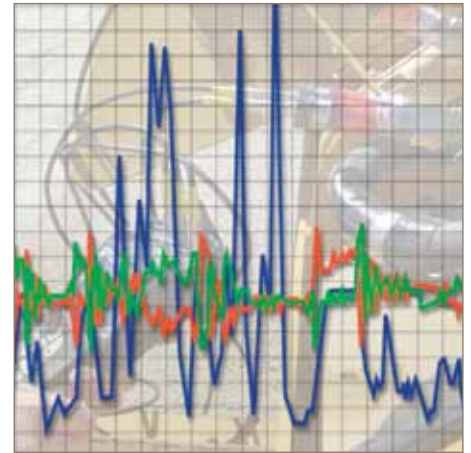


The Parker Service Master Plus

Diagnostic Instrument



Measurement, Display, PLUS Analysis:

The Service Master Plus combines innovative technology with increased overall capabilities to bring you a premier diagnostic instrument. This new tool is more than just a meter; it incorporates data measurement, display, and on-screen analysis to provide increased functionality that extends far beyond standard meters currently on the market.

Combining CAN bus sensor communication protocol with traditional analog inputs, the Parker Service Master Plus has 24 channels for a variety of inputs and outputs. In addition, this unit incorporates multiple data interfaces for connectivity and data storage, a variety of display options for user preference and storage capabilities of up to one billion measured values. The Parker Service Master Plus is truly a user-friendly, versatile, diagnostic instrument for any fluid power system.



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Model SCM-500-01-01 Features:

- On-screen data measurement, display and analysis
- Combines CAN bus and analog sensor inputs over 24 channels.
- Multiple display options for user convenience: numerical, bar graph, pointer, curve graph etc.
- Multiple connection interfaces: LAN, USB
- Up to one billion data points storage
- Operates with user-friendly SensoWin software
- Measuring parameters: pressure, temperature, flow, rpm, voltage and current

ENGINEERING YOUR SUCCESS.

The Parker Service Master Plus Diagnostic Instrument

Technical Data

CANbus Inputs

- 2 CANbus networks with 8 inputs each (16 total)
- Scanning Rate: 1 ms
- Input Impedance: 1 k Ω
- M12x1, 5 pin push-in connector

Analog Inputs

- 6 Senso Control sensor inputs
- Parker Automatic Sensor Recognition
- Scanning Rate: 1 ms
- Input Impedance: 1 k Ω
- Add two additional sensors with SCMA-VADC adaptor
- 5 pin push-pull connection

Digital Input /Output

- Active High 7 to 24 VDC
- Active Low <1 VDC
- Input Impedance: 1 k Ω
- Output Current - 20 mA

Analog Inputs for auxiliary sensors

- 2 analog inputs for measuring current and voltage.
- Scanning Rate: 1ms
- Voltage Measuring Range: -10 to +10VDC
- Current Measuring Range: 0/4 to 20 mA.
- Configurable as FAST-mode analog inputs, .1ms scanning rate

Input Module Accuracy

- Measurement Accuracy: $\pm 0,25$ % FS
- Temp Error: 0.02% FS per $^{\circ}\text{C}$

Display

- Visible Area: 115 x 86 mm
- Resolution 640 x 480 pixels

Interfaces

- USB device type B
- USB host type A
- 10/100 base T Ethernet RJ45

Functions

- Measuring mode: Start/stop, points, trigger
- Measurement: ACT, MIN and MAX
- Measurement display: Numerical, bar graph, pointer, curve graph
- Trigger: Slope, manual, level, window, time, logic, Pre-Trigger
- Remote operation via the Ethernet
- Acoustic notification at any incident

Measured value storage

- ~4,000,000 points per measurement
- 1,000,000,000 points total
- On board storage 64 MB
- External: Micro SD memory card slot
- External: USB mass storage device

Ambient Operating Conditions

- Ambient temperature: 32 to 112 $^{\circ}\text{F}$
- Storage temperature: -10 to 140 $^{\circ}\text{F}$
- Relative humidity: < 80 %
- Environmental test: IEC60068-2-32 (1 m, free fall)



Type of protection

- IP64 (to EN60529)

Power supply

- Internal Lithium ion pack, +7.4 VDC/4500 mAh
- Charge Time: 3h
- Run time with fully charged battery: 8h
- External 110/240 VAC - 24 VDC/2500 mA
- Vehicle adapter cable as accessory (12/24 VDC)

