



aerospace
 climate control
 electromechanical
 filtration
fluid & gas handling
 hydraulics
 pneumatics
 process control
 sealing & shielding



SensoControl®

Product directory



ENGINEERING YOUR SUCCESS.

All the instruments meet the guidelines of the European Community (EU).
It is confirmed that these products are approved acc. to following standards.



DIN/EN 61000-6-2
DIN/EN 61000-6-3

Note!

This document and other information from Parker Hannifin GmbH, provide product or system options for further investigation by users having technical expertise. Before you select or use any product or system it is important that you analyse all aspects of your application and review the information concerning the product or system in the current product catalogue. Due to the variety of operating conditions and applications for these products or systems, the user, through his own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance and safety requirements of the application are met. The products are subject to change by Parker Hannifin GmbH at any time without notice.

Technical subject to change. November 2015
© Copyright 2015, Parker Hannifin Corporation. All right reserved.



SensoControl®

Differentiated and exact analyses - always up-to-date

Diagnosis measurement technology

Measuring
Displaying
Analyzing

Robust, fast,
easy to operate

- Early identifications of faults
 - Pressure
 - Flow rate
 - Temperature
 - Rotation speed
- Precise diagnosis
 - On-site
 - Logging of short-term incidents
 - Trend analysis over longer periods
 - Expressed graphically or numerically
 - Assessment and documentation on a PC
- For
 - preventative maintenance
 - commissioning
 - troubleshooting
 - machine optimization

Industry Products

Measuring
Managing
Regulating

Robust, long-term stability, also
suited for extreme conditions

- Displays, measurements, and parameter monitoring
 - Pressure
 - Temperature
 - Level
 - Flow rate
- Parameter analysis
 - On-site visualization
 - Suited for a rapid regulatory process
 - Reliable switching with simple operation
- Application

Ideal for assembly units in general machine and plant construction, for machine tools or presses in car plants.
Individual branch-specific solutions are available any time.

Reliable technology for trouble-free machine monitoring

ENGINEERING YOUR SUCCESS.

Parker SensoControl® Diagnosis Measurement Technology

ServiceJunior



The **ServiceJunior** enables the measurement and display of pressures in a single device. Thanks to the four-digit display, the measurement values are displayed more accurately. Pressure peaks are securely recorded with a sampling rate of 10 ms.

The **ServiceJunior** is characterized by its easy use. With its convincing price-performance ratio, the device offers all the advantages of digital pressure measurement. The measurement of MIN and MAX values enables pressure peaks to be recorded.

Device features:

- Digital pressure measurement and backlit display
- Accuracy $\pm 0.1-0.5\%$ FS (FullScale)
- Display with a bar chart (drag indicator) using the peak hold function
- Pressure peak measurement with 10 ms sampling rate
- Easy operation
- Robust and reliable
- Rotating

Parker Serviceman Plus



The new **Parker Serviceman Plus** is a mobile, extremely robust and easy-to-use measurement instrument for numerous measurement tasks in mobile hydraulics and stationary hydraulic plants.

Thanks to the automatic sensor recognition, you can simply clip in pressure, temperature, flow rate and speed sensors and start measurements immediately. No tedious sensor parameterizing required, the measuring ranges are automatically scaled and the measurement unit is shown in the display.

Device features:

- Easy operation
- Robust design with oil-resistant rubber protection
- Plug-&-Play functionality
- Large back-lit display
- New storage concept with a Nano USB stick
- Incl. PC software SensoWin®
- Can be delivered in 2 versions: analog or CAN

Catalog 4054

Catalog 4054



The Parker Service Master *Easy*



The Parker Service Master *Easy* is a multi-channel portable measurement instrument for the simultaneous measurement of important hydraulic units:

It can measure, display, store and process all hydraulic parameters such as pressure, differential pressure, temperature, rotation speed, flow rate and hydraulic performance.

In order to meet the requirements of both modern industry hydraulics and complex mobile hydraulics, different versions are available to the user.

Device features:

- 3-channel and 4-channel versions
- Easy to use thanks to automatic sensor recognition
- PC connection
- Measuring channels
- Integrated memory
- Trigger storage
- Incl. PC software SensoWin®

Catalog 4054

The Parker Service Master *Plus*



In machine, plant and vehicle construction, the implementation possibilities of hydraulics are constantly increasing through the combination of hydraulics and electronics. **The Parker Service Master *Plus*** meets the demands of this development. It has never been easier to measure, display and analyze complex processes. The tried and tested storage process is particularly targeted at the measurement of MIN and MAX values and, in combination with various display options, offers analysis possibilities for problem solving.

Device features:

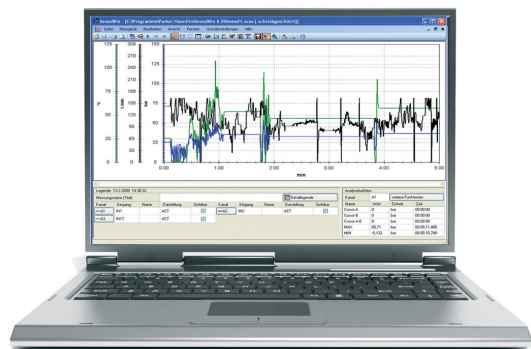
- Portable multi-function measuring instrument
- Measure, monitor and analyze pressure, temperature, volumetric flow rate and rotation speed.
- Measurements and displays from 26 sensors
- Presentation of measurement values as figures, bars, pointer and curves
- Project templates stored and loaded
- Interfaces: CAN, LAN, USB
- Storage of all measurement values for more than 1 billion values. Measurement values
- Measurement data (automated recording, storage and analysis via LAN and USB with PC software SensoWin®)

Catalog 4054

ENGINEERING YOUR SUCCESS.

Parker SensoControl® Diagnosis Measurement Technology

PC software SensoWin®



PC software **SensoWin®** is an easy-to-use aid for importing and editing the measurement curves recorded by **The Parker Serviceman Plus**, **The Parker Service Master Easy** or **The Parker Service Master Plus**.

Documentation and certificates are easily and cheaply issued, as PC software **SensoWin®** can serve all possibilities and advantages of Windows.

Device features:

- Easy operation
- Compatible with Windows 2000/XP/VISTA/7 (32- und 64-bit)
- Zoom function
- Conjunction of measurement curves
- Tabular view of measurement values
- Calculation of extreme values
- Cursor function
- Transmission of measurement procedures and documentation print-out
- Export function
- Online measurement

Test-Kit SCJN



Thanks to the **ServiceJunior-Test-Kit**, you can easily check manometers and pressure sensors, configure pressure switches and much more besides.

