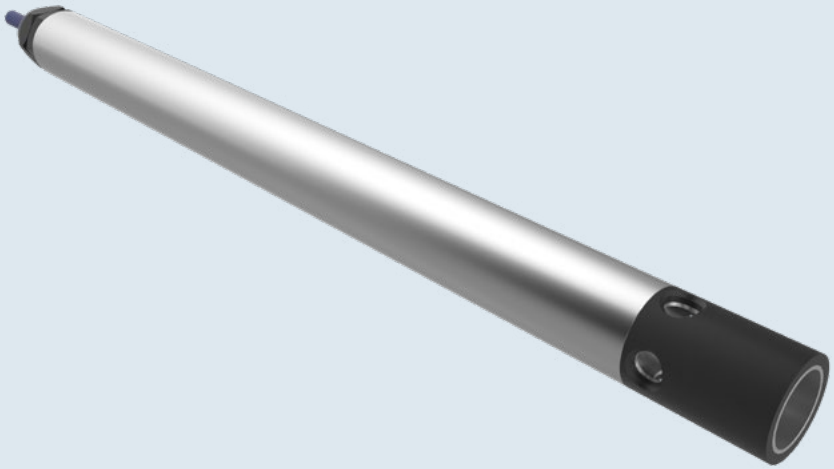
SIM

Water Quality

Index

Water Quality

WQ410
Conductivity sensor



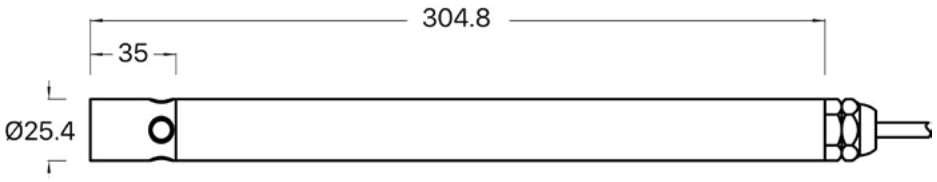
Description

The WQ410 conductivity sensor is rugged and compact instrument suited for measuring conductivity in surface and underground waters.
The sensor consist of two stainless steel electrodes: the outside electrode is a ring the inside electrode is a wire.
The conductivity sensor measures the ability of a solution to conduct an electric current between the two electrodes.
The conductivity sensor is automatically temperature compensated using an internal thermistor.
The WQ410 conductivity sensor is produced in a 25 mm stainless steel housing, which can be inserted in small size wells.
Every sensor is provided with a calibration certificate that attests the results of the test performed and all electromechanical features.
Manual read out with DATAVIEW.
Automatic read out with MINILOG, MYLOG.
Readout units with NATUN.

Applications

Conductivity measurement in wells, tanks, etc.

WQ410
Conductivity sensor



Technical features						
Model	WQ410					
	- 01	- 02	- 03	- 04	- 05	- 06
Range (µS)	500	2000	5000	10000	20000	40000
Supply	12 Vcc (±5%)					
Output	4-20 mA					
Linearity	2% FS					
Consumption	0.8 mA + sensor output					
Max pressure	3 bar					
Operating temperature	-40 ÷ + 55 °C					
Temperature compensation	2% per °C					
Warm up	3 sec					
Dimensions	25 x 300 mm					
Weight	0.450 Kg					
Material	Stainless Steel / PVC					
Temperature sensor	***Add to acronym***					
		- CT			***- PT***	
Output		µA/K			PT100 100Ω a 0 °C	
Range		-50 , 105°C			-100÷104°C	
Accuracy		0.3°			0.1°	

