





# Technical description

## Sensors

### Accelerometers:

Accelerometers work according to the piezoelectric principle. In the sensor is a piezo crystal placed on which a power by a seismic mass is minted. In proportion to this power the piezo crystal produces an electric charge which in the integrated amplifier is changed into a voltage signal.

Order number: Type:	S-608A11 -PA, -PS, -PSL	S-607A11 -PA	S-607A61 -PA	S-601A02 -PA, -PS, -PSL
				
Sensitivity:	100 mV/g respectively 10,2 mV/(m/s <sup>2</sup> )			500 mV/g respectively 51 mV/(m/s <sup>2</sup> )
Measurement range:	490 m/s <sup>2</sup>			98 m/s <sup>2</sup>
Frequency range ± 3dB:	0,5 ... 10.000 Hz			0,17 ... 10.000 Hz
Resonance frequency:	22 kHz	25 kHz	25 kHz	16 kHz
Connection:	integrated connection cable, on the top	integrated connection cable, lateral	integrated steel-armored connection cable, lateral	connector and separate connection cable
Cable length:	10 m, other length are available, please state this in the order			
Voltage supply range:	ICP			
Temperature range:	-54 ... 121 °C			
Protection class:	IP 68			

### Inductive displacement and speed sensors

Inductive sensors collect the changes of the magnetic field in the sensor measurement range, which are caused by passing of metal particles.

Optical speed sensors work as reflection barrier. A reflection mark is bonded on the shaft.

Order number: Type:	S-IWRM 18U9501 -PA, -PS, -PSL	S-IFRM 18P1301/S14L -PA	S-IFRM 18P1703/S14L -PA	S-FPAM 18P3151/S14 -PS, -PSL
				
Description:	inductive linear sensor	inductive speed sensor		optical speed sensor with reflection band
	reference distance: 3,25 ± 0,25 mm	max. switching frequency: 0,5 kHz		nominal range: 3 m
	sensitivity: 2,67 V/mm	sensing distance: 12 mm	sensing distance: 8 mm	actual range: 2,5 m
	slew rate: 1 mm/ms	output indicator: LED red		output indicator: LED yellow
	linearity: ± 0,1 mm			alignment aid: LED flashing
	repeatability: ± 0,01 mm			release time: < 1 ms
Temperature range:	0 ... 60 °C	-25 ... +75 °C		-25 ... +55 °C
Housing material:	brass nickel plated	brass nickel plated		brass nickel plated / polycarbonate
Protection class:	IP 67	IP 67		IP 67
Voltage supply range:	14 ... 30 VDC, < 20 mA	10 ... 30 VDC, < 15 mA		10 ... 30 VDC, < 35 mA
Connection:	integrated connection cable, at the top	connector and separate connection cable		connector and separate connection cable

### Type:

-PA	These sensors are used for the Peakalyzer and delivered pre-fabricated. An assembly aid will be delivered for the accelerometer. This aid will be bonded at the machine housing. The sensor is bolted on it by an assembly bolt M6x1. Displacement and speed sensors have a mounting thread M18x1.
-PS	These sensors are used for the PeakStore and delivered pre-fabricated. Accelerometers have a contact magnet and the connection cables have BNC-connectors. The displacement and speed sensors have a mounting thread M18x1 and will also be delivered with the right connectors.
-PSL	These sensors are used for the PeakStore and delivered pre-fabricated. Accelerometers have a contact magnet and the connection cables have LEMO-connectors. The displacement and speed sensors have a mounting thread M18x1 and will also be delivered with the right connectors.