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# SensoControl

Bedienungsanleitung  
Operating Instruction  
Mode d'emploi  
ServiceJunior



**Bitte vor Gebrauch aufmerksam lesen !**  
**Please read carefully before use !**  
**S.V.P. lire attentivement avant emploi !**

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# 1 General

The ServiceJunior digital pressure gauge measures and displays pressures and corresponding MIN and MAX readings. The accuracy (tolerance) is given by  $\pm 0,5\%$  related to Full scale. (FS). Running with a scanning rate of 10 msec (100 readings per second) pressure peaks are captured. The MIN/MAX memory will be permanent updated.

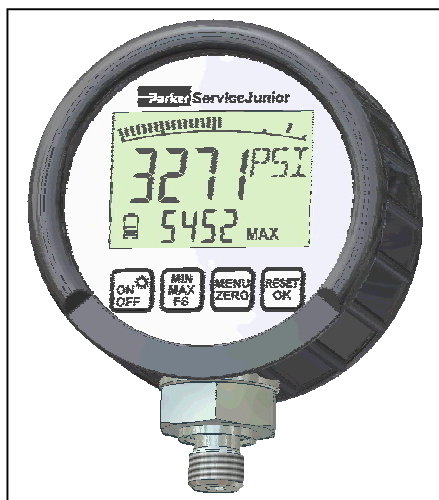
## 1.1 Safety Hints / Product Selection

The proper function of the ServiceJunior according to these operating instructions is only guaranteed if the specifications described in these operating instructions are observed. This is especially true for the observation of the permissible upper limit of the effective range as well as the temperature range.

 The application of the selected product in areas not described in the specifications (improper use) or the non-adherence to the instructions in the manual may lead to serious malfunctions which may even cause damage or bodily injury. Especially the improper assembly of the pressure gauge and the associated adapters may lead to the tearing off of the pressure gauge and/or to fluid leaks. **Please contact your Parker Hannifin Sales Office for Service, Repair and calibration.**

## 1.2 Model Versions

Versions and scope of supply			
Default setting “bar” Pressure port 1/4 BSPP male Deliveries includes Adapter M16x2		Default setting “PSI” Pressure port 7/16-20 UNF male Deliveries without Adapter	
Range	Part No.	Range	Part No.
-1...16,00 bar	SCJN-016-01	-1...230,0	SCJR-0230-02
0...100,0	SCJN-100-01	0...1500	SCJR-1450-02
0...400,0	SCJN-400-01	0...5800	SCJR-5800-02
0...600,0	SCJN-600-01	0...8700	SCJR-8700-02



## 2 Getting Started

The ServiceJunior will be delivered with assembled batteries.  
The device is ready for use after switching on.

### 2.1 Replacement of Battery



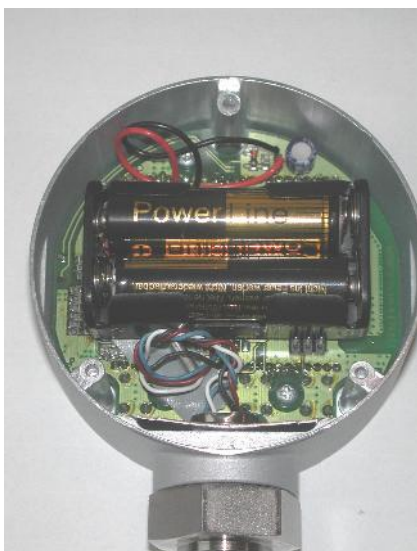
#### Caution !

To replace the battery switch off the device first. Remove the battery lid. Build in the new battery acc. to instructions. Pay attention to polarity.

Battery type 2 x 1,5 V (LR6 - AA)