The Kit consists of a hand pump, with a choice of hydraulic or pneumatic, to produce a definite control pressure, and of a **ServiceJunior** as a reference device. Air, water and oil are used as pressure media.

Device features:

- Easy production of control pressures and adjustment of:
 - manometers
 - pressure sensors
 - pressure switches
 - safety valves
- Also suitable for portable use
- Pneumatic version from -0.95 - 60 bar and hydraulic version from 0 - 700 bar
- No additional power supply required
- Comprehensive adaptor set included

Catalog 4054

Catalog 4054



SCMA-FCU-600 Frequency Measurement SCMA-VADC-600



Frequency measurement with SCMA-FCU-600

With the **SCMA-FCU-600** frequency signals such as turbines, flowmeters and speed sensors with a frequency output can be connected to our portable measuring instruments. Sinusoidal or squarewave signals from 1 Hz to 5 Hz can be processed with a signal amplitude of 40 mV to 10 V. Configuration through USB and PC software.

■ Power supply for external sensor

With the **SCMA-FCU-600**, external sensors can be supplied with a voltage of 24 V.

■ Analog and CAN outlet

The **SCMA-FCU-600** can be connected to the analog or CAN input of our measuring instruments, as desired.



Measurements from other sensors with SCMA-VADC-600

Signals such as 0/4...20 mA or 0...10 V from other sensors e. g. for torque, force or displacement, can be connected to our portable measuring instruments

Applications:

- Force/displacement diagram
- Torque-volumetric flow rate characteristic curve

■ Current/voltage measurement

Electric currents up to 4 ADC and voltage up to 48 VDC can be measured with this module.

Applications:

- Current consumption at proportional valve
- Measurement of switching states of motors/pumps

Catalog 4054

Catalog 4054

ENGINEERING YOUR SUCCESS.

Parker SensoControl® Diagnosis Measurement Technology

SCP Pressure Measurement - Analog



Quick response times guarantee a quick identification of disturbing pressure peaks in the hydraulic system. The robust stainless steel construction allows a variety of applications, e. g. in hydraulics, for cooling water or in compressed air systems.

All pressure sensors are delivered with pre-assembled diagnosis adaptors (M16x2). The connection to the hydraulic system is quick and secure. Reduced assembly times.

Device features:

- Small size
- Robust stainless steel design
- Response time of 1 ms
- Pressure peaks logged
- Accuracy $\pm 0.5\%$

SCP Pressure Measurement - CAN



All the advantages of the analog SCP sensors combined with future-proof CAN bus technology. Simple wiring with the quick plug/screw connection SPEEDCON®. Plug-&-Play functionality with minimum configuration effort.

All pressure sensors are delivered with pre-assembled diagnosis adaptors (M16x2). The connection to the hydraulic system is quick and secure. Reduced assembly times.

Device features:

- Small size
- Robust stainless steel design
- Response time of 1 ms
- Pressure peaks logged
- Accuracy $\pm 0.5\%$
- Quick plug/screw connection SPEEDCON®
- Sensor identification light ring
- Suitable for long cable lengths

Pressure Measurement	
-1 ... 015 bar	Pneumatic/low pressure
0 ... 060 bar	Medium pressure
0 ... 150 bar	Medium pressure
0 ... 400 bar	Operational pressure hydraulics
0 ... 600 bar	High pressure
0 ... 1000 bar	High pressure peak load

Pressure Measurement	
-1 ... 016 bar	Pneumatic/low pressure
0 ... 060 bar	Medium pressure
0 ... 160 bar	Medium pressure
0 ... 400 bar	Operational pressure hydraulics
0 ... 600 bar	High pressure
0 ... 1000 bar	High pressure peak load

SPEEDCON® Registered trademark of the PHÖNIX CONTACT GmbH & Co company. KG

Catalog 4054

Catalog 4054



SCPT Pressure/Temperature Measurement - Analog



Quick response times guarantee a quick identification of disturbing pressure peaks in the hydraulic system. The robust stainless steel construction allows a variety of applications, e. g. in hydraulics, for cooling water or in compressed air systems.

All pressure sensors are delivered with pre-assembled diagnosis adaptors (M16x2). The connection to the hydraulic system is quick and secure. Reduced assembly times.

Device features:

- Robust stainless steel design
- Response time of 1 ms
- Pressure peaks logged
- Accuracy ± 0.5 %

SCPT Pressure/Temperature Measurement - CAN



All the advantages of the analog SCPT sensors combined with future-proof CAN bus technology. Simple wiring with the quick plug/screw connection SPEEDCON®. Plug-&-Play functionality with minimum configuration effort.

All pressure sensors are delivered with pre-assembled diagnosis adaptors (M16x2). The connection to the hydraulic system is quick and secure. Reduced assembly times.

Device features:

- Robust stainless steel design
- Response time of 1 ms
- Pressure peaks logged
- Future-proof CAN bus technology
- Simple wiring with SPEEDCON®
- Sensor identification LED
- Suitable for long cable lengths
- Accuracy ± 0.5%

Pressure Measurement	
-1 ... 015 bar	Pneumatic/low pressure
0 ... 060 bar	Medium pressure
0 ... 150 bar	Medium pressure
0 ... 400 bar	Operational pressure hydraulics
0 ... 600 bar	High pressure
0 ... 1000 bar	High pressure peak load
Temperature Measurement	
-25 ... +105 °C	Temperature

Pressure Measurement	
-1 ... 016 bar	Pneumatic/low pressure
0 ... 060 bar	Medium pressure
0 ... 160 bar	Medium pressure
0 ... 400 bar	Operational pressure hydraulics
0 ... 600 bar	High pressure
0 ... 1000 bar	High pressure peak load
Temperature Measurement	
-25 ... +105°C	Temperature

SPEEDCON® Registered trademark of the PHÖNIX CONTACT GmbH & Co company. KG

Catalog 4054

Catalog 4054

ENGINEERING YOUR SUCCESS.

SCT Temperature Measurement - Analog SCT Temperature Measurement - CAN



Temperature measurements in hydraulics are useful for searching for faults and for avoiding damage following too high temperatures in 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 insertion sensors of the SCT-190 series can also be used to measure temperature in SCFT-xxx-02-02 turbine flowmeters.