Housing/protective sleeve

- Housing material: ABS/PC (thermoplastic)
- Housing protective sleeve material: TPE (thermoplastic elastomer)
- Dimensions (w x h x d): 257 mm x 75 mm x 181 mm
- Weight: 1550 g (basic model)

Analog Accessories that can be used with the Parker Service Master Plus



Flow Sensor

In-Line turbine flow measurement.
Flow Range: 0.2 -160 GPM
Accuracy: 1% Full Scale
Part Number
SCFT-XXXX-XXX (See back panel)



Pressure Sensor

Thin film pressure sensor with attached diagnostic coupler.
Pressure Range: -14.5 - 8700 psi
Accuracy: 0.5% Full Scale
Push-pull cable connection

Part Number
PDXXXX-XXXX (See Bul. 3800-SM EZ)



Temperature Sensor

Can be used with Parker flow sensors or with an SCTA-1/4 port adapter.
Temperature range: -13 $^{\circ}\text{F}$ to 257 $^{\circ}\text{F}$
[-25 $^{\circ}\text{C}$ to 125 $^{\circ}\text{C}$]

Accuracy: ± 1.5 % Full scale

Part Number
SCT-150-04-02

CAN-bus Pressure Transducer Options

- Five measurement ranges:
Vacuum to 8,700 PSI, standardize
- Automatic sensor recognition
- Accuracy of .5% Full Scale (FS)
- Available with PD or EMA style diagnostic couplings
- Color coded for easy identification



Transducer Technical Data



	PD**-0160-CAN	PD**-0600-CAN	PD**-1500-CAN	PD**-4000-CAN	PD**-6000-CAN
Measuring Range	-14.5 to 235 psi	0 to 870 psi	0 to 2175 psi	0 to 5800 psi	0 to 8700 psi
Overload Pressure	434 psi	1740 psi	4350 psi	11600 psi	17400 psi
Burst Pressure	2175 psi	7250 psi	13050 psi	17400	26100
Response Time	1 ms	1 ms	1 ms	1 ms	1 ms
Accuracy (typical)	0.25%	0.25%	0.25%	0.25%	0.25%
Accuracy (max.)	0.50%	0.50%	0.50%	0.50%	0.50%

Excitation Voltage.....8-40 VDC

Electrical Connection.....5 pin, M 12 x 1 connection

Port Connection.....1/2 " BSPP

Housing.....Stainless Steel 1.4301

Seal Material.....FKM

Ambient Temperature Range.....-13 to 185°F

Max. Fluid Temperature.....221°F

Shock Resistance.....IEC 68-2-29

Vibration Resistance.....IEC 68-2-6

Cable End (Pin Out)



Pin	Item
1	Shield
2	$V_s = 8...40\text{VDC}$
3	GND
4	CAN High
5	CAN Low



SCRPM Tachometer

Displays a precision measurement of rotational speed. 5-pin push-pull style connector.
Rotational Speed Range: 20 to 10,000 RPM
Part Number
SCRPM-220



Voltage Adapter for use with auxiliary sensors

Input Signal: 0-4A or 0-48VDC
Output Signal: 0-3 VDC
Additional Power Supply Input: 18 VDC
Accuracy: 0.25% FS
Part Number
SCMA-VADC-600

SensoControl CAN-bus Flow Sensors

- Four measurement ranges: 0.2 to 160 GPM
- Automatic sensor recognition
- Accuracy of 1% FS or IR
- Measures pressure, temperature and flow
- Supplied with diagnostic and temperature measurement port



Flow Sensors Technical Data

	SCFT-0004-**-CAN	SCFT-0116-**-CAN	SCFT-0380-**-CAN	SCFT-5160-**-CAN
Measuring Range	0.2 to 4 GPM	1 to 16 GPM	3 to 80 GPM	5 to 160 GPM
Accuracy @ 21 cSt	1 % FS	1 % IR	1 % IR	1 % IR
Operating Pressure	5000 psi	5000 psi	5000 psi	4200 psi
Port Connection	1/2" BSPP	3/4" BSPP	1" BSPP	1 1/4" BSPP
Pressure Drop @ FS 21 cSt	21 psi	21 psi	58 psi	72 psi
Response Time	50 ms	50 ms	50 ms	50 ms
Length (in)	5.35	7.48	7.48	8.35
Width (in)	1.45	2.44	2.44	2.44
Height (in)	5.91	6.46	6.61	7.20

