

# The Parker Service Master *Plus*








ENGINEERING YOUR SUCCESS.

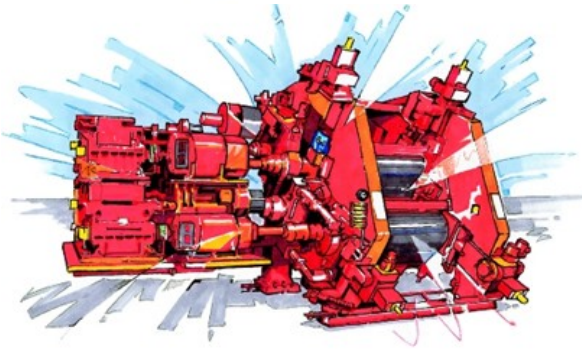


# Diagnostic Products SensoControl®

## Product portfolio:

Measure - Display	Measure - Display - Saving	Analyzing
  <p>ServiceJunior    Serviceman</p>	  <p>ServiceJunior <i>wireless</i>    ServiceMaster <i>Easy</i></p>	 <p>The Parker ServiceMaster <i>Plus</i></p>

# Applications of Diagnostic Products



- **Mobile:**

- Excavator - Crane – Crawler
- Roadwork vehicle
- Agriculture machines
- Fork lifts
- Working platform

- **Industry:**

- Spray cast machines
- Aluminium-pressure cast machines
- Machine tools
- Hydraulic compression
- Paper machines

- **For**

- Preventive maintenance
- Implementing
- Trouble shooting
- Machine improvement

# The Parker Service Master Plus

## Overview



# The Parker Service Master *Plus*



## Funktionen:

- Portable handmeter
- Measurement, display and analyzing of more than

### 50 Channels for

- Pressure,
- Temperature,
- Speed,
- Volume Flow
- Display of values: Numeric, Bar Graph, Gauge, Curve
- Saving and loading of measurement templates
- Interfaces: CAN, LAN, USB
- Saving up to 4.000.000 values in each measurement and memory for more than 1 bill. values
- Saving and analysing data on PC with Software SensoWin ® via LAN and USB

# The Parker Service Master *Plus*



# The Parker ServiceMaster *Plus*

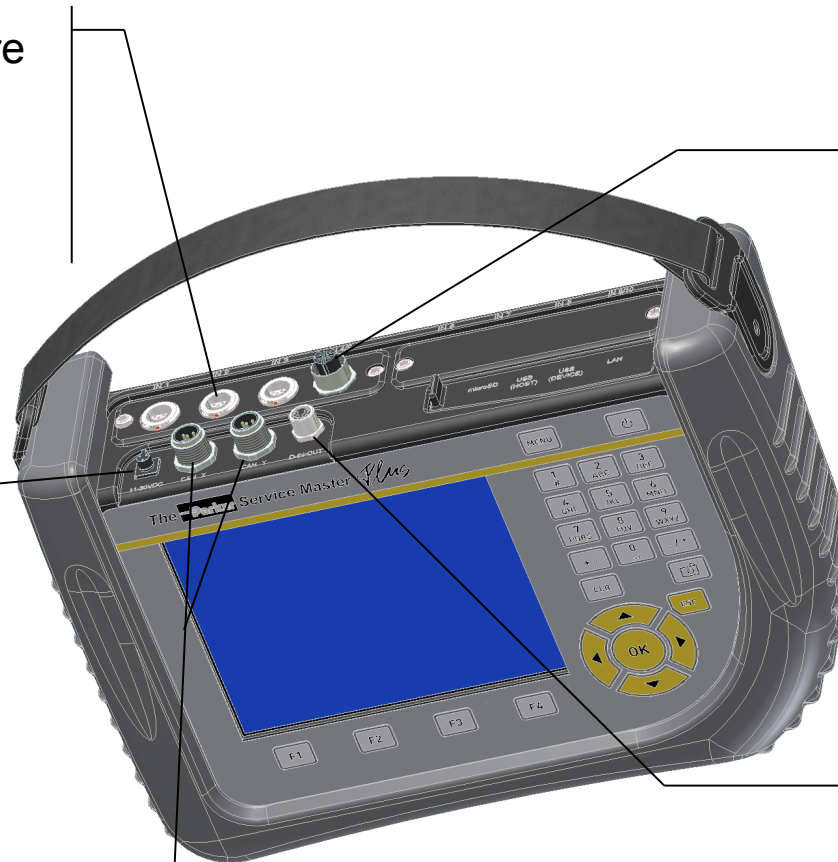
Module based architecture  
for up to 12 analogue  
channels with automatic  
sensor identification

Each module with a  
connector for 2 auxiliary  
sensors

Power Supply  
110/240 volt,  
Operating time 8h,  
Charging time 3h

Digital Input and Output  
for trigger measurements  
and counter

2 CAN networks,  
each network for up  
to 16 channels





# The Parker ServiceMaster *Plus*

## Interface: USB

Online data transfer of ACT/MIN/MAX Values to SensoWin ®, Memory Expansion up to 40 GB for values, projects and screenshots



## Interface: LAN

Online data transfer of ACT/ MIN/MAX Values to SensoWin ®, Remote control functionality