Device features:

- High pressure-resistant temperature probe
- Temperature measurement up to 1000°C
- Flexible use
- Pressure peaks logged
- Screw-in or bulb sensor



Temperature measurements in hydraulics are useful for searching for faults and for avoiding damage following too high temperatures in critical components such as pumps or proportional valves.

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

The insertion sensors of the SCT-190 series can also be used to measure temperature in SCFT-xxx-02-02 turbine flowmeters.

Device features:

- High pressure-resistant temperature probe for measuring hydraulics
- Temperature measurement up to 150°C
- Flexible use
- Insertion sensor
- Sensor identification light ring
- Accuracy ± 0.66 %
- Quick plug/screw connection SPEEDCON®
- Suitable for long cable lengths

SPEEDCON® Registered trademark of the PHÖNIX CONTACT GmbH & Co company. KG

Catalog 4054

Catalog 4054



SCRPM Speed Measurement - Analog



Performance data that depends on the rotation speed, such as the delivery rate of regulated pumps, are ideally transmitted along with the pressure and the flow rate measurement of a hydraulic drive.

Contactless speed measurement (optoelectronic principle) is fast and easy to implement.

The rotation speed is measured, e. g. at a drive shaft, and shown on the measuring instrument. No adjustment needed.

Device features:

- Also for contactless rotation speed measurement
- Speed measurements up to 10,000 RPM
- With 3-m fixed cable

SCFT Turbine Flowmeter - Analog



A turbine wheel is driven by the oil flow and thus set in motion. The frequencies produced are processed by a digital electronic device. The influence of disturbing flow effects is thus compensated. With the lower flow resistance Q_R , the hydraulic circulation operates at low loss.

The turbine flowmeter is equipped with an EMA-3 quick connect coupling to measure the pressure. Oil temperatures can be directly measured from the oil flow in the turbine flowmeter. Thus, all the important measured values are gathered in one location.

Device features:

- 6 measuring ranges up to 750 l/min
- Easy assembly
- Resistant to high pressure up to 480 bar
- Low flow resistance
- Integrated pressure and temperature measurement points
- Suitable for reverse mode

Catalog 4054

Catalog 4054

ENGINEERING YOUR SUCCESS.

SCFTT CAN Turbine Flowmeter



A turbine wheel is driven by the oil flow and thus set in motion. The frequencies produced are processed by a digital electronic device. The influence of disturbing flow effects is thus compensated. With the lower flow resistance Q_R , the hydraulic circulation operates at low loss.

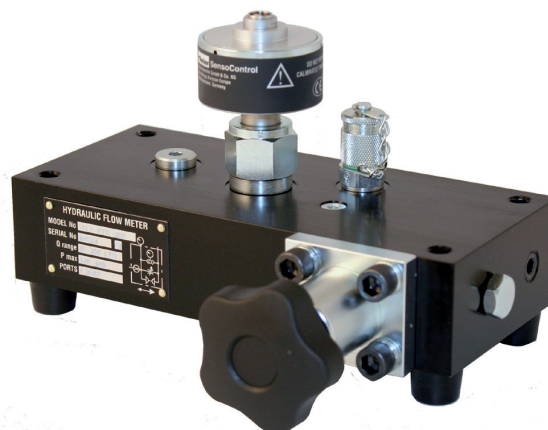
The turbine flowmeter is equipped with an EMA-3 quick connect coupling to measure the pressure.

Oil temperatures are directly measured from the oil flow in the turbine flowmeter. Thus, all the important measured values are gathered in one location.

Device features:

- Turbine flowmeter with integrated temperature sensor in CAN bus technology
- 6 measuring ranges up to 750 l/min
- Easy assembly
- Resistant to high pressure up to 480 bar
- Low flow resistance
- Integrated pressure and temperature measurement points
- Suitable for reverse mode
- Simple wiring with SPEEDCON®
- Suitable for long cable lengths
- Sensor identification LED

SCLV Hydraulics Tester - Analog and CAN



Hydraulics testers test the functions of motors, pumps, valves, and hydrostatic drives. These easy-to-handle hydraulic testers can help locate faults in a hydraulic system.

Hydraulic testers can be used for a precise measurement of pressure, temperature, and flow rate when performing maintenance work on hydraulic systems and to locate the source of faults in regulated directional control valves and in the placement of valves.

The pressure loading valve with integrated bursting discs allows pressure to build up progressively to test the flow rate over the whole work area.

Device features:

- 2 measuring ranges up to 750 l/min
- Resistant to high pressure up to 480 bar
- Integrated overload protection
- Reverse mode (flow direction A-B)
- Also with a CAN bus connection
- CAN version with integrated temperature sensor
- Connections for pressure and temperature sensors possible

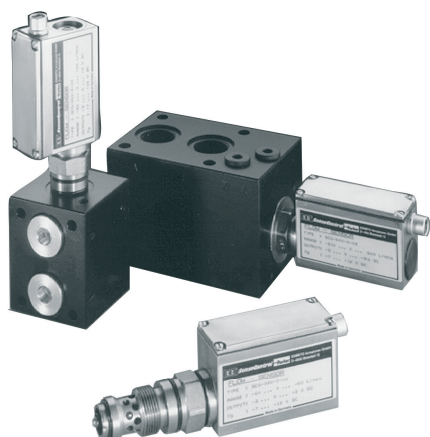
SPEEDCON® Registered trademark of the PHÖNIX CONTACT GmbH & Co company. KG

Catalog 4054

Catalog 4054



SCQ Flowmeter - Analog



In high pressure hydraulics, a rapid identification of the rate of flow is very important. Thanks to the quick response time of the flowmeter, the dynamic behavior of hydraulic systems can be measured.

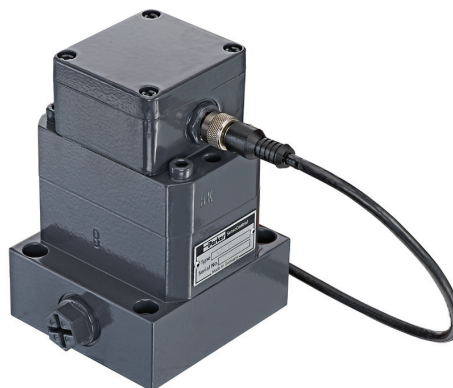
The direction indicator is helpful when searching for faults in the hydraulic system.