WQ410_EN_ED05/18
ED-08/22

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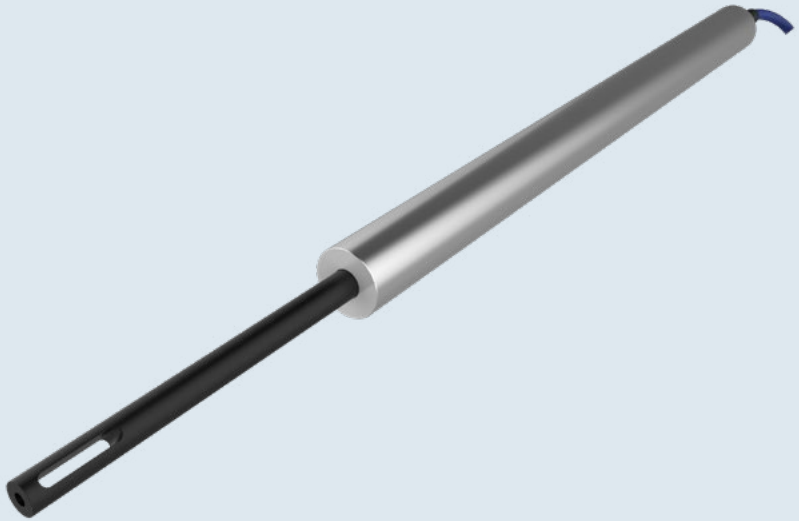
SIM STRUMENTI SNC
Via Merendi 42
20010 CORNAREDO (MI)
Tel: +39 02 9700 30 39
Fax: +39 02 9729 01 67
www.simstrumenti.com
sim@simstrumenti.com

WQ411
Conductivity sensor



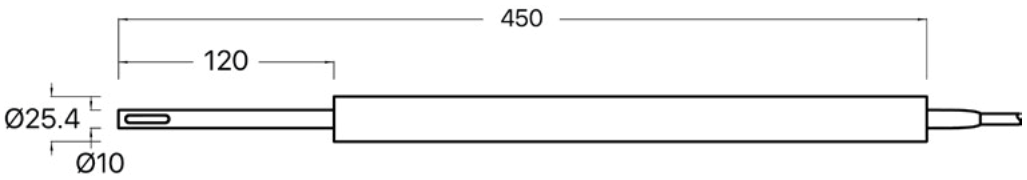
Description

The conductivity sensor WQ411 is suitable for measuring conductivity in a wide variety of applications including laboratories, streams, rivers, and groundwater. The small diameter and rugged housing make it useful for hand held measurements or permanent installation.
The conductivity sensors use a 4-electrode measuring technique that provides accurate readings over a wide range of conductivities and temperatures. Because the conductivity of ionic solutions increases with increasing temperature, a temperature sensor is also incorporated and is used to provide automatic temperature compensation of 2%/°C normalized to 25°C. An in-line interface module converts the digital conductivity sensor and temperature data into two separate 4-20mA signals.
Every sensor is provided with a calibration certificate that attests the results of the test performed and all electromechanical features.
Manual read out with DATAVIEW.
Automatic read out with MINILOG, MYLOG.
Readout units with NATUN.

Applications

Conductivity measurement in wells, tanks, etc.

WQ411
Conductivity sensor



Technical features					
Conductivity Sensor					
Model	***WQ411***				
	- 01	***- 02***	***- 03***	***- 04***	***- 05***
Range	0-200 µS	200-2000 µS	2-20 mS	20-200 mS	200-2000 mS
Supply	12 Vcc (±5%)				
Output	4-20 mA				
Linearity	2% FS				
Operating temperature	-40 ÷ + 55 °C				
Temperature compensation	2% per °C				
Temperature Sensor					
Range	-5 ÷ 70°C				
Temperature accuracy	±0.2°C				
Output	4-20 mA				
Response	99% < 20sec				
General					
Warm up	15 sec				
Dimension	25 x 300 mm				
Weight	0.450 Kg				
Material	Stainless Steel / PVC				
Consumption	20 mA + sensor output				
Max Pressure	3 bar				

WQ411_EN_ED05/18
ED-06/22

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SIM STRUMENTI SNC
Via Merendi 42
20010 CORNAREDO (MI)
Tel: +39 02 9700 30 39
Fax: +39 02 9729 01 67
www.simstrumenti.com
sim@simstrumenti.com

WQ420
PH sensor

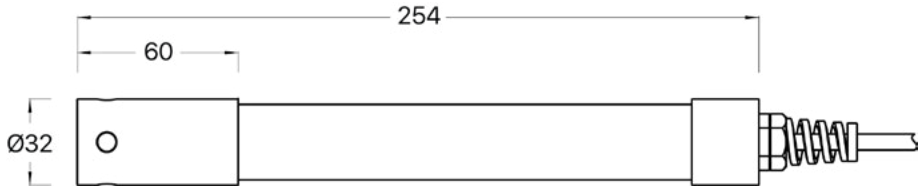
Description

The WQ420 PH sensor is rugged and compact instrument suited for measuring PH in surface and underground waters.
The sensor is produced with a replaceable sensible element, for an easy maintenance and to allow a long longevity to the sensor.
The WQ420 PH sensor consists of a Hydrogen ion-sensitive glass bulb, and a reference electrode. The mA output signal is directly proportional to the measured liquid PH.
The WQ420 PH sensor is produced in a 32 mm stainless steel housing, which can be inserted in small size wells.
Every sensor is provided with a calibration certificate that attests the results of the test performed and all electromechanical features.
Manual read out with DATAVIEW.
Automatic read out with MINILOG, MYLOG.
Readout units with NATUN.

