



## S-LINE

### COMPACT / MODULAR DIGITAL INDICATORS / TOTALIZERS

**S-Line Series** is a high performance compact/modular indicators / totalizers family. This series offers scalable display with 4, 6, 8, 4+7 digits in multiple visualization mode (real-time, integrated, totalized measured values). S-Line indicators support universal input (analog, digital, by sensor) and retransmitted output mA, V standard. Concerning power supply they ensure an extended option range options: 80-265 Vac; 10-40 Vdc / 19-28 Vac; power transducers. Accuracy class reach 0,1% with 14-16 bit A/D conversion. Optionally S-Line indicators can provide ModBUS interface alarm relay (hysteresys and threshold control) and IP66 case.

#### SCALABLE DISPLAY



4,6,8,4+7 digits

#### UNIVERSAL INPUT



Analog, Digital (Pulses),  
Temperature (sensor)

#### RETRANSMISSION (OUTPUT)



Analog or Digital  
(Pulses)

#### POWER SUPPLY



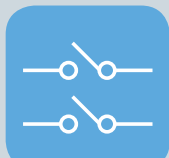
85-265 Vac; 10-40 Vdc,  
19-28 Vac, Power Supply  
for transducers

#### HIGH ACCURACY



0,1% CLASS; A/D  
converter at 14-16 bit

#### RELAY OUTPUT



Threshold management  
and hysteresis

#### MULTIPLE VISUALIZATION



Instantaneous &  
integrated values,  
increase/ decrease counters

#### EASY SETUP

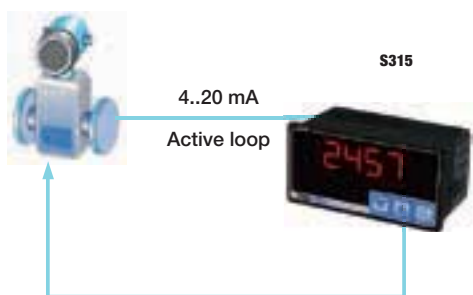


Plug&Play  
configurator software