Quick load changes that cause damage, for example, to valves or pumps, can be identified. Assembly with the connector block allows the combined measurement of p, T, and Q. The IN-LINE adaptor for tube or hose assembly ensures the quick integration of the flowmeter into the hydraulic system. The robust construction also permits application in extreme conditions, such as a high load change or speeds of pressure increase.

Device features:

- Spring/piston system
- Flowmeter with direction indicator
- Response time ≤ 2 ms
- Compact construction
- Pressure-resistant up to 420 bar
- Wide range of viscosity
- p, T, and Q measurements possible with connector block

SCVF Volume Counter



The **SCVF** is a volume counter for highly accurate flow measurements in hydraulic installations. A very precisely worked gear pair is driven by the fluid flow.

The **SCVF** works in a wide range of viscosity. Different thicknesses allow a variety of applications.

Thanks to the wide range of viscosity, all pumpable fluids with a certain degree of lubricity can be measured:

- mineral oils
- hydraulic oils
- grease
- brake fluid (EPDM sealing)
- Skydrol (special version)

If you need to gather exact flow measurements from a wide range of viscosity, the **SCVF** volume counter is the ideal solution.

Device features:

- Measurement principle: volume/gear counter
- 4 measuring ranges up to 300 l/min
- Measurement accuracy ± 0.5 % FS
- Pressure-resistant up to 400 bar
- Wide range of viscosity
- Quiet
- Exact flow measurement over a wide range of viscosity
- Flexible use of different media

Catalog 4054

Catalog 4054

ENGINEERING YOUR SUCCESS.

SCPSDi Pressure Switch



The **SCPSDi** is an electronic pressure switch with:

- Pressure display
- 2 programmable switching outputs
- Optional analog output signal
- IO-link interface
- VDMA menu navigation

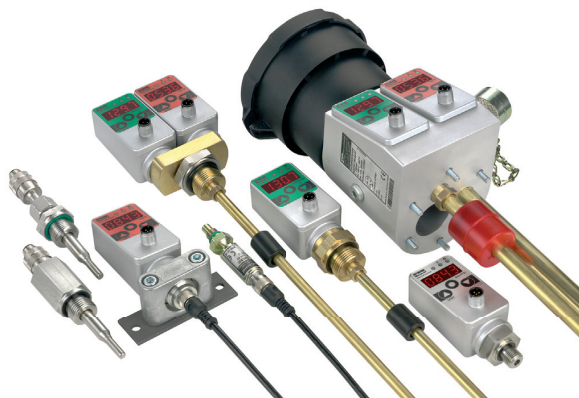
The new construction concept and the resulting assembly possibilities combined with multiple connection options are the most important characteristics of the **SCPSDi**.

This unique scope of functions makes the **SCPSDi** ideal for long-term series use in industrial applications.

Device features:

- IO-Link
- VDMA menu
- ECO Mode
- Rotating >360°
- 180° reversible display
- Analog output V/mA
- Reliable operation thanks to LOCK
- Compact
- Robust
- MPa, bar, PSI
- Metal housing
- Mounting width 35 mm
- Mounting height 78 mm

Controller Family



Controllers are used in control, management, and monitoring systems in which switch or analog signals or a display is/are necessary.

The controllers can replace:

- mechanical switches
- mechanical displays (manometers, thermometers, gauge-glasses)
- sensors

and combine all the functions of the above-named components in a single device.

Device features:

- Large display
- Freely adjustable
- Robust metal design
- Compact
- Long term stability
- Reliable
- Resistant to interference

SCPSD PressureController



The PressureController combines the functions of a pressure switch, a pressure sensor, and a display unit:

- Pressure display (manometer)
- Switching outputs
- Analog signal

Simple operation, compact construction and high reliability are the most important characteristics of the PressureController. The PressureController offers exceptional technical data and optimum pressure management, combined with various assembly options. It is therefore ideal for long-term series use in industrial applications.

Each switching output can be configured individually:

- Normally open/normally closed contact
- On/off switching pressures
- Delay times
- Hysteresis/window function
- Attenuation

These comfortable switch functions enable intelligent configurations which are not possible with mechanical switches. Thus, several switches can be replaced by a single controller.

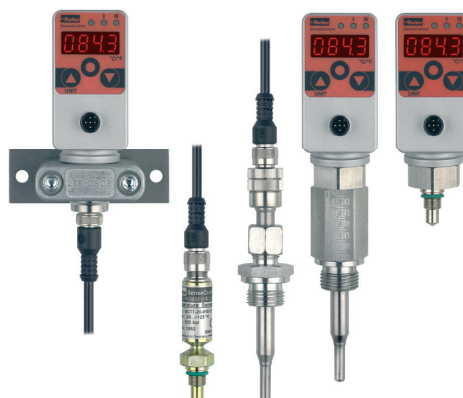
Device features:

- Compact
- Robust
- Reliable
- Easy operation
- Long term stability
- Excellent interference resistance
- Metal housing
- High protection class
- Many versions
- Rotating
- Analog output
- Password
- MPa, bar, PSI



Catalog 4083

SCTSD TemperatureController



The TemperatureController combines the functions of a temperature switch, a temperature sensor, and a display unit:

- Temperature display (thermometer)
- Switching outputs
- Analog signal

Simple operation, varied functionality, and a modular design are the most important characteristics of the TemperatureController. The TemperatureController offers exceptional technical data and optimum temperature management, combined with various assembly options. It is therefore ideal when the temperature must be safely monitored and clearly displayed.

Each switching output can be configured individually:

- Normally open/normally closed contact
- On/off switching pressures
- Delay times
- Hysteresis/window function
- Time delay

These comfortable switch functions enable intelligent configurations which are not possible with mechanical switches. Thus, several switches can be replaced by a single controller.

Device features:

- Compact
- Robust
- Reliable
- Metal housing
- Modular design
- Many versions
- Analog output
- Rotating
- Password
- °C, °F



Catalog 4083

ENGINEERING YOUR SUCCESS.

SCTSD-L Combination Switch



The **SCTSD-L** combination switch was devised around the requirements of hydraulic unit constructions and combines the functions of a fixed mechanical level switch with those of a configurable electronic temperature switch with a display.

Level

The tank level is measured by a highly dynamic and fully encapsulated magnetic float and switches the bistable dry reed contacts. The M12 pin assignment is compatible with conventional systems. The level contacts are firmly preset according to normal tank sizes. Two standard switching output versions are available.