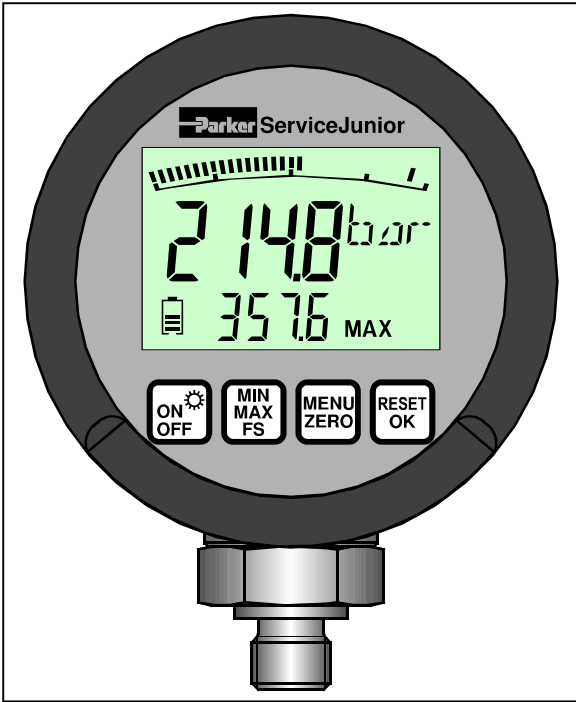


The battery lifetime is 1.500 hrs by continuous operation. (No back light function)  
The remained battery capacity will be displayed permanently.



ServiceJunior S/N

### 3 Functions and keys



#### Display






4 ½ digit LCD with back light function  
readouts and menu functions are displayed.

„bar-graph“ with peak & hold function  
Actual read out (character size 15mm)  
MIN/MAX or FullScale (FS) (8 mm)

Battery status

#### Key



Key		Function
	ON /OFF	Switch on the device Switches off the device
		Press 2 sec. Back Light function ON (30 sec.)
	MIN	Select additional display: MIN / MAX or FS
	MAX	Lowest readout;
	FS	Highest readout (peak) Full scale (range) (e.g.400 bar)
	MENU:	Press 2 sec.
	ZERO:	Select engineering units; automatic switch off function Zero pint adjustment
	RESET:	Delete MIN and MAX memory
	OK:	Confirm MENU functions

### 3.1 Display Mode

Operating the instrument in the display mode, the actual pressure (ACT) will be displayed. The actual readout will be shown with its corresponding unit. MIN, MAX or FS-will be shown at the additional display line.

Display	Description
<b>bar-graph</b>	The actual reading will be displayed graphical by pixels. Pressure peaks are indicated by a separated highlighted pixel. Refreshing rate 50 msec.
<b>ACT</b>	Actual reading Refreshing rate 300 msec.
<b>MIN/MAX</b>	Displays MIN-, <b>MAX</b> - or <b>FS</b> -range. Refreshing rate 300 msec.
<b>FS</b>	Full scale range (e.g. 400 bar)
<b>Units</b>	Engineering unit
<b>Battery</b>	Battery level (5 Steps)
<b>REC</b>	REC flashes when data logging is operated (on Option)
<b>x10</b>	Reading multiplied by 10.

### 3.2 Menu Functions

Following set ups can be done within the MENU Function:

- Automatic switch off enable/disabled
- Selection of engineering units (bar/mbar/PSI/kPa/Mpa.)

By pressing the MENU key (2 sec.) the desired function appears. Skip to next function by pressing MENU again. Confirmation by pressing the „OK“ key. The ServiceJunior returns into the display mode.

#### 4 Connect to the Hydraulics

According to the various models (UNF/BSPP port) the ServiceJunior is designed with 1/4 BSPP or 7/16-UNF male studs.

Please make sure that the device is properly mounted to avoid malfunctions.



**Please do not do the assembly while the ServiceJunior is pressurized**

Model	SCJR-xxx-02	SCJN-xxx-01
Pressure port	7/16-20 UNF	1/4 BSPP
Adapter (M16x2)	SCA-7/16-EMA-3	SCA-1/4-EMA-3 Already assembled (hex size 24mm)
Test Hose (M16x2)	SCA-EMA-3/3	SCA-EMA-3/3
Other systems		
Testpoint M16x1.5	SCA-EMA-3/4	SCA-EMA-3/4
Testpoint M12,65x1.5	SCA-EMA-3/2	SCA-EMA-3/2
Testpoint Pin Lock	SCA-EMA-3/1	SCA-EMA-3/1



**Please pay attention to the assembly torque:**

The hex size of the presure port is 27 mm	
Pressure port	Torque
7/16-20 UNF	35 Nm
1/4 BSPP	25 Nm

When the ServiceJunior will be assembled directly, pls pay attention to the rotation.