Applications

PH measurement in wells, tanks, rivers etc.

WQ420
PH sensor



Technical features		
Range	0-14 PH	
Supply	10-30 Vcc	
Output	4-20 mA	
Linearity	2% FS	
Consumption	5.5 mA + sensor output	
Max pressure	3 bar	
Operating temperature	-40 ÷ + 55 °C	
Warm up	3 sec	
Dimensions	32 x 255 mm	
Weight	0.450 Kg	
Material	Stainless Steel / PVC	
Temperature sensor	***Add to acronym***	
	- CT	***- PT***
Output	µA/K	PT100 100Ω a 0 °C
Range	-50 , 105°C	-100÷104°C
Accuracy	0.3°	0.1°

Accessories	
PH electrode	***WQ420-AX-ELPH***

WQ420-EN-ED05/18
ED-06/22

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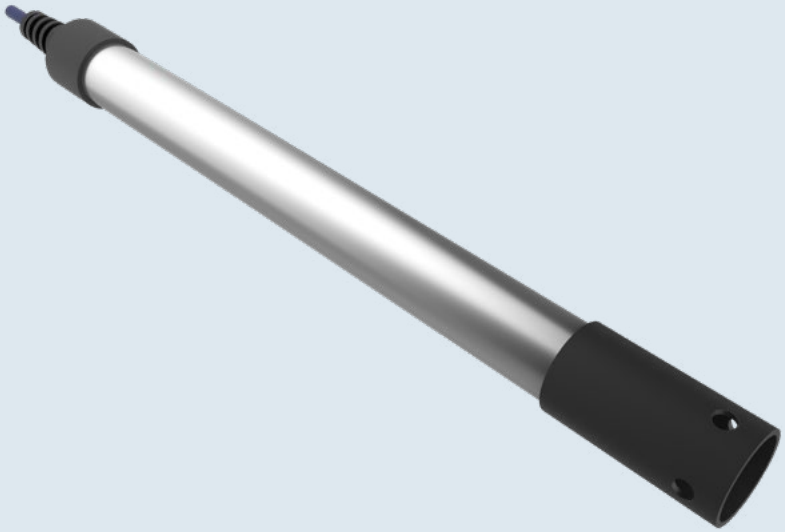
SIM STRUMENTI SNC
Via Merendi 42
20010 CORNAREDO (MI)
Tel: +39 02 9700 30 39
Fax: +39 02 9729 01 67
www.simstrumenti.com
sim@simstrumenti.com

WQ430
Dissolved oxygen sensor



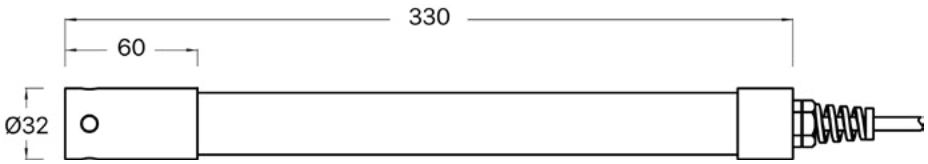
Description

The WQ430 DO sensor is rugged and compact instrument suited for measuring dissolved oxygen in surface and underground waters. The sensor is produced with a replaceable sensible element, for a easy maintenance and to allow a long longevity to the sensor. The WQ430 PH sensor is produced in a 32 mm stainless steel housing, which can be inserted in small size wells.
Every sensor is provided with a calibration certificate that attests the results of the test performed and all electromechanical features.
Manual read out with DATAVIEW.
Automatic read out with MINILOG, MYLOG.
Readout units with NATUN.

Applications

DO measurement in wells, tanks, rivers etc.