Temperature

The temperature is measured via the temperature sensor and assessed by the SCTSD TemperatureController and continually displayed. These comfortable switch functions (e. g. window function) enable intelligent configurations which are not possible with mechanical temperature switches.

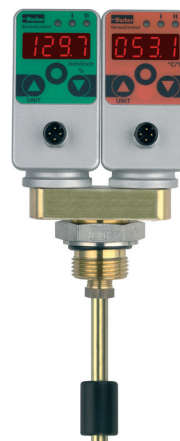
Device features:

- Compact construction
- Temperature display
- Individually configurable temperature switch outputs
- Small switching hysteresis
- Preset
 - for standard oils
 - for cooling
 - for shutdown (T_{max})
- Fixed level contacts
- Bistable contacts
- Preset level
 - Warning and shutdown min
 - Shutdown min/max
- Up to 1 m bar length



Catalog 4083

SCLTSD LevelTempController



The LevelTempController enables the temperature and the level to be configured and displayed separately on the same platform. When monitoring the tank, this integration of level and temperature functionality opens up many possibilities.

The LevelTempController combines the functions of a level/temperature switch, a level/temperature sensor, and a level/temperature display:

- Level/temperature display
- Switching outputs
- Analog signal

Level

The position of the float is finely graduated (≥ 5 mm) and continually logged and shown in mm or inches in the display. The continual logging of the level means that there is no risk of individual mechanical contacts 'sticking'. This greatly increases the operational safety of the monitored installation.

Temperature

The temperature in the medium is continually logged and shown on the display. As with the LevelController, all switching outputs can be configured individually. In addition, all the comfortable switching functions are available, including the window and hysteresis functions, normally open and normally closed contacts, and an analog output for temperature.

Device features:

- Proven measurement system
- Rotating
- Level display
- mm/inch/% display
- High & low display
- Analog output
- Switching outputs
- One borehole only
- No surge pipe necessary
- Replaces several mechanical switches



Catalog 4083



SCLSD LevelController



The LevelController combines the functions of a level switch, a level sensor, and a level display:

- Level display (gauge-glass)
- Switching outputs
- Analog signal

The LevelController is best suited for monitoring tank levels.

A variety of applications can be comfortably implemented or subsequently corrected through the menu-driven configuration of the level switching points. As the switching points no longer need to be given when ordering, the usual variability found in mechanical level switches is reduced.

Each switching output can be configured individually:

- Normally open/normally closed contact
- Higher/lower level switching point
- Delay times
- Hysteresis/window function
- Attenuation

These comfortable switch functions enable intelligent configurations which are not possible with mechanical switches. Thus, several switches can be replaced by a single controller.

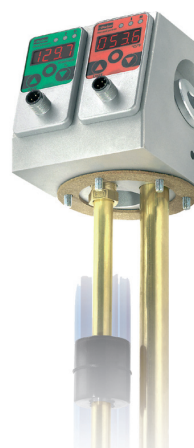
Device features:

- Proven measurement system
- Level display
- mm/inch/% display
- High & low display
- Analog output
- Switching outputs
- No surge pipe necessary
- Replaces several mechanical switches
- Rotating



Catalog 4083

SCOTC OilTankController



In addition to the LevelTempController, the OilTankController offers standardized connections for an air filter and a filling coupling.

When monitoring the tank for series use, this integration of level and temperature functionality together with air filter and fill adapter port opens up many possibilities. Only one connecting bore is needed for four functions.

The OilTankController combines the functions of a level/temperature switch, a level/temperature sensor, and a level/temperature display:

- Level/temperature display (Thermometer/gauge-glass)
- Switching outputs
- Analog signal

Each switching output can be configured individually:

A variety of applications can be comfortably implemented or subsequently corrected through the menu-driven configuration of the level switching points. As the switching points no longer need to be given when ordering, the usual variability found in mechanical level switches is reduced.

Device features:

- Proven measurement system
- Level/temperature display
- mm/inch/% display
- High & low display
- One borehole only
- Continual level measurement
- Connection
 - Filling coupling
 - Air filter
 - Negative pressure
- No surge pipe necessary



Catalog 4083

ENGINEERING YOUR SUCCESS.

SCP01 Pressure Sensors



The **SCP01** pressure sensor was designed for the requirements of industrial applications and is used for control, management, or monitoring systems. The **SCP01** is characterized by its compact form, high linearity, and excellent interference resistance. Thanks to its speed of response, the **SCP01** is also used for rapid control processes. The compact stainless steel housing is designed for harsh ambient conditions. All parts in contact with the medium are manufactured from stainless steel and, in combination with welded thin-layer measuring cell, ensure high medium compatibility. All electronic parts are encapsulated as protection against vibrations and humidity.

An EDM hole is integrated in order to ensure an exact pressure measurement free from interference. It minimizes air cavitation and thus protects the measuring cell from any pressure blows or pressure peaks that may occur.

Thanks to its long life, high accuracy, high reliability, and robust stainless steel construction, it is the device best suited for sustained series use in hydraulic applications.

Device features:

- Small construction
- Stainless steel measuring cell
- Stainless steel housing
- Resistant to shock and vibrations
- Wide-ranging media compatibility
- High linearity
- Long term stability
- Medium temperature -40 ... 125 °C
- Up to 1000 bar
- High burst pressure
- 1 ms
- EDM-drilling
- Encapsulated electronic parts

Catalog 4083



Pressure sensors SCP02



The **SCP02** was specially designed for use in mobile work machines. For this, the **SCP02** has received e1 approval and is manufactured with the latest manufacturing methods, in accordance with ISO/TS 16949.

Its resistance to shock and vibrations, EMC properties, power supply, and wider temperature range have been designed for this area of application.

Thanks to its speed of response, the **SCP02** can also be used for rapid control processes.

The compact stainless steel housing and the plastic plug enable use in harsh ambient conditions, such as are found in mobile hydraulics.

All parts in contact with the medium are manufactured from stainless steel (1.4548) and, in combination with the welded thin-layer measuring cell, ensure high medium compatibility.

An EDM hole is integrated in order to ensure an exact pressure measurement free from interference. It minimizes air cavitation and thus protects the measuring cell from any pressure blows or pressure peaks that may occur.