**Interface: microSD-Memory Card**  
Memory Expansion up to 2 GB

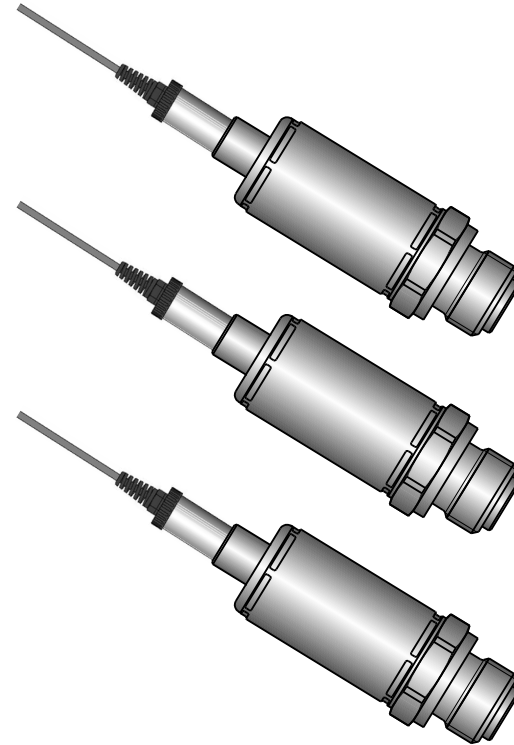


# The Parker Service Master Plus

## Sensor Connections

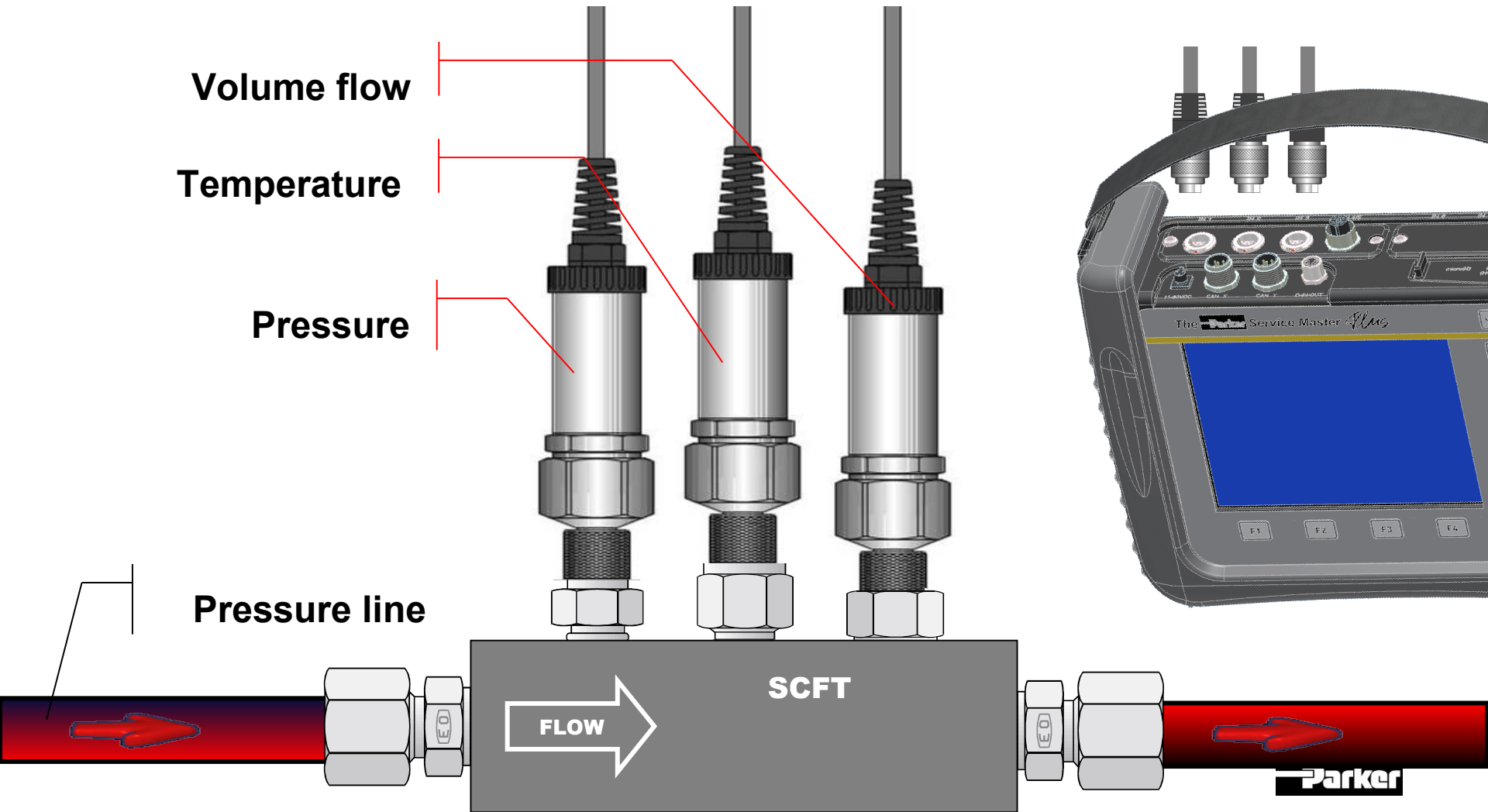


# Connection of analogue sensors with automatic sensor identification

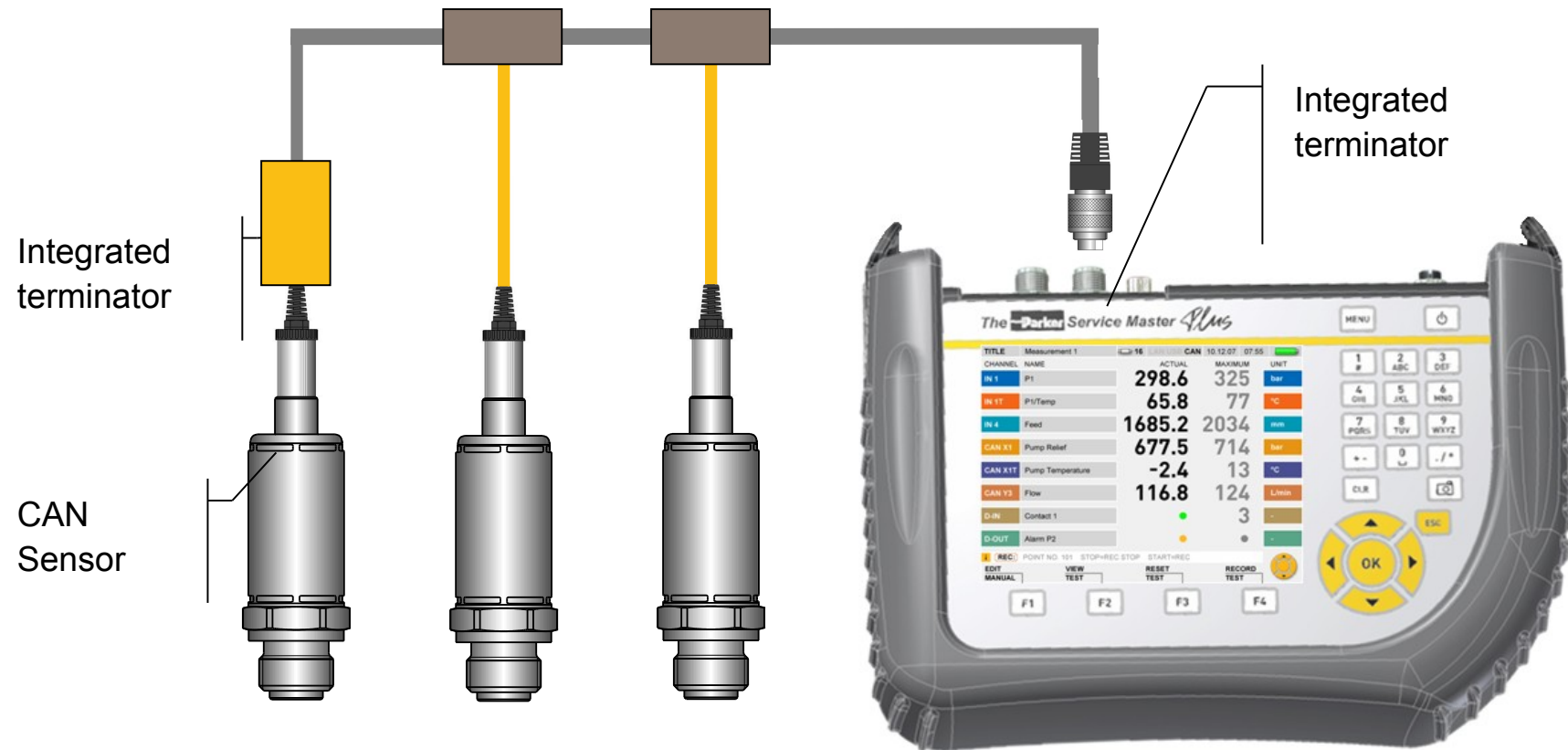


→ Every sensor has to be connected to the handheld with one cable

# Connection of analogue sensors with automatic sensor identification



# Connecetion of Parker CAN sensors with automatic sensor identification



→ With a CAN Bus network only one cable has to be connected to the handheld

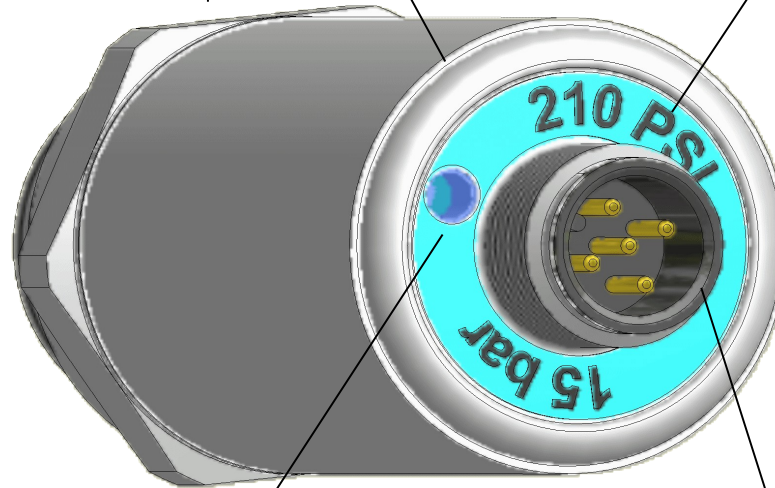
# Advantages of the Parker CAN Bus

- High cable length (up to 100m)
- Lower cabling effort (one cable to the handheld for up to 8 sensors)
- High interference resistance through digital data transfer
- Open bus standard for flexible operations in customer projects
- Automatic sensor identification at Parker CAN Bus sensors

