- <b>-</b> 2.		The Parker S	Service Mast	er CONN	IECT			
	4.2020 10:45 Müller Bagger SPC ► ну	_	3311 03321 多 奈 4道20 プ Trigger Logic					
CAN X - 1 CAN X - 2 CAN X - 3 CAN Y - 1 CAN Y - 2	EL NAME Druck P1 Druck P2 Druck P3 Temperatur T Durchfluss Q1 Power P1	ACTUAL 236,47 bar 17,361 bar 1,236 bar 34,72 °C 60,236 l/min 74,482 kW	< BARGRAPH	MAX > 400 60 150 300 3000			F	

### **The Parker Service Master CONNECT**

Intuitive operation. Modular system. Customized solutions. Optimal connections.



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### The Parker Service Master CONNECT –

Modular system due to individual interchangeable measuring modules





## Advantages that connect.

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Pressure, temperature, flow, rpm and frequency, etc. – everything is measured, saved, monitored and analyzed

#### Large internal data logger

Push button for screen shots

#### Varied connections: – WLAN

- Bluetooth LE
- LTE\*
- \* in preparation







### Universally appliable for mobile and stationary applications.

A strong diagnosis measuring device for many applications due to the modularly structured system in the hardware and software.

Can be flexibly used in hydraulics thanks to the wide range of sensors. For example, for service, commissioning, research and development.

### Strong design, durable and easy to operation

Highly protected against moisture and dust, protection class IP 65



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### Easy and practical to use.

Not only for universal application, but also universal handling. The Parker Service Master CON-NECT has diverse adaptation capabilities prepared: A stand on the back, VESA-standard connection for wall mounting and a carrying strap for "mancarried" use.

Integrated bracket for carry strap

Additional large tactile keyboard to ensure operation even in adverse conditions

Intuitive operation thanks to clear icons and functional keys and apps

# Everything is intuitively possible and me

Power supply with universal country adapters, strong battery power and fast charge time, energy saving options for long operating times Analog input module for connection with Parker sensors with sensor recognition

> Analog auxiliary sensors - also with high-speed feature

2 x CAN-BUS networks with up to 24 channels each

Sim card slot



### asurable.

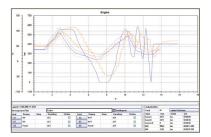
CAN module for monitoring CAN systems or also for connecting auxiliary CAN sensors

> LAN interface for remote monitoring, transmission of measured values or remote control

USB host interface for connection with USB mass storage.

USB device interface for connection with PC, Laptop etc.





### We are in touch with technology

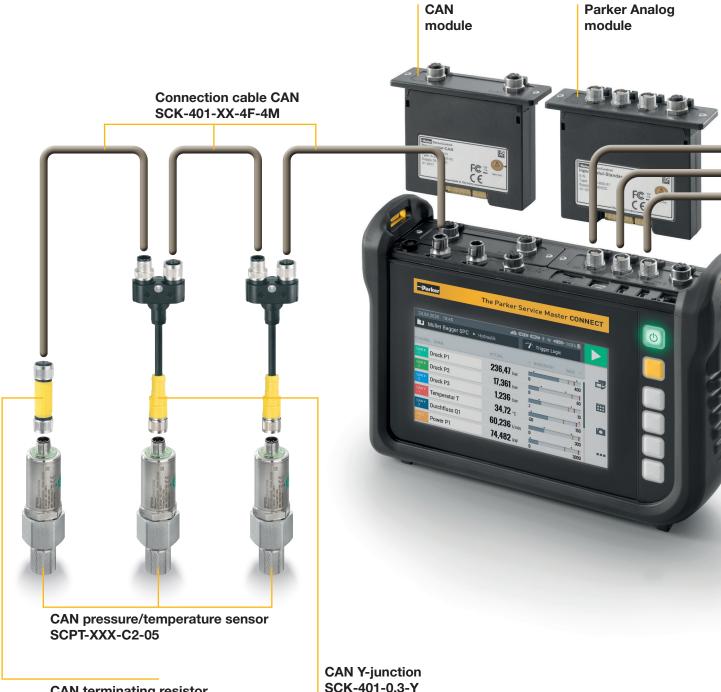
With the The Parker Service Master CONNECT, we make work environments a little bit easier and more manageable. Never before has it been so easy to measure, display and analyze complex operations. Specially developed Parker sensors enable the automatic sensor recognition and the Plug & Play solution. Don't wait – start right away!

The tried-and-tested software SensoWin<sup>®</sup> is included in the delivery. With that, measurements are analyzed and test reports are easily prepared.