Device features:

- Small construction
- Stainless steel measuring cell
- Stainless steel housing
- Resistant to shock and vibrations
- High degree of protection
- E1 road approval
- Medium temperature -40 ... 150 °C
- Up to 1000 bar
- 1 ms
- Up to 36 V wiring systems



Catalog 4083

SCPS01 Pressure Switch



The **SCPS01** electronic pressure switch was conceived for use in series machines.

In order to make assembly more straightforward, the pressure switches can be pre-programmed to client-specific values upon request. Time-consuming adjustments or configuration under pressure are therefore unnecessary. The system manufacturer can configure the pressure switches by software. This excludes the possibility of an unauthorized end user manipulating the switch.

The pressure switches do not contain any mechanical moving parts. All parts in contact with the medium are made out of stainless steel and, in combination with the welded thin-layer measuring cell, ensure high medium compatibility. A cushioning mechanism can be optionally integrated in the medium inlet. The stainless steel housing enables use in extremely harsh ambient conditions.

In order to ensure a wide field of use, the EMC properties and shock and vibration resistance are configured for use in mobile work machines. The e1 approval even permits the **SCPS01** to be installed in vehicles used on public roads.

Thanks to their robust and compact construction, combined with their long-term stability and attractive price, the **SCPS01** are the alternative to mechanical pressure switches.

Device features:

- Long life
- No re-adjustment
- Engineered for harsh environments
- Precise switching



Catalog 4083

SCP-EX Pressure Sensors



The **SCP-EX** can be configured for Zone 1 and conforms with Directive 94/9/EC. Thanks to the appropriate protective circuits, polarity reversal protection, overvoltage protection, and power dissipation limitation will be activated in the case of a fault. Its wide-reaching industrial application options are guaranteed through high accuracy and a robust and compact construction. Various pressure transducers are available thanks to its compatibility with different mechanical and electrical connections.

For Zone 1, in which explosive atmospheres, such as a mix of inflammable compounds in the form of gas, steam, or haze and air, sometimes occur in normal operation. It is essential to adhere to the relevant national safety regulations when assembling, commissioning, and operating these pressure transducers.

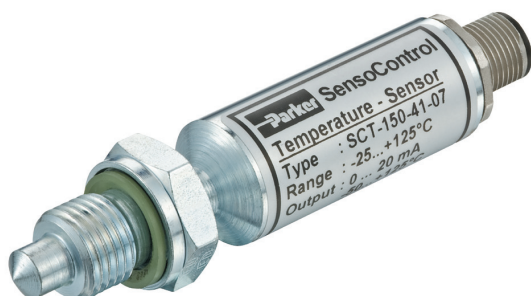
Device features:

- Measuring ranges 0 ... 1000 bar
- ATEX approval for Zone 1
 - II 2G Ex ia IIC T4
- Output signal 4 ... 20 mA
- High reliability

Catalog 4083

ENGINEERING YOUR SUCCESS.

SCT-150 Temperature Sensors



A compact construction and high pressure resistance characterize the **SCT-150** electronic temperature sensor.

If the temperature needs to be measured under high pressure and a compact construction is necessary, the **SCT** can be used.

Thanks to its pressure resistance up to 630 bar, the **SCT** temperature sensor is suited to the needs of hydraulic applications.

It performs precise and quick temperature measurements.

The temperature sensors in the **SCT** series are compatible with the **SCE** panel measuring instruments. This allows the medium temperature as well as the hydraulic pressure to be measured, controlled, and evaluated.

Device features:

- Pressure-resistant up to 630 bar
- Compact construction
- Robust steel housing
- Easy assembly
- -25 °C ... +100 °C

SCE-020 Digital Display Unit



Multiple connections, a flexible display and numerous outlets characterize the **SCE** digital display unit. The **SCE-020** converts analog standard signals (in 0 ... 10 V to 0/4 ... 20 mA ranges) into easily understood measurement values/units.

Thus, the **SCE-020** can easily display any sensor (pressure, temperature, torque, length etc.) desired.

The display can be read from a great distance. In order to present different measuring values, the desired measurement range and the decimal point can be set easily and in a user-friendly way. Additional units are shown on a separate illuminated surface. The power supply can range from 11 to 30 VDC. An adjustable limit value can be monitored through the potential-free switching output. The analog output and the RS232 series interface can forward the signal to a corresponding peripheral device. If different measuring values need to be presented easily and in a flexible manner, the **SCE-020** display unit can be used.

Device features:

- Easily readable digital display:
 - large
 - bright
- Programmable
- Free choice of unit
- Input:
 - current 0/4 ... 20 mA
 - voltage 0 ... 10 V
 - frequency 0 ... 8 kHz
- Switching output
- Loophrough function:
 - analog output
 - series interface
- Standard housing 96 x 48 mm

Catalog 4083

Catalog 4083



SCK Cable



SensoControl® cables are designed according to the requirements of industrial sensors and switches.

M12 cables and M12 plugs are therefore usually

- compact
- screened
- 5-pin

5-pin design

The 5-pin cables are suitable for both 4 and 5-pin connections. 5-pin cables are fully compatible with sensor versions with 4-pin plugs.

This means that a (5-pin) cable design can always be used for pressure switches (Controller Family SCxSD & SCOTC) and sensors irrespective of the plug version and the different number of pins.

The SCK-400-xxx-x5 cables are compatible with all components with M12 plug connections.

Shielding

The screening ensures high interference resistance and operational safety.

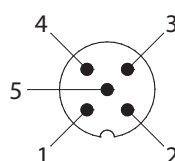
- High EMC protection

Device features:

- One cable for everything
- Compact
- Resistant to interference
- Compatible with:
 - sensors
 - controllers
- M12 plugs
- DIN EN 175301 (connector plugs)
- Different lengths

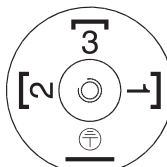
Connector assignment

SCK-400-xx-x5



PIN			
1	bn	brown	brown
2	wh	white	white
3	bu	blue	blue
4	bk	black	black
5	gy	grey	grey

SCK-400-xx-56



PIN			
1	ye	yellow	yellow
2	gn	green	green
3	bn	brown	brown

Parker SensoControl® Test couplings and adaptors

EMA1/EMA3/EMA4 test points

EMA1



EMA3/ EMA4



- To monitor and control pressure in high, low, and negative pressure systems.
- To ventilate cylinders and hydraulic systems.
- For taking samples from high, low, and negative pressure.