# Parker CAN Bus Sensor - SCPT

Measuring of pressure and temperature at the same time,  
-1..16/0..60/150/400/600/100bar,  
-25..+125°C

Color ring for pressure range identification



Sensor Identification  
LED for activity  
control

SPEEDCON®  
connector for faster  
cabling

# The Parker Service Master Plus

## Display Options





# Display Options

Display up to 8 channels in one screen

TITLE		Measurement 1	16	LAN	USB	CAN	17.08.08	09:50	
CHANNEL	NAME		ACTUAL	MAXIMUM		UNIT			
IN 1T	VALVE 1		3.0	5.4		°C			
IN 4	ENGINE 1		4.0	6.4		mm			
CAN X1	PUMP RETURN		5.0	7.4		bar			
CAN X1T	PUMP TEMPERATURE		6.0	8.4		°C			
CAN Y3	ENGINE 2		7.0	9.4		L/min			
CAN X2	SYSTEM		10.0	12.4		bar			
CAN X2T	SYSTEM TEMP		11.0	13.4		°C			
CAN X3	VALVE 2		12.0	14.4		bar			

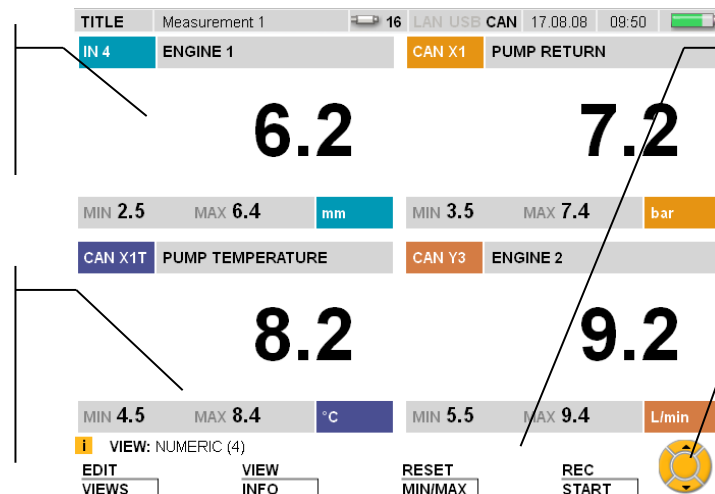
i VIEW: NUMERIC (8) MAX  
 EDIT VIEWS VIEW INFO RESET MIN/MAX REC START

Uniform information line for Title, Number of connected sensors, used interfaces, date, time and accumulator charging status