## The connection artist is at home on many

### Parker CAN bus sensors

Up to 24 channels are connected via one bus cable to the measuring device. Further modules are in preparation, customer-specific solutions are possible.



CAN terminating resistor SCK-401-R

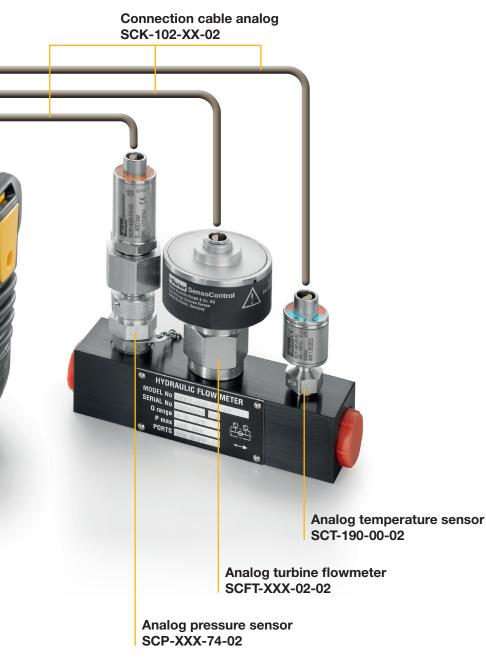
SCK-401-0.3-Y



### / stages.

#### Analog sensors

The analog sensors are separately and directly connected to the measuring device.



#### Lighthouse with exemplary function.

The measurement device can process different electrical signals. In the range of the CAN bus technology the following sensors can be connected.

Parker CAN sensors with integrated sensor recognition. After plug in, manual parameterizing of the measurement signal and measuring range is no longer necessary - independent if pressure, temperature, flow or rpm sensors.

Connection of standard CAN sensors, which are supplied and processed independently by the measuring device.

Communication with a CAN system for so-called "listening", i. e. to display and further process measurement values without interfering directly with the bus controller.

An optional CAN monitor assists during installation of CAN channels and analysis of CAN bus reports.

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# **Evident: A large display for the smallest**

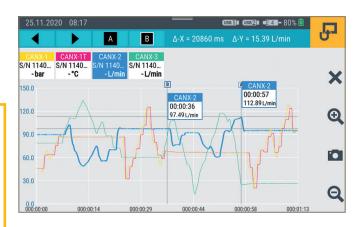
- Up to 12 channels in one display
- Color allocation of the individual channels
- Display can be changed between ACT, MIN and MAX values

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Excavator SP	C 🕨 Hydraulic	<b>7</b> ' Tri	gger Logic	
NAME	ACTUAL	NAME	ACTUAL	
CANX-1 Pressure Valve 1	<b>54.637</b> bar	CANY-3 Frequency 1	1326.12 Hz	
CANX-2 Flow	16.235 L/min	INA-1 Pressure Front	80.236 bar	III
CANX-3 Temperature out	<b>16.4</b> °c	INA-2 Oil Temperature	<b>47.263</b> °c	
CALC-1 Power	1.478 kw	F1 Engine Speed	827.9 1/min	
CANY-1 Temperature in	<b>23.36</b> °c	CANB-101 Engine Temperature	<b>73.62</b> °c	
CANY-2 Pressure Valve 2	<b>269.365</b> bar	CANB-201 Engine Pressure	347.53 bar	

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CHANNEL NAME	ACTUAL	< BARGRAPH	MAX >	
CANX-2 Pressure 1	45.558 bar		45.912	
CANX-1 Pressure 2	<b>0.28</b> bar	1 1	0.78	m
CANX-3 Pressure 3	<b>99.24</b> bar	'	99.44	
CANX-5 Flow	381.33 L/min		382.11	
NA-3 Temperature 1	<b>22.29</b> ℃	<b>1</b>	22.54	
CANX-2T Temperature 2	88.93 °C	· · · · · · · ·	89.24	

- Numerical display of 6 channels with bar graph
- Display of measuring range, warning and alarm values and min. and max, values

- Up to 8 freely selectable channels simultaneously in one curve display
- Choice between ACT and MIN/MAX value presentation
- Free scalability
- For analysis purposes, up to two cursors with measured value and delta display could be inserted





Variety of measurement possibilities for different applications



### values.

- Recurring measuring tasks can easily be saved as a template
- When choosing the template, the preset measurement set up is also compared
- Using a template, ensures the comparability of the measurements.
- A current template can be duplicated and modified as needed