Advantages

- Leak-proof sealing of the connection before opening the valve
- Robust, reliable designs for small dimensions
- Easy handling
- Simple connections for measuring, testing, and switching devices
- Couplings under pressure up to 400 bar possible for types with screw couplings
- Nominal pressures to 630 bar
- Vibration-proof metal protective cap

Sealing system for primary seal

For EMA1: a non-return ball valve.

For EMA3/EMA4: a sealing cone with an O-Ring seal.

The EMA3/EMA4-sealing system guarantees minimal leakage.

An additional O-ring seal is effective as a secondary seal for screwed-on screw caps (EMA3/EMA4) and coupled sealing plugs (EMA1), as well as for connected measurement hoses.

Differences between the EMA1 and EMA3/EMA4 types

- a) Sealing system (see above paragraph)
- b) Measuring hose connection with plug coupling for EMA1
measuring hose connection with screw coupling EMA3/EMA4
- c) Nominal pressures (s. paragraph "Nominal pressures")

Nominal pressures

- EMA3/EMA4 types to 630 bar
- EMA1 types to 400 bar
- Adaption under pressure to max. 400 bar

Materials and temperatures

- Steel Cr(VI)-free
- Stainless steel, material no. 1.4571
- Seals:
 - FKM (temperature range: -20 to +200 °C)
 - EPDM (ethylene propylene for brake fluid)
 - Temperature range: (-40 to +150 °C)
- Hose:
 - Polyamide (temperature range: -35 to +100 °C)
- For stainless steel version, FKM only

Utilities

- Suitable for hydraulic oils and other oils with a mineral oil base (take sealing material into account)
- When using with other fluid or gas media, please inquire with information on the medium or the sealing material, or notify us when ordering.

Catalog 4100





At Parker, we're guided by a relentless drive to help our customers become more productive and achieve higher levels of profitability by engineering the best systems for their requirements. It means looking at customer applications from many angles to find new ways to create value. Whatever the motion and control technology need, Parker has the experience, breadth of product and global reach to consistently deliver. No company knows more about motion and control technology than Parker. For further info call 00800 27 27 5374

Parker's Motion & Control Technologies



Aerospace

Key Markets
 Aftermarket services
 Commercial transports
 Engines
 General & business aviation
 Helicopters
 Launch vehicles
 Military aircraft
 Missiles
 Power generation
 Regional transports
 Unmanned aerial vehicles

Key Products

Control systems & actuation products
 Engine systems & components
 Fluid conveyance systems & components
 Fluid metering, delivery & atomization devices
 Fuel systems & components
 Fuel tank inerting systems
 Hydraulic systems & components
 Thermal management
 Wheels & brakes



Climate Control

Key Markets
 Agriculture
 Air conditioning
 Construction Machinery
 Food & beverage
 Industrial machinery
 Life sciences
 Oil & gas
 Precision cooling
 Process
 Refrigeration
 Transportation

Key Products

Accumulators
 Advanced actuators
 CO₂ controls
 Electronic controllers
 Filter driers
 Hand shut-off valves
 Heat exchangers
 Hose & fittings
 Pressure regulating valves
 Refrigerant distributors
 Safety relief valves
 Smart pumps
 Solenoid valves
 Thermostatic expansion valves



Electromechanical

Key Markets
 Aerospace
 Factory automation
 Life science & medical
 Machine tools
 Packaging machinery
 Paper machinery
 Plastics machinery & converting
 Primary metals
 Semiconductor & electronics
 Textile
 Wire & cable

Key Products

AC/DC drives & systems
 Electric actuators, gantry robots & slides
 Electrohydraulic actuation systems
 Electromechanical actuation systems
 Human machine interface
 Linear motors
 Stepper motors, servo motors, drives & controls
 Structural extrusions



Filtration

Key Markets
 Aerospace
 Food & beverage
 Industrial plant & equipment
 Life sciences
 Marine
 Mobile equipment
 Oil & gas
 Power generation & renewable energy
 Process
 Transportation
 Water Purification

Key Products

Analytical gas generators
 Compressed air filters & dryers
 Engine air, coolant, fuel & oil filtration systems
 Fluid condition monitoring systems
 Hydraulic & lubrication filters
 Hydrogen, nitrogen & zero air generators
 Instrumentation filters
 Membrane & fiber filters
 Microfiltration
 Sterile air filtration
 Water desalination & purification filters & systems



Fluid & Gas Handling

Key Markets

Aerial lift
 Agriculture
 Bulk chemical handling
 Construction machinery
 Food & beverage
 Fuel & gas delivery
 Industrial machinery
 Life sciences
 Marine
 Mining
 Mobile
 Oil & gas
 Renewable energy
 Transportation

Key Products

Check valves
 Connectors for low pressure fluid conveyance
 Deep sea umbilicals
 Diagnostic equipment
 Hose couplings
 Industrial hose
 Mooring systems & power cables
 PTFE hose & tubing
 Quick couplings
 Rubber & thermoplastic hose
 Tube fittings & adapters
 Tubing & plastic fittings



Hydraulics

Key Markets

Aerial lift
 Agriculture
 Alternative energy
 Construction machinery
 Forestry
 Industrial machinery
 Machine tools
 Marine
 Material handling
 Mining
 Oil & gas
 Power generation
 Refuse vehicles
 Renewable energy
 Truck hydraulics
 Turf equipment

Key Products

Accumulators
 Cartridge valves
 Electrohydraulic actuators
 Human machine interfaces
 Hybrid drives
 Hydraulic cylinders
 Hydraulic motors & pumps
 Hydraulic systems
 Hydraulic valves & controls
 Hydrostatic steering
 Integrated hydraulic circuits
 Power take-offs
 Power units
 Rotary actuators
 Sensors



Pneumatics

Key Markets

Aerospace
 Conveyor & material handling
 Factory automation
 Life science & medical
 Machine tools
 Packaging machinery
 Transportation & automotive

Key Products

Air preparation
 Brass fittings & valves
 Manifolds
 Pneumatic accessories
 Pneumatic actuators & grippers
 Pneumatic valves & controls
 Quick disconnects
 Rotary actuators
 Rubber & thermoplastic hose & couplings
 Structural extrusions
 Thermoplastic tubing & fittings
 Vacuum generators, cups & sensors