Colored display for unique channel identification

Changeable measurement information between MIN / MAX / FS

Display of 4 channels with detailed information



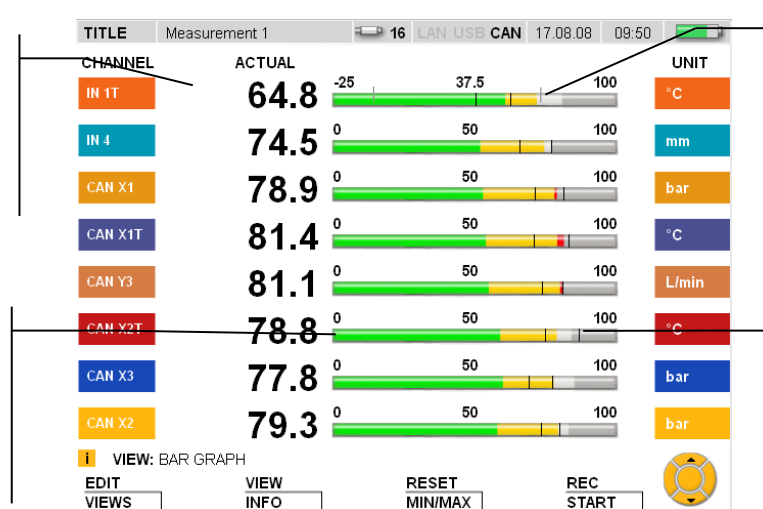
Display of status information, events and settings

Simultaneous display of ACT / MIN and MAX values

Display of currently usable arrow keys

# Display Options

Display of measurement values as number and bar graph

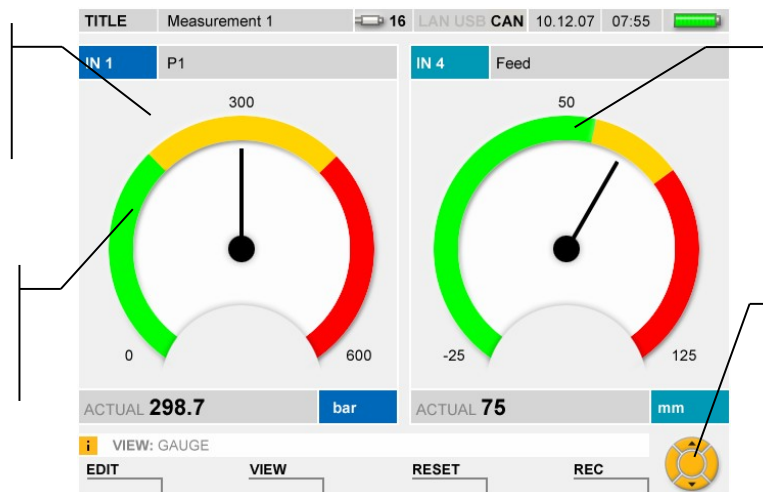


Drag-indicator for MIN and MAX values

Supported diagnostic through definable alarm ranges

Alarm range in green, yellow and red

Display of measurement values as a gauge



Coloured alarm range in green, yellow and red

Drag-indicator for MIN and MAX values

Using arrow keys shows more connected sensors

# Display Options

Simultaneous display  
of 8 channels

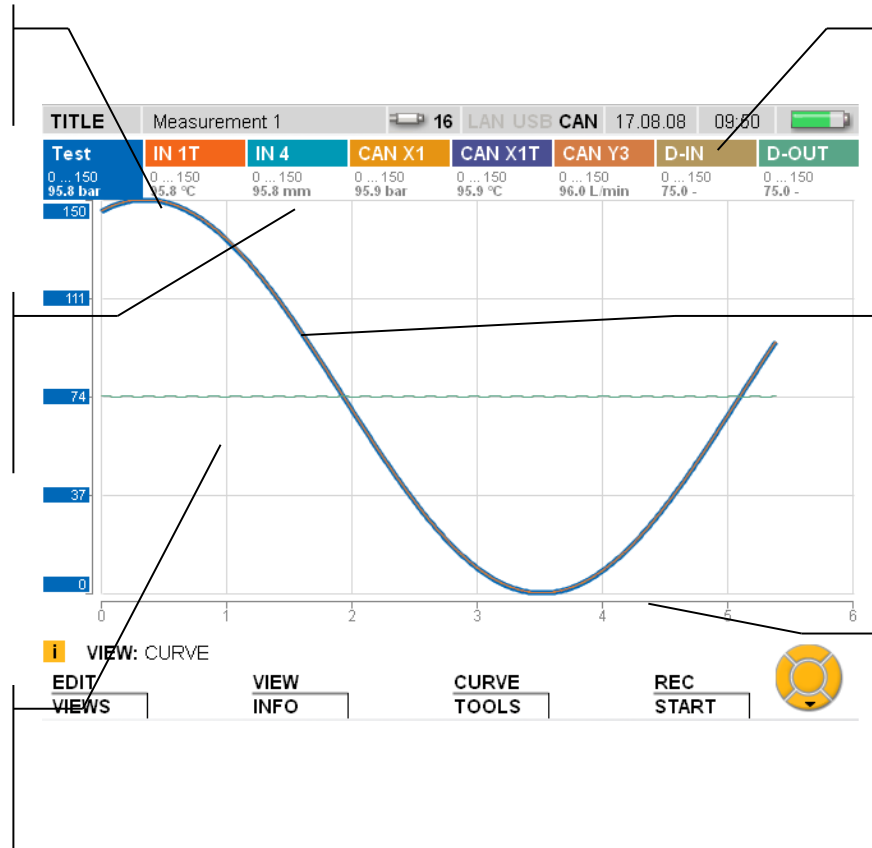
Uniform colour  
identification in each  
display type