WQ430
Dissolved oxygen sensor



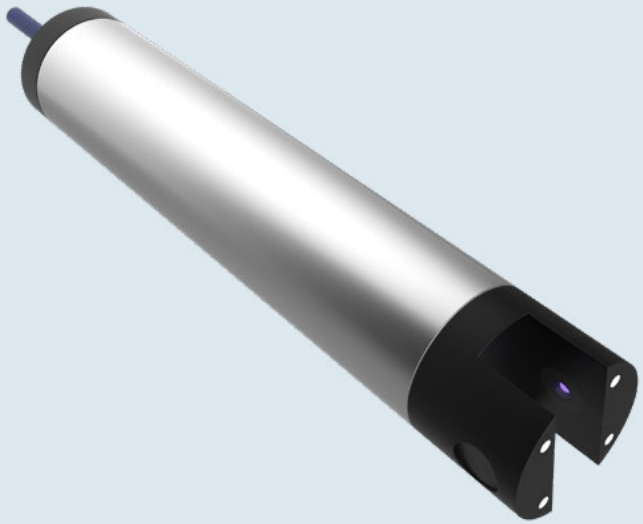
Technical features		
Range	0-100% 0-8 ppm	
Supply	10-36 Vcc	
Output	4-20 mA	
Accuracy / Combined Error	0.5%FS / 2% FS	
Temperature compensated to	25 °C	
Consumption	5.5 mA + sensor output	
Max pressure	3 bar	
Operating temperature	-40 ÷ + 55 °C	
Warm up	3 sec	
Dimensions	32 x 255 mm	
Weight	0.450 Kg	
Material	Case	Stainless Steel / PVC
	Membrane	Teflon
Temperature sensor	***Add to acronym***	
	- CT	***- PT***
Output	µA/K	PT100 100Ω a 0 °C
Range	-50 , 105°C	-100÷104°C
Accuracy	0.3°	0.1°

Accessories	
DO Electrode	***WQ430-AX-ELDO***

WQ430-EN-ED05/18
ED-06/22

SIM STRUMENTI SNC
Via Merendi 42
20010 CORNAREDO (MI)
Tel: +39 02 9700 30 39
Fax: +39 02 9729 01 67
www.simstrumenti.com
sim@simstrumenti.com

WQ440
Turbidity sensor



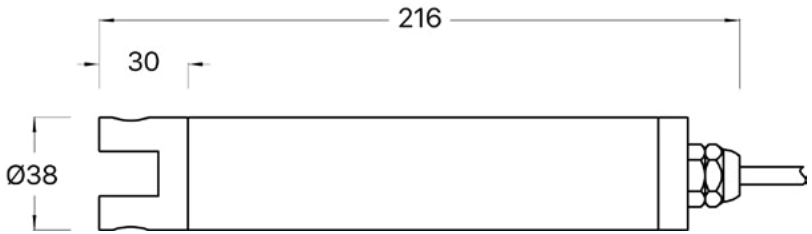
Description

The WQ440 turbidity sensor is rugged and compact instrument suited for measuring turbidity in surface and underground waters. The WQ440 turbidity sensor consists of a 90 degree scatter nephelometer and a photodetector positioned at 90 degrees to the light beam.
In accordance with USEPA Method 180.1 for turbidity measurement, the Turbidity Sensors are a 90 degree scatter nephelometer. The turbidity sensor directs a focused beam into the monitored water. The light beam reflects off particles in the water, and the resultant light intensity is measured by the turbidity sensor's photodetector positioned at 90 degrees to the light beam. The light intensity detected by the turbidity sensor is directly proportional to the turbidity of the water. The turbidity sensors utilize a second light detector to correct for light intensity variations, color changes, and minor lens fouling.
Every sensor is provided with a calibration certificate that attests the results of the test performed and all electromechanical features.
Manual read out with DATAVIEW.
Automatic read out with MINILOG, MYLOG.
Readout units with NATUN.

Applications

Turbidity measurement in wells, tanks, flumes, streams etc.