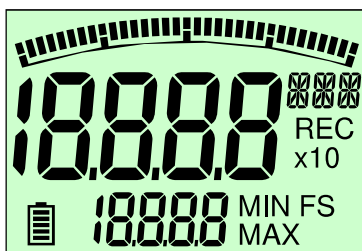


## 5 Operation of the ServiceJunior

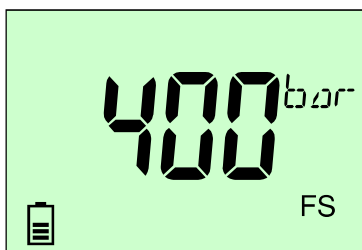
### 5.1 Switch on (ON)



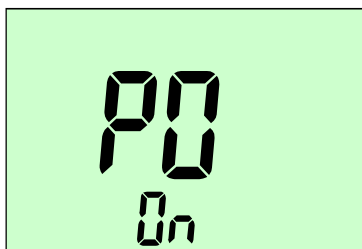
Press



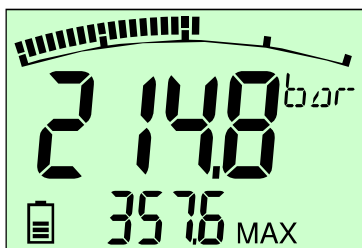
Self test running



Indication of full-scale range (FS)  
Unit (**bar**) SCJN-xxx-01  
Unit (**PSI**) SCJR-xxx-02



Auto Power Off function enabled  
Automatic switch off after 15 min.  
This configuration can be selected within **MENU**.



Display mode.  
**ACT** readout in display  
**MAX** peak



## 5.2 Switch off (OFF)



Press key (quick)

## 5.3 Back light function



Hold down the key (2 sec).

The back light illumination will be switched off after 30 sec.

## 5.4 MIN/MAX Display

The additional display line can be switched to MIN/MAX or FS format.  
The scroll function indicates MIN / MAX after the other.

To measure pressure peaks the MIN/MAX Function is in use. The MIN/MAX memory saves the highest (MAX) and the lowest (MIN) reading. Switching off the instrument, the MIN/MAX memory will be erased. When running different pressure tests one after another, the MIN/MAX memory should be deleted (**RESET**) after every test cycle.



MIN / MAX and FS appears in display

## 5.5 FS Full Scale Display

The FullScale display helps to read out the bar graph indication.  
After MIN and MAX FS appears.  
The full scale value will be displayed numerically.



FS appears in display

## 5.6 Delete MIN/MAX readings



MIN/MAX readings deleted

## 5.7 Zero Point Adjustment (ZERO)

When undesirable deviations displayed while the system is pressure less (Atmospheric pressure), a new zero point can be set manually.



Processing a zero point adjustment the actual reading is set to zero. Please operate this function only for **pressure less** application in order to avoid failed results.



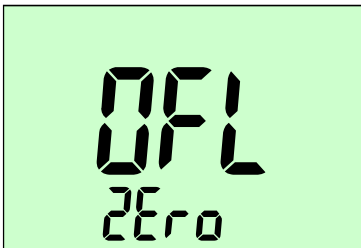
Press ZERO key (quick)



The zero point adjustment is done. The display shows 0.0 bar appears as the **ACT** reading. This configuration is enabled until the device will be switched off.



If the actual reading is higher than 5% of full scale range, **OFL / ZErO** (3 sec.) appears. The zero point adjustment will **not** be done.



The adjustment cannot be done. Please make sure that the system is really pressure less.

## 5.8 Disable zero point adjustment



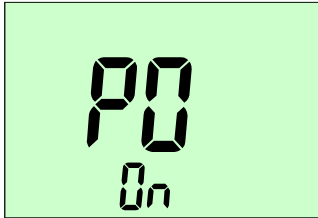
Switch off the device. Switching on the device again. The adjustment is disabled.

## 5.9 Automatic Switch Off




Press for 2 sec

According to the SerbviceJunior configuraton two different setups are possible.  
Automatic switch off or continuously operation:



**PO On**




When  is pressed, the automatic switch off is enabled.  
The device will switch off after 5 mins.



**PO OFF**



When  is pressed, the device must be switched off manually.