Display of  
measurement range  
and actual value

Scaling and colour  
adjustment for marked  
channel

Detailed curve view  
through high resolution  
display

Automatic and manual  
scaling of X and Y axis  
for optimal display of  
values



# Device Parameter

One overview for all device settings

Shortcut to speed up navigation

Information line for user instructions

Navigation with arrow keys and num block

MENU 16 LAN USB CAN 10.12.07 07:55

DEVICE	SENSOR	MEMORY	DATA
TIME / DATE [10]	ANALOGUE INPUT	DATA FORMAT	FILE MANAGER [60]
UNITS [11]	IN4 [30]	<input type="radio"/> ACT / MIN / MAX [50]	CAN
DISPLAY [12]	IN5 [31]	<input checked="" type="radio"/> FAST (ACT) [51]	SETTINGS [70]
POWER	IN9 [32]	MEMORY FORMAT [52]	F/CAN MODULE [71]
<input checked="" type="radio"/> ON [13]	IN10 [33]	STANDARD SAVE REC	LAN
<input type="radio"/> AUTO [14]	VADC INPUT	<input type="radio"/> DEVICE [53]	SETTINGS [80]
LANGUAGE	IN1 [34]	<input type="radio"/> SD CARD [54]	PRINTER
<input checked="" type="radio"/> ENGLISH [15]	IN2 [35]	<input checked="" type="radio"/> USB MEMORY [55]	SETTINGS [90]
<input type="radio"/> DEUTSCH [16]	IN3 [36]		OTHER
BUZZER [17]	IN6 [37]		SETTINGS [95]
DEVICE INFO [18]	IN7 [38]		
USER ID [19]	IN8 [39]		
DEFAULT SETTINGS [20]	D-IN / D-OUT		
	D-IN [40]		
	D-OUT [41]		

i MENU: CHANGE SETTINGS AND CONFIGURATIONS

EXIT

MENU 16 LAN USB CAN 10.12.07 07:55

TIME / DATE

FORMAT DATE	FORMAT TIME
13.03.81 [10]	13:25:20 [20]
<input checked="" type="radio"/> DD.MM.YY [11]	<input checked="" type="radio"/> 24H [21]
<input type="radio"/> MM/DD/YY [12]	<input type="radio"/> 12H [22]
	MORNING / MIDNIGHT
	<input type="radio"/> A.M. [23]
	<input type="radio"/> P.M. [24]

i TIME /DATE: ENTER DATE

EXIT  
SAVE

# The Parker Service Master Plus

Further  
Details



# The Parker ServiceMaster *Easy* vs. The Parker ServiceMaster *Plus*

## The Parker ServiceMaster *Easy*



## The Parker ServiceMaster *Plus*



	The Parker ServiceMaster <i>Easy</i>	The Parker ServiceMaster <i>Plus</i>
<b>Input</b>	3-4 Inputs with automatic sensor identification (p/T/Q/n), Connector: 5pin, push-pull	5-10 analogue inputs, 3-6 with automatic sensor identification (p/T/Q/n) 2xCAN for up to 16 Sensors 1xDigital Input, 1xDigital Output
<b>Display</b>	LCD 128x64 Pixel, Digit height 6mm, Backlit display	TFT-LCD 640x480, Digit height 11mm, Backlit display
<b>Scanning Rate</b>	0.25ms (FAST), 1ms	0.1ms (2xFAST), 1ms
<b>Interfaces</b>	PC Interface USB 2.0	2xUSB (Host, Device), LAN
<b>Memory</b>	1.000.000 Values	Internal: 32.000.000 Values mircoSD Card: 2GB / USB Mass Storage: 40GB
<b>Operation Time</b>	8h	8h (6 analogue sensors)
<b>Max. Values in each record</b>	250.000 Values	4.000.000 Values
<b>Environmental Conditions</b>	Environmental temperature: 0...50°C Storage temperature: -25...+60°C Temperature error: < 0,02%/°C  Protection class: IP 54 (spray water/oil) Drop test: IEC 60 (1m)	Environmental temperature: 0...50°C Storage temperature: -25...+60°C Temperature error: < 0,02%/°C Protection class: IP 64 (dust tight/ splashing water) Drop test: IEC 60 (1m)