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Reassign channel				5
CH. NAME	NOMINAL CH.	ACTUAL CH.	STATE	
CANX-2 Pressure 1	<b>0 - 60 bar</b> S/N 1204016617	<b>0 - 60 bar</b> S/N 1204016617	ОК	×
CANX-1 Pressure 2	<b>0 - 600 bar</b> S/N 1445133623	0 - 600 bar S/N 1445133623	ОК	_
CANX-3 Pressure 3	0 - 150 bar S/N 1204016919	0 - 150 bar S/N 1204016919	ОК	
Delta Pressure	<b>-60 - 150 bar</b> s/N	<b>-60 - 150 bar</b> s/N	ОК	~
Flow	<b>0 - 600 L/min</b> S/N 1204017305	0 - 600 L/min S/N 1204017305	ОК	
NA-3 Temperature 1	-50 - 250 °C s/N	-50 - 250 °C s/N	ОК	

P	99% 🗐	4 <b>:172-</b>	ĬX	USB2	USB ]					07:00	.2020 Edit	28.1
	ula_01	Form									e	Na
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						5		<		CH2	os	
						2			×2	СНЗ	an	
~						0					f`(I	

- Up to 4 calculation channels can be set up
- In addition to the predefined standard functions, such as delta values or hydraulic power, also free formulas can be entered

10.12.2020 12:30	_	(USB]] [] (USB2)	i × 🖷 🏹 99% 🔳	P
Measurements	Templates		Media	-
NAME	TYPE	DATE V	SIZE	د
Drawing SCPT-XXX-C2-05-EMA	png	20.09.2019	130 KB	<b>=</b>
SCJN	pdf	20.09.2019	309 KB	
USERMANUAL	pdf	20.09.2019	2 MB	
SCREENSHOT_001	jpg	20.09.2019	1 MB	
SCREENSHOT_002	jpg	20.09.2019	245 KB	

In addition to measurement data and templates, also images, reports and other documentation files can be managed

# **Specifications**

#### The Parker Service Master CONNECT

Input/output	
CAN sensor input	2 CAN bus networks, 24 Parker CAN bus sensors each. Alternative at CAN Y up to 5 external CANopen sensors. Baudrate at different CAN adjustable. 24 VDC power supply/ max. 250 mA. No mixed mode of Parker-CAN and different CAN within a CAN-Bus section possible. Internal termination impedance 120 Ohm fixed. Supports CAN 2.0 A/CAN 2.0 B. Version SMC-600-LC: max. 20 channels. SMC-600-LC: only predefined calculation channels possible.
Scanning rate Plug connection D-IN/OUT F1/2	1 ms = 1.000 measurement value/s M12x1, 5 pin with SPEEDCON®, connection plug dual-function input, which can be used either as DIGITAL-IN or DIGITAL-OUT, or through a changeover, two frequency inputs
Connection Input Supply Input signals Gauge/level	are made available. Also possible as recognition of rotation direction. M12x1 SpeedCon female. (5 pin) galvanic separated 24 V DC, 80 mA Frequency (0 Hz 20 KHz) Activ low: 0-1.4 V, Activ high: 3-30 V
Precision Module slots Touch display	≤± 0,1% 2, for input module, flexible placement possible 7" color graphic display, 800 x 480 pixels
<b>Calculation channels</b> Quantity Functions Max. offsettings of channels /Calc-channels	4 /, *, +, -, f'(t), Integral, sin, cos, tan, x2, SQRT, xy 3
Ports USB device USB host 1 USB host 2 Memory LAN SIM card Wireless communication	data transmission between device and PC connection with external storage media connection with external storage media 12 GB connection with network cable MINI-SIM insert SMC-600-00: WLAN, Bluetooth LE (Europe)
Ambient conditions Ambient temperature Storage temperature Rel. humidity Environmental impact test Vibration Protection class External power supply Connection	-10+50 °C -20+60 °C < 80 % Drop test 1 m (EN 60721-3-7) (EN 60721-3-7, 7M3) IP 65 (EN/IEC 60529:2014) 110/240 VAC - 24 VDC/3.750 mA KFZ charging cable as accessory (12/24 VDC) 3 pin
Battery	Lithium-ion pack, +14.4 VCD/3.250 mAh
Material Housing Housing protective cover Flammability rating Dimensions (W x H x D) Weight VESA connection	ABS/PC (thermoplastic) TPE (thermoplastic elastomer) UE94VO 257 mm x 181 mm x 87 mm 1880 g without input modules 100 x 100 mm / M4 metric