Excitation Voltage.....8-40 VDC

Max. Flow.....1.1 x Flow Range

Overload Pressure.....1.2 x Operating Pressure

Housing Material.....Aluminum

Seal Material.....FKM

Wetted Parts.....Stainless Steel

Max Fluid Temperature.....194°F

Ambient Temperature.....14 to 122°F

Filtration.....25 um

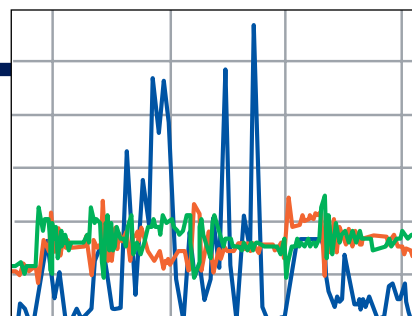
Viscosity Range.....10 to 100 cSt



5 pin to 5 pin Cables
Flow sensor, transducer and
temperature probe cables.
Length Part Number
10 ft (3 m) SCK-102-03-02
Extension Cable
16.4 ft (5 m) SCK-102-05-12



Adapters
See Catalog 3800 for available
adapters.



SensoWIN™ Software
Transfer data from the Service
Master Plus to your PC. Display up
to 16 curves simultaneously. Zoom
and cursor functions. Calculation
functions.
Part Number
DVD-4082



Key	Description	Part Number
1	CAN Connection Cable (2M, 5M & 10M)	SCK-401-02-4F-4M SCK-401-05-4F-4M SCK-401-10-4F-4M
2	Analog Connection Cable (2M, 5M & 10M)	SCK-102-02-02 SCK-102-05-02 SCK-102-10-02
3	CAN Y-Junction	SCK-401-0.3-Y
4	CAN Terminating Resistor	SCK-401-R
5	CAN Pressure/Temperature Sensor	PDXXXXX-XXXX-CAN
6	Analog Pressure/Temperature Sensor	PDXXXXX-XXXX
7	Analog Flow Sensor	SCFT-XXXX-XXX
8	Analog Temperature Sensor	SCT-150-04-02
9	Service Master Plus Instrument	SCM-500-01-01

Test Instrument Kits

The Parker Service Master Plus 500 Test Instrument Kit Includes:

CaseSCC-500
The Parker Service Master Plus Instrument.SCM-500-01-01
2 Transducers (CAN or Analog see Information below)
2 Transducer Cables (10 Ft. CAN or Analog) SCK-XXX-XX-XX
Power Supply SCSN-460
SensoWin Software and DocumentationDVD 4082
USB Connection Cable SCK-318-02-35
Quick Start Manual (incl. with the Parker Service Master Plus)



Code for Ordering Kits:

PDSMP 50 - X - XX - XX - XXX

CODE	DESCRIPTION
CAN	CAN bus Technology
Blank	Analog

Transducer Pressure Range (choose 2)

CODE	DESCRIPTION
2	PD Style
6	EMA3 Style (Female)

Coupler Style

CODE	PRESSURE	COLOR
01	-14.5 - +235 PSI	Blue
06	0 - 870 PSI	Green
15	0 - 2175 PSI	Yellow
40	0 - 5800 PSI	Orange
60	0 - 8700 PSI	Red

CODE	DESCRIPTION
50	The Parker Service Master Plus

Additional Transducers

Code for Ordering Separately:

PD XXXXX - XXXX - XXX

CODE	DESCRIPTION
CAN	CAN bus Technology
Blank	Analog

Pressure Range

CODE	DESCRIPTION
TA	PD Style
TEMA3	EMA3 Style (Female)

Coupler Style

CODE	PRESSURE	COLOR
0100	-14.5 - +235 PSI	Blue (Analog)
0160	-14.5 - +235 PSI	Blue (CAN-bus)
0600	0 - 870 PSI	Green
1500	0 - 2175 PSI	Yellow
4000	0 - 5800 PSI	Orange
6000	0 - 8700 PSI	Red

Flow Sensors

Code for Ordering Separately:

SCFT-XXXX - XXX - XXX

CODE	DESCRIPTION
CAN	CAN bus Technology
Blank	Analog

Coupler Style

CODE	DESCRIPTION
PD	PD Style
EMA	EMA Style

Flow Range

CODE	FLOW RATE
0004	0.2 - 4 GPM (1 - 15 l/min)
0116	1 - 16 GPM (4 - 60 l/min)
0380	3 - 80 GPM (10 - 300 l/min)
5160	5 - 160 GPM (20 - 600 l/min)

Bulletin 3800-SMP



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