# Measurement Types / Storage Technology

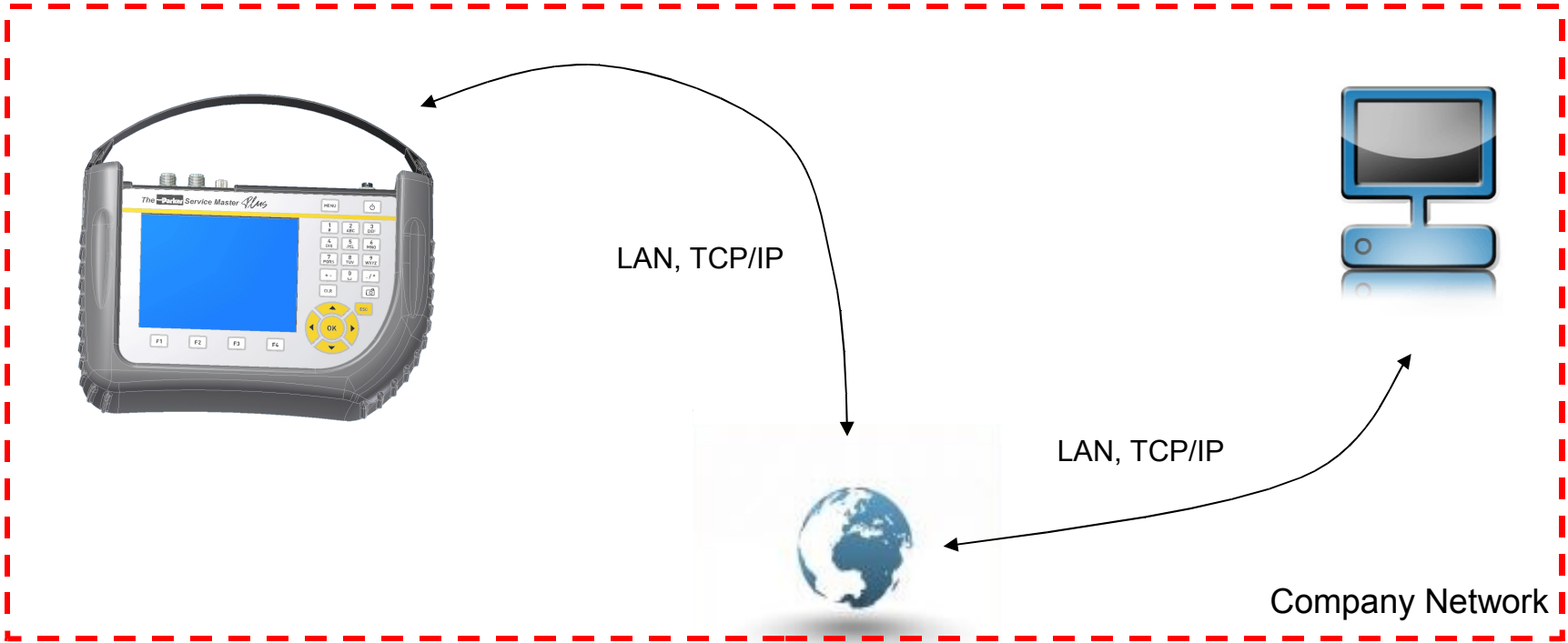
Measurement Types	Trigger	Trigger Logik	Start/Stop	Point
<b>Messung Start</b>	Manual, Level, Window, External, Time	AND/OR linked Trigger: Manual, Level, Window, External, Time	Manual	Manual
<b>Messung Stopp</b>	Manual, Time	AND/OR linked Trigger: Manual, Level, Window, External, Time	Manual	Manual
<b>Datenformat</b>	ACT/MIN/MAX, ACT(FAST)	ACT/MIN/MAX, ACT(FAST)	Not changeable ACT/MIN/MAX	Not changeable ACT
<b>Memory Format</b>	Record Rate, Points	Record Rate, Points	Not changeable, Points	Not changeable, ACT
<b>Measurement Duration</b>	<=300h	<=300h	Unlimited	Unlimited

Storage Technology	FAST	ACT/MIN/MAX	Start/Stop	Point
<b>Scanning Rate</b>	Input 4/9, 0.1ms	Analogue: IN 1-10, >=1ms Digital: CAN 1-16, >=1ms D-IN, 1ms	as FAST, ACT/MIN/MAX	ACT
<b>Memory Rate</b>	Not changeable, 0.1ms	>=1ms	Dynamic	ACT
<b>Points</b>	Not possible	2000, 4000, 8000, 16000 for each: ACT, MIN, MAX	Dynamic	ACT



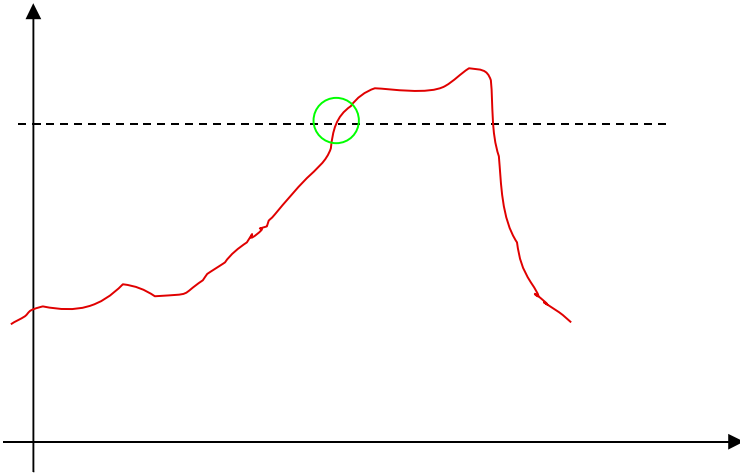


# Ethernet – Remote Control



- Remote Maintenance: Monitoring of measuring station independent of time and place
- Functions:
  - Full remote control through desktop access
  - Interoperability of Service Master Plus and SensoWin®

# Audible Signal



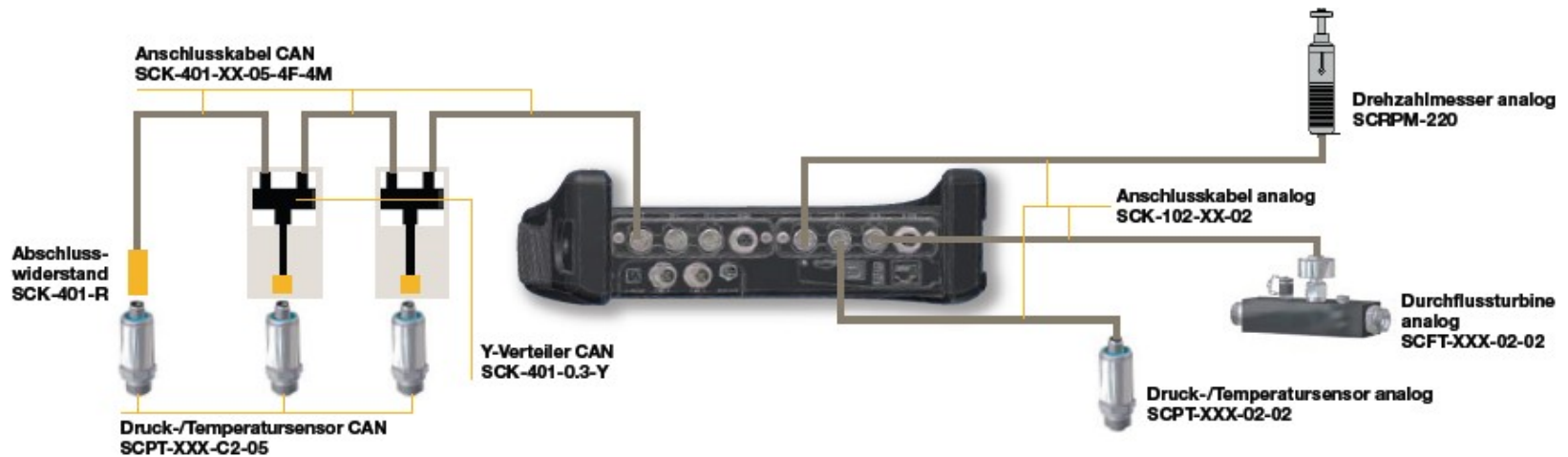
→ Audible signal at different events  
(D-IN/D-OUT, Value in alarm range, Trigger event, End of record)