WQ440
Turbidity sensor



Technical features		
Range		0-50 NTU e 0-1000 NTU
Light source		Infrared LED (880nm)
Supply		10-36 Vcc
Output		2 x 4-20 mA
Linearity		±1% FS
Consumption		30 mA + sensor output
Max pressure		2 bar
Operating temperature		-10 ÷ + 50 °C
Warm up		5 sec
Dimensions		38 x 216 mm
Weight		0.454 Kg
Material	Case	Stainless steel and Polyether
	Sensore housing	Delrin

WQ440-ENG-ED05/18
ED-06/22

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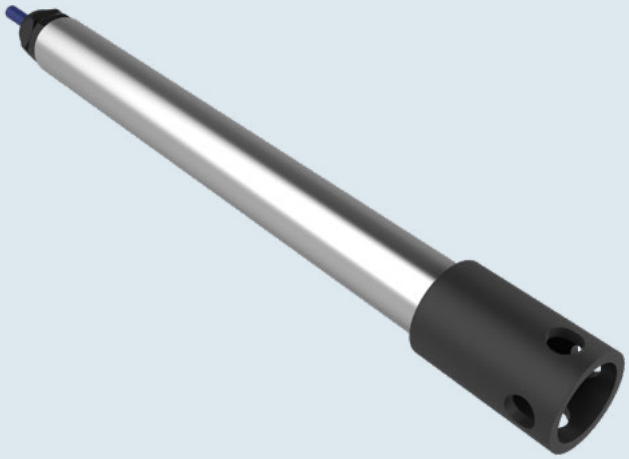
SIM STRUMENTI SNC
Via Merendi 42
20010 CORNAREDO (MI)
Tel: +39 02 9700 30 39
Fax: +39 02 9729 01 67
www.simstrumenti.com
sim@simstrumenti.com

WQ450
ORP sensor



Description

The WQ450 ORP sensor is rugged and compact instrument suited for measuring redox in surface and underground waters.
Redox or ORP (Oxidation Reduction Potential) is a measure of the oxidation activity of the water. ORP is also used as an alternative way to measure chlorine concentration, since water high in chlorine (a strong oxidizer) has a high ORP.
The WQ450 ORP sensor consists of a platinum wire and a reference electrode.
The mA output signal is directly proportional to the ORP.
Every sensor is provided with a calibration certificate that attests the results of the test performed and all electromechanical features.
Manual read out with DATAVIEW.
Automatic read out with MINILOG, MYLOG.
Readout units with NATUN.

Applications

ORP measurement in wells, tanks, rivers, streams etc.

WQ450
ORP sensor

Technical features		
Range	-500 ÷ +500 mV	
Supply	10-36 Vcc	
Output	4-20 mA	
Linearity	2% FS	
Consumptio	0.2 mA + sensor output	
Max pressure	3 bar	
Operating temperature	-40 ÷ + 55 °C	
Warm up	3 sec	
Dimensions	25 x 267 mm	
Weight	0.227 Kg	
Material	Stainless steel / PVC	
Temperature sensor	***Add to acronym***	
	- CT	***- PT***
Output	µA/K	PT100 100Ω a 0 °C
Range	-50 , 105°C	-100÷104°C
Accuracy	0.3°	0.1°

WQ450_EN_ED05/18
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SIM STRUMENTI SNC
Via Merendi 42
20010 CORNAREDO (MI)
Tel: +39 02 9700 30 39
Fax: +39 02 9729 01 67
www.simstrumenti.com
sim@simstrumenti.com

WQ455
Industrial ORP transmitter

Description

The industrial ORP transmitter WQ455 has an isolated 2-wire 4-20mA output load with a big size LCD display. The scales can be selected via an internal dip switch. The Industrial ORP transmitter use BNC connections for the ORP sensor. The transmitter can be connected to a PLC or, using the 4-20mA output, connected to any SIM STRUMENTI data acquisition system:

A. MINILOG data acquisition system
B. DATAVIEW readout unit
C. MYLOG data acquisition system
D. PC320 controller

Applications

Measurement of water oxidation in tanks, etc.

WQ455
Industrial ORP transmitter

Technical features	
Model	***PR310-FS****
Range	0.5-1-2-3-4-6-10-16-25-40-60-100 bar
Supply	8-24 Vcc
Output	4-20 mA
Linearity	0.25% FS
Repeatability	0.01% FS
Operating temperature	-20 ÷ +70 °C
Dimension	95 x 230 x 6 mm
Weight	0.6 Kg
Material	Stainless Steel 17-4 PH
Protection	IP68

Accessories	
Hydraulic tube	***Add -TI-MM** to the product abbreviation***
Soldering brackets	***Add -AS to the product abbreviation***
"T" connector ***	***Add -RT to the product abbreviation***
Piston	***Add -PI-MM** to the product abbreviation***
Male quick connector	***PR310-RM***

*FS	Indicate the range
**MM	Indicate the tube length in meters
***	The "T" connector is supplied with a female quick connector and protection cap. The sensor is connected to the quick connector.
****	The piston requires a hydraulic tube, indicate the desired length.