Process Control

Key Markets

Alternative fuels
 Biopharmaceuticals
 Chemical & refining
 Food & beverage
 Marine & shipbuilding
 Medical & dental
 Microelectronics
 Nuclear Power
 Offshore oil exploration
 Oil & gas
 Pharmaceuticals
 Power generation
 Pulp & paper
 Steel
 Water/wastewater

Key Products

Analytical Instruments
 Analytical sample conditioning products & systems
 Chemical injection fittings & valves
 Fluoropolymer chemical delivery fittings, valves & pumps
 High purity gas delivery fittings, valves, regulators & digital flow controllers
 Industrial mass flow meters/controllers
 Permanent no-weld tube fittings
 Precision industrial regulators & flow controllers
 Process control double block & bleeds
 Process control fittings, valves, regulators & manifold valves



Sealing & Shielding

Key Markets

Aerospace
 Chemical processing
 Consumer
 Fluid power
 General industrial
 Information technology
 Life sciences
 Microelectronics
 Military
 Oil & gas
 Power generation
 Renewable energy
 Telecommunications
 Transportation

Key Products

Dynamic seals
 Elastomeric o-rings
 Electro-medical instrument design & assembly
 EMI shielding
 Extruded & precision-cut, fabricated elastomeric seals
 Homogeneous & inserted elastomeric shapes
 Medical device fabrication & assembly
 Metal & plastic retained composite seals
 Shielded optical windows
 Silicone tubing & extrusions
 Thermal management
 Vibration dampening

ENGINEERING YOUR SUCCESS.

Parker Worldwide

Europe, Middle East, Africa

AE – United Arab Emirates, Dubai
Tel: +971 4 8127100
parker.me@parker.com

AT – Austria, Wiener Neustadt
Tel: +43 (0)2622 23501-0
parker.austria@parker.com

AT – Eastern Europe, Wiener Neustadt
Tel: +43 (0)2622 23501 900
parker.easteurope@parker.com

AZ – Azerbaijan, Baku
Tel: +994 50 2233 458
parker.azerbaijan@parker.com

BE/LU – Belgium, Nivelles
Tel: +32 (0)67 280 900
parker.belgium@parker.com

BG – Bulgaria, Sofia
Tel: +359 2 980 1344
parker.bulgaria@parker.com

BY – Belarus, Minsk
Tel: +375 17 209 9399
parker.belarus@parker.com

CH – Switzerland, Etoy
Tel: +41 (0)21 821 87 00
parker.switzerland@parker.com

CZ – Czech Republic, Klecany
Tel: +420 284 083 111
parker.czechrepublic@parker.com

DE – Germany, Kaarst
Tel: +49 (0)2131 4016 0
parker.germany@parker.com

DK – Denmark, Ballerup
Tel: +45 43 56 04 00
parker.denmark@parker.com

ES – Spain, Madrid
Tel: +34 902 330 001
parker.spain@parker.com

FI – Finland, Vantaa
Tel: +358 (0)20 753 2500
parker.finland@parker.com

FR – France, Contamine s/Arve
Tel: +33 (0)4 50 25 80 25
parker.france@parker.com

GR – Greece, Athens
Tel: +30 210 933 6450
parker.greece@parker.com

HU – Hungary, Budaörs
Tel: +36 23 885 470
parker.hungary@parker.com

IE – Ireland, Dublin
Tel: +353 (0)1 466 6370
parker.ireland@parker.com

IT – Italy, Corsico (MI)
Tel: +39 02 45 19 21
parker.italy@parker.com

KZ – Kazakhstan, Almaty
Tel: +7 7273 561 000
parker.easteurope@parker.com

NL – The Netherlands, Oldenzaal
Tel: +31 (0)541 585 000
parker.nl@parker.com

NO – Norway, Asker
Tel: +47 66 75 34 00
parker.norway@parker.com

PL – Poland, Warsaw
Tel: +48 (0)22 573 24 00
parker.poland@parker.com

PT – Portugal, Leca da Palmeira
Tel: +351 22 999 7360
parker.portugal@parker.com

RO – Romania, Bucharest
Tel: +40 21 252 1382
parker.romania@parker.com

RU – Russia, Moscow
Tel: +7 495 645-2156
parker.russia@parker.com

SE – Sweden, Spånga
Tel: +46 (0)8 59 79 50 00
parker.sweden@parker.com

SK – Slovakia, Banská Bystrica
Tel: +421 484 162 252
parker.slovakia@parker.com

SL – Slovenia, Novo Mesto
Tel: +386 7 337 6650
parker.slovenia@parker.com

TR – Turkey, Istanbul
Tel: +90 216 4997081
parker.turkey@parker.com

UA – Ukraine, Kiev
Tel: +380 44 494 2731
parker.ukraine@parker.com

UK – United Kingdom, Warwick
Tel: +44 (0)1926 317 878
parker.uk@parker.com

ZA – South Africa, Kempton Park
Tel: +27 (0)11 961 0700
parker.southafrica@parker.com

North America

CA – Canada, Milton, Ontario
Tel: +1 905 693 3000

US – USA, Cleveland
Tel: +1 216 896 3000

Asia Pacific

AU – Australia, Castle Hill
Tel: +61 (0)2-9634 7777

CN – China, Shanghai
Tel: +86 21 2899 5000

HK – Hong Kong
Tel: +852 2428 8008

IN – India, Mumbai
Tel: +91 22 6513 7081-85

JP – Japan, Tokyo
Tel: +81 (0)3 6408 3901

KR – South Korea, Seoul
Tel: +82 2 559 0400

MY – Malaysia, Shah Alam
Tel: +60 3 7849 0800

NZ – New Zealand, Mt Wellington
Tel: +64 9 574 1744

SG – Singapore
Tel: +65 6887 6300

TH – Thailand, Bangkok
Tel: +662 186 7000-99

TW – Taiwan, Taipei
Tel: +886 2 2298 8987

South America

AR – Argentina, Buenos Aires
Tel: +54 3327 44 4129

BR – Brazil, Sao Jose dos Campos
Tel: +55 800 727 5374

CL – Chile, Santiago
Tel: +56 2 623 1216

MX – Mexico, Toluca
Tel: +52 72 2275 4200

EMEA Product Information Centre

Free phone: 00 800 27 27 5374

(from AT, BE, CH, CZ, DE, DK, EE, ES, FI, FR, IE, IL, IS, IT, LU, MT, NL, NO, PL, PT, RU, SE, SK, UK, ZA)

US Product Information Centre

Toll-free number: 1-800-27 27 537

www.parker.com