# The Parker Service Master Plus

Sensors,  
Accessories,  
KITs



# Sensors and Accessories



Produktübersicht				Zusätzlicher Lieferumfang:
	CAN Sensoreingänge	Sensoreingänge mit Sensorkennung (analog)	Fremdsensoreingänge (analog)	
SCM-500-00-00 <sup>1)</sup>	2 Netze mit je max. 8 Sensoren	0	0	<ul style="list-style-type: none"> <li>- montierter Handgriff</li> <li>- Netzteil 24VDC/1A inkl. Länderadapter</li> <li>- Kabeldose (M8x1, 4polig)</li> <li>- USB 2.0 Kabel (2m)</li> <li>- LAN Kabel (5m)</li> <li>- Bedienungsanleitung</li> <li>- PC-Software</li> </ul>
SCM-500-01-00 <sup>2)</sup>	2 Netze mit je max. 8 Sensoren	3	2	
SCM-500-01-01 <sup>3)</sup>	2 Netze mit je max. 8 Sensoren	6	4	

<sup>1)</sup> Basisgerät ohne Inputmodul    <sup>2)</sup> Basisgerät mit 1 Inputmodul    <sup>3)</sup> Basisgerät mit 2 Inputmodul

# Sensors and Accessories

## Produkte mit CAN Schnittstelle\* und Zubehör

Typ	Bezeichnung
<b>Druck-/Temperatursensor CAN</b> inkl. montiertem SCA-1/2-EMA-3 Adapter	
-1...16bar	SCPT-016-C2-05
0...60bar	SCPT-060-C2-05
0...150bar	SCPT-150-C2-05
0...400bar	SCPT-400-C2-05
0...600bar	SCPT-600-C2-05
0...1000bar	SCPT-1000-C2-05
<b>Durchflussturbine CAN</b> Betriebsdruck: max. 480bar	
1...15L/min	SCFT-015-C2-05
4...60L/min	SCFT-060-C2-05
6...150L/min	SCFT-150-C2-05
10...300L/min	SCFT-300-C2-05
20...600L/min	SCFT-600-C2-05
25...750L/min	SCFT-750-C2-05
<b>Frequenzadapter</b> inkl. Stecker M8x1 (2Hz...5KHz)	SCMA-FCU-600
<b>Anschlusskabel CAN</b> Stecker 5pin - Buchse 5pin	
2m	SCK-401-02-4F-4M
5m	SCK-401-05-4F-4M
10m	SCK-401-10-4F-4M
<b>Y-Verteiler CAN</b> inkl. 0.3m Kabel	SCK-401-0.3-Y
<b>Abschlusswiderstand CAN</b> Buchse 5pin-Buchse 5pin	SCK-401-R