WQ455-ENG-ED05/18
ED-06/22

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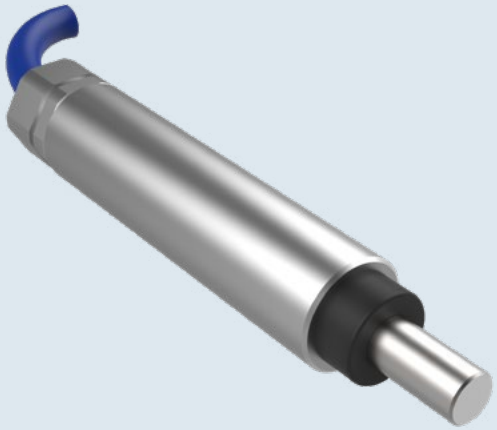
SIM STRUMENTI SNC
Via Merendi 42
20010 CORNAREDO (MI)
Tel: +39 02 9700 30 39
Fax: +39 02 9729 01 67
www.simstrumenti.com
sim@simstrumenti.com

WE711
Temperature sensor



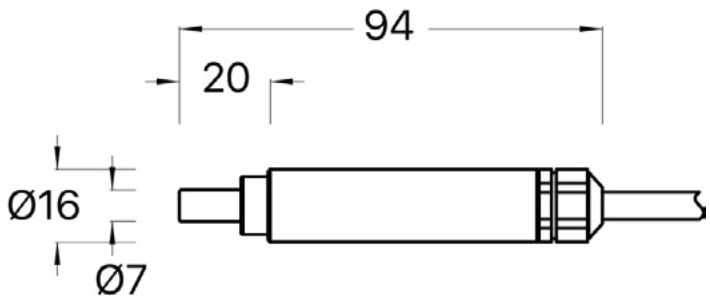
Description

The WE711 sensor is an instrument suitable for temperature control in many situations: in liquid, masonry and rock, embedded in concrete, inserted in soils, etc.
The WE711 temperature gauge consists of a stainless steel watertight container, which allows it to be used in all environments. For each of the uses mentioned, SIM STRUMENTI designed an adequate protection which, in addition to guaranteeing reliability, does not influence the characteristics of the sensitive element.
Every sensor is provided with a calibration certificate that attests the results of the test performed and all electromechanical features.
Manual read out with DATAVIEW.
Automatic read out with MINILOG, MYLOG.
Readout units with NATUN.

Applications

Temperature measurement in water, concrete, soil, etc.

WE711
Temperature sensor



Technical features				
Model	***WE711-PT***	***WE711-42***	***WE711-AN***	***WE711-CN***
Supply	1 mA	10-30 Vcc	5-30 Vcc	5-30 Vcc
Output	100 Ω a 0 °C	4-20mA	10mV/°C	µA/K K= °C+273.1
Range	-100 ÷ 104°C	Adjustable*	-40 ÷ 110°C	-50 ÷ 105°C
Accuracy	1/3 DIN	0.25 °C	0.3 °C	0.1 °C
Consumption	1 mA	30 mA	0.3 mA	0.3 mA
Material**	Stainless Steel			
Dimension***	Ø16 x 110 mm			
Protection	IP68			

* The converter is calibrated in the laboratory; the desired scale must be specified at the time of the order.

** In the model WE711-42, the converter is inserted in reinforced polyester IP65 box with dimensions of 55x55x38mm.

*** In the model WE711-42-IM, if the converter has to have also an IP68 protection, both sensor and converter will be placed in a stainless steel Ø48x70mm container.

WE711_EN_ED05/18
ED-06/22

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20010 CORNAREDO (MI)
Tel: +39 02 9700 30 39
Fax: +39 02 9729 01 67
www.simstrumenti.com
sim@simstrumenti.com

SIM STRUMENTI SNC
Via Merendi 42
20007 CORNAREDO (MI)
ITALY
Tel: +39 0297003039
Fax: +39 0297290167
www.simstrumenti.com
info@simstrumenti.com