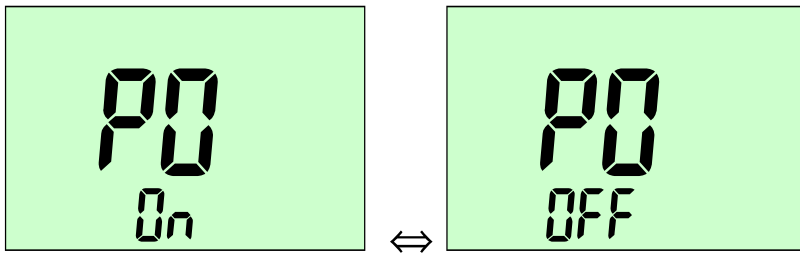


The Auto Power On / Off function is enabled and saved.

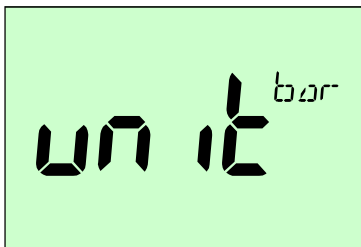
## 5.10 Setting Engineering Units



Press for 2 sec



Press to skip

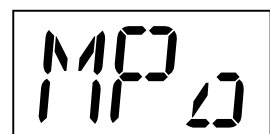
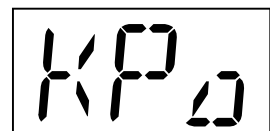
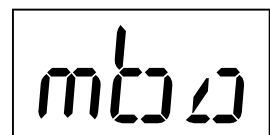
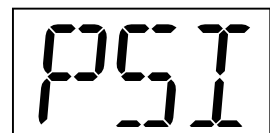
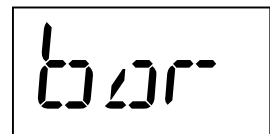


Press quickly

The next unit appears



Confirm selected unit



## 6 Technical Data:

<b>Version</b>	Digital pressure gauge with <b>ACT - MIN</b> and <b>MAX Display</b> bar graph display (33 segments) with peak and hold function 4 ½ digit LC display (15 mm) with back light illumination Battery powered with low power electronic system. Life time cycle 1.500 hrs (No back light function) Pressure port stainless steel 1.4404 1/4 BSP (ISO 1179-2) or 7/16 – 20 UNF (ISO 11926-2/3)	
<b>Input:</b>	Ceramic sensor cell (relative) –1. . 16 bar Strain gauge cell (absolute) 0. . 100/400/600 bar	
<b>Fluids and gases</b>	Oil, water, air and oxygen NBR sealed	
<b>Accuracy</b>	Tolerance ± 0,5%FS (Full Scale)	
<b>Resolution</b>	12 bit = 4.096 steps	
<b>MAX-MIN Memory</b>	Scanning rate 10 msec.	
<b>Ambient conditions</b>	Operating temperature	-10. . 50 °C
	Fluid temperature	-20. . +80 °C
	Storage temperature:	-20. . +60 °C
	Rel. humidity:	< 85%
	Protection:	EN 60529 (IP 67)
	Vibration:	IEC 60068-2-6, (5g)
	Shock:	IEC 60068-2-27 (25g)
<b>Power supply</b>	Battery 2 x1,5 VDC (LR6 –AA) Alkaline (Mignon)	

## Digital Pressure Gauge ServiceJunior

Range bar	Display bar	Display PSI	Display mbar	Display kPa	Display MPa
-1 .. 16	-1,00...16,00	-14,5...200,0	-999...16000	-100...1600	-
0 .. 100	0...100,0	0...1500	-	0...10000	0...10,00
0 .. 400	0...400,0	0...6000	-	0...4000 (x10)	0...40,00
0 .. 600	0...600,0	0...9000	-	0...6000 (x10)	0...60,00
0 .. 1000	0...1000	0...15000	-	-	0...100,0

Range (bar)	-1 .. 16	0 .. 100	0 .. 400	0 .. 600
Overload P <sub>max</sub> (bar)	40	200	800	1200
Burst Pressure (bar)	50	800	1700	2200



Burst pressures related to Tests without assembled adapters.  
Exceeding the maximum overload values (P<sub>max</sub>) may lead to malfunctions and may even destroy the ServiceJunior.

The ServiceJunior meets the guidelines of the European Community (EU).  
It is confirmed that this product is approved acc. to following standards:



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

Technical subject to change

June 2004