## **Specifications**

#### Input module SCMI-600-01 Parker analog

Inputs with sensor recognition Working temperature range Storage temperature range Weight	3 sensor inputs (up to 6 analog measurement channels) With sensor recognition (p/T/Q/n) for SensoControl® diagnosis sensors Plug connection: 5 pin, push-pull, combination connector/socket Sampling rate: 1 ms = 1.000 measured values/sec. -10 °C+50 °C -20 °C+60 °C 152 g
Inputs for auxiliary sensors Supply Input signal range	2 sensor inputs (analog) For measuring power and voltage Scanning rate: 1 ms = 1.000 measured values/sec. Voltage measuring range: -10+10 VDC Current measuring range: 0/420 mA Supply ext. Sensors: +24 VDC/max. 100 mA Plug connection: M12x1, 5 pin socket FAST-MODE scanning rate: 0/1 ms = 10.000 measured value/s 24 V DC, 100 mA -10+10 V 0/420 mA
Accuracy	±0.1 % FS
Input module SCMI-600-02 CAN	2 x M12x1, 5 pin plug input for connection with CAN systems like CANopen, CAN generic and SAE-J1939
Connection Nomenclature Kanale CAN1xx Kanale CAN2xx Standards Protocol support Termination impedance Supply signal connection Working temperature range Storage temperature range Weight	2 x M12 5 pol. female CAN1xx, CAN2xx, each galvanically separated 24 CAN 2.0 A, CAN 2.0 B, CANopen, SAEJ1939 CAN generic, mixed mode of several CAN protocols possible Attachable/detachable Passive, no external supply -10 °C+50 °C -20 °C+60 °C 127 g
Input modules	Such as SCML600-01 Parker analog, but module electronically isolated from device

Input modules SCMI-600-03 Parker analog ISO

Such as SCMI-600-01 Parker analog, but module electronically isolated from device

## PC software SensoWin®

- Compatible with Windows 10 (32- and 64-Bit)
- Zoom functions
- Conjunction of measurement curves
- Cursor functions
- Export function
- Extensive filter function
- Remote connection/remote control The Parker Service Master CONNECT
- Freely definable calculation channels
- Online measurement
- Easy operation



#### General

The PC software SensoWin<sup>®</sup> is an easy-to-use tool for reading and processing the measurement curves recorded by The Parker Service Master CONNECT.

### Functions

The recorded curves can be represented in a diagram. Shifting of the curves allows for accurate analysis of the hydraulics.

A performance curve can be created to evaluate a pump. Pressure losses and leaks are detected by generating the difference values of pressure curves.

With the cursor, a hydraulic procedure can be examined relating to the time. Comprehensive information is available for each curve. That is to say the measurement recorded by The Parker Service Master CONNECT can be reproduced at any time.

Changing the scale factor and units allows for any subsequent adjustment to be shown in a diagram. Smoothing of the measurement curve and mathematical operations are important functions in the analysis of the hydraulic system.

The date, time, and any notes are documented with each measurement, making subsequent allocation considerably easier. As a result, documentation and certificates can be generated quickly and in a cost-effective way since the PC software SensoWin<sup>°</sup> can make use of all Windows features and benefits. All measurements can be exported in CSV format.

Current findings (pressure peaks, etc.) are visible during ongoing processes (online function).



# Scope of delivery

The Service Master CONNECT (without input modules)	X-	SCM-600	-	XX				
The following items are furnished with the device:								
- Power supply incl. Country adapter								
- USB 2.0 cable (2 m)								
- PC software								
The Service Master CONNECT Kit (without input modules)	Х-	SCKIT-600	-	хх				
Device incl. carry strap in case with trolley function								
2 x SCK-401-05-4F-4M, 2 x SCK-401-R,								
2 x SCA-EMA-3/3, 2 x SMA3-1500								
The Service Master CONNECT with input modules	Х-	SCMSET-600	-	хх	-	х	-	х
-								
With calibration certificate according to ISO 9000	K-							
Instrumentation								
with WLAN and Bluetooth LE (Europe) / no LTE				00				
without WLAN and without Bluetooth				0A				
Input module 1								
Input module Parker Analog SCMI-600-01						1		
Input module CAN SCMI-600-02						2		
Input module Parker Analog ISO (electronically separate	ed) S0	CMI-600-03				3		
Input module 2								
without								0
Input module Parker Analog SCMI-600-01								1
Input module CAN SCMI-600-02								2
Input module Parker Analog ISO (electronically separate	ed) S0	CMI-600-03						3

Accessories	Order designation
KFZ charging cable 24 VDC	SCK-318-05-21
KFZ charging cable 12 VDC	SCNA-SMC-CAR
Plug M12x1 for external sensor input	SCK-401-4M
SMC carry strap	SC-ACC-02
LAN-Cable	SCK-318-02-37
Power supply incl. adapter (EUR/UK/US/AUS)	SCSN-470
Case with Trolley function	SCC-600
USB cable	SCK-315-02-35

Subject to alteration.



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