow meter  
SCT-190-C0-05



IN-LINE-Adapter  
SCA-GMA3/20S/T

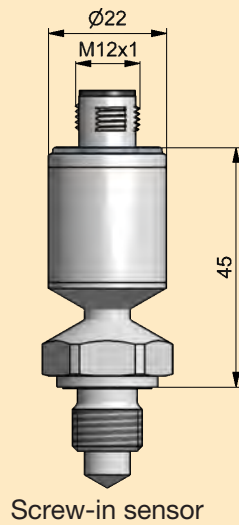
### Screw-in sensor SCT-190 (-40 °C...+150 °C)

The SCT-190-Cx-05 screw-in sensor can be adapted to the hydraulic system up to a system pressure of 630 bar. The screw-in plug is compatible with the GMA3/20 series measuring connections, the SCFTT-xxx turbine flow meter and the SCLVT-xxx hydraulic tester.

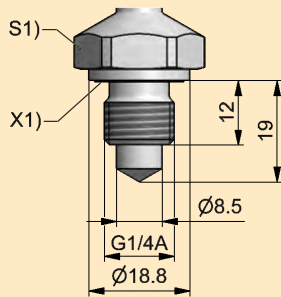


# 12 Temperature measurement SCT CAN

## Technical data

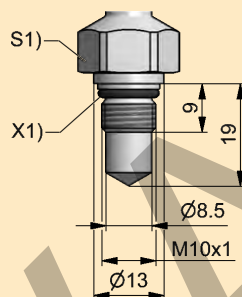


Screw-in sensor



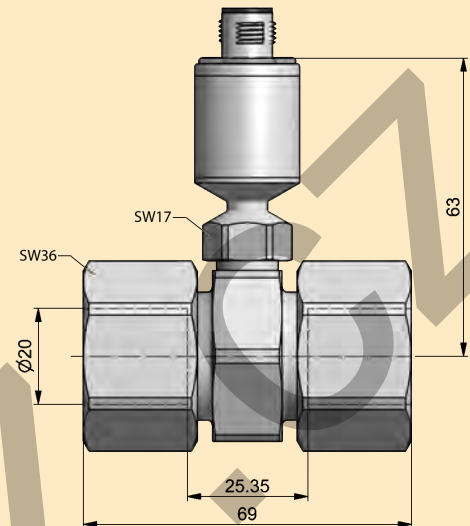
SCT-190-C4-05

G1/4"-connection  
S1) = SW22  
X1) = ED-seal 14x1.5

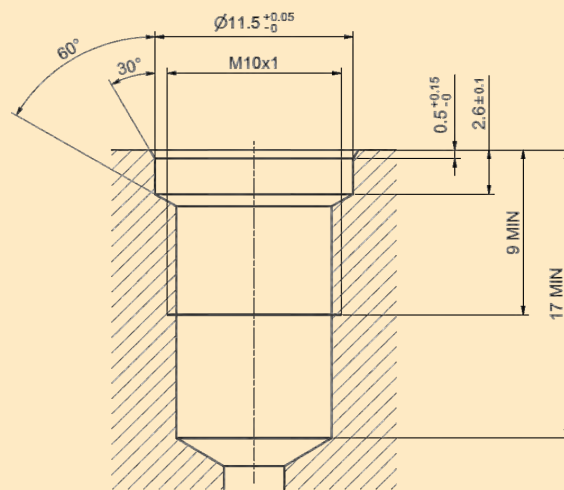


SCT-190-C0-05

M10x1-connection  
S1) = SW17  
X1) = O-ring 7.65x1.78



Screw-in sensor  
SCT-190-C0-05  
with IN-LINE adapter  
SCA-GMA3/20S/T



Port M10X1

# 12 Temperature measurement SCT CAN

Type	SCT-190-C0-05	SCT-190-C4-05
Measuring range (°C)	-40 ... +150	-40 ... +150
(°F)	-40 ... +302	-40 ... +302
Accuracy	± 0.66% FS	± 0.66% FS
Response time	$T_{50} \leq 4s, T_{90} \leq 12s$	$T_{50} \leq 4s, T_{90} \leq 12s$
Ambient temperature (°C)	-40...+85 @ $T_{Meas} \leq 85^\circ C$ -40 ... +70 @ $T_{Meas} > 85^\circ C$	-40...+85 @ $T_{Meas} \leq 85^\circ C$ -40 ... +70 @ $T_{Meas} > 85^\circ C$
(°F)	-40...+185 @ $T_{Meas} \leq 185^\circ F$ -40 ... +158 @ $T_{Meas} > 185^\circ F$	-40...+185 @ $T_{Meas} \leq 185^\circ F$ -40 ... +158 @ $T_{Meas} > 185^\circ F$
Storage temperature (°C)	-40...+85	40...+85
(°F)	-40...+185	-40...+185
Operating pressure (bar)	630	630
(psi)	9100	9100
Overload pressure (bar)	800	800
(psi)	11600	11600
Burst pressure (bar)	2000	2000
(psi)	29000	29000
Housing	Stainless steel	Stainless steel
Seal	FKM**	FKM**
Weight (g)	55	70
Media-contacting parts	Stainless steel	Stainless steel

\* FS = FullScale (full scale value)

\*\* for temperatures -25...+150 °C, other materials on request

## Supply range and accessories

SCT temperature sensors CAN	Order designation
Screw-in sensor (M10x1)	SCT-190-C0-05
Screw-in sensor(G1/4" BSPP male)	SCT-190-C4-05
IN-LINE adapter pipe mounting (M10x1)	SCA-GMA3/20S/T

SCT temperature sensor CAN with calibration certificate as per ISO 9001*	Order designation
Screw-in sensor (M10x1)	K-SCT-190-C0-05
Screw-in sensor(G1/4" BSPP male)	K-SCT-190-C4-05
* calibrated range -25 ... + 100 °C	

SCK connection cables CAN*	Order designation
0.5 m (male 5 pin - female 5 pin)	SCK-401-0.5-4F-4M
2 m (male 5 pin - female 5 pin)	SCK-401-02-4F-4M
5 m (male 5 pin - female 5 pin)	SCK-401-05-4F-4M
10 m (male 5 pin - female 5 pin)	SCK-401-10-4F-4M
Y-junction CAN	SCK-401-Y
Y-junction CAN incl. 0.3-m cable	SCK-401-0.3-Y
T-junction CAN	SCK-401-T
Terminating resistor** CAN (female 5 pin - female 5 pin)	SCK-401-R

\* Other lengths available on request

\*\* Each CAN network requires a terminating resistor