\* je CAN Netz wird ein Abschlusswiderstand (SCK-401-R) benötigt

## Produkte mit Analog-Schnittstelle und Zubehör

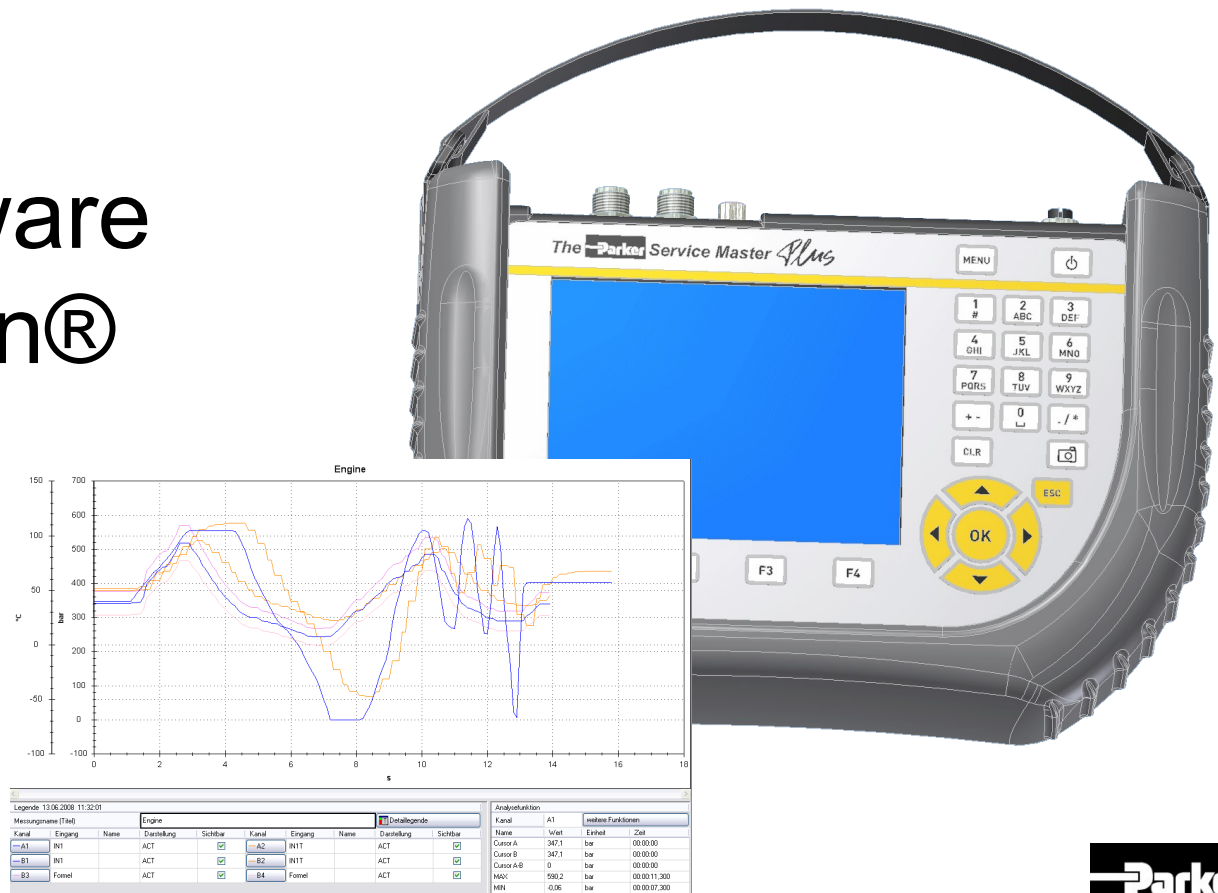
Typ	Bezeichnung
<b>Druck-/Temperatursensor</b> inkl. montiertem SCA-1/2-EMA-3 Adapter	
-1...15bar	SCPT-015-02-02
0...60bar	SCPT-060-02-02
0...150bar	SCPT-150-02-02
0...400bar	SCPT-400-02-02
0...600bar	SCPT-600-02-02
0...1000bar	SCPT-1000-02-02
<b>SCA Adapter</b> , M16x2 Außen-M16x2 Außen	SCA-EMA-3/3
<b>Temperatursensor</b> , -25...125°C mit Einschraubfühler (M10x1)	SCT-150-04-02
Temperatursensor, -25...125°C mit Stabfühler	SCT-150-0-02
<b>Drehzahlmesser</b> , 0...10.000RPM mit 2m Kabel inkl. Kontakt-/Fokusadapter und Reflexfolie	wSCRPM-220
<b>Durchflussturbine</b> Betriebsdruck: max. 480bar	
1...15L/min	SCFT-015-02-02
4...60L/min	SCFT-060-02-02
6...150L/min	SCFT-150-02-02
10...300L/min	SCFT-300-02-02
20...600L/min	SCFT-600-02-02
25...750L/min	SCFT-750-02-02
<b>Durchflussturbine</b> inkl. Drosselrückschlagventil	
7,5...150L/min	SCFT-150-DRV
10...300L/min	SCFT-300-DRV
<b>Frequenzadapter</b> inkl. Stecker M8x1 (2Hz...5KHz)	SCMA-FCU-600
<b>Strom-/Spannungswandler</b> (0...48V, 0...4A) inkl. Anschlusskabel mit Prüfklemme	SCMA-VADC-600
<b>Messschlauch</b> , 1.5m (M16x2)	SMA3-1500
<b>Anschlusskabel Analog</b> (Stecker 5pin-Stecker 5pin)	
3m	SCK-102-03-02
5m	SCK-102-05-02
<b>Fremdsensoradapter</b> M12x1, gerade, 5polig	SCK-145

# Service Master Plus - KIT

Kit-Übersicht			
	SCKIT-500-00-00	SCKIT-500-01-00	SCKIT-500-01-01
The Parker ServiceMaster Plus	SCM-500-00-00	SCM-500-01-00	SCM-500-01-01
Koffer SCC-500	1	1	1
Nackengurt SC-ACC-01	1	1	1
Anschlusskabel CAN SCK-401-05-4F-4M	2	2	2
Abschlusswiderstand CAN SCK-401-R	2	2	2
Messschlauch SMA3-1500	2	2	2
SCA-Adapter SCA-EMA-3/3	2	2	2
Anschlusskabel Analog, 3m SCK-102-03-02	--	2	3
Anschlusskabel Analog, 5m SCK-102-05-02	--	1	3
Fremdsensoradapter SCK-145	--	1	2

# The Parker Service Master Plus

PC-Software  
SensoWin®

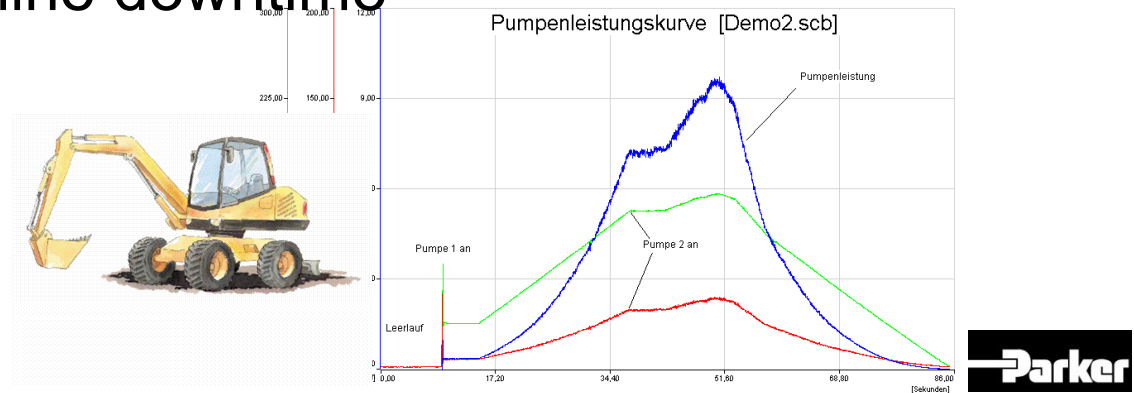




# SensoWin® Software

## Failure reduction by preventive maintenance

- Measuring of p and Q temporal intervals  
(Documentation acc. ISO 9001)
- Recording of performance data with “SensoWin”
- Comparison of target and actual values
- Trend identification (e.g. Pump power)
- Reduction of machine downtime



# SensoWin® Functions

- Interoperability with Service Master Plus via USB and Ethernet
- Online/Template/Point measurement
- Online display types: Curve, Numeric, Gauge, Bar Graph, Oscilloscope
- Auto-Sequence Control measurement
- Additional modifications towards SensoWin 6

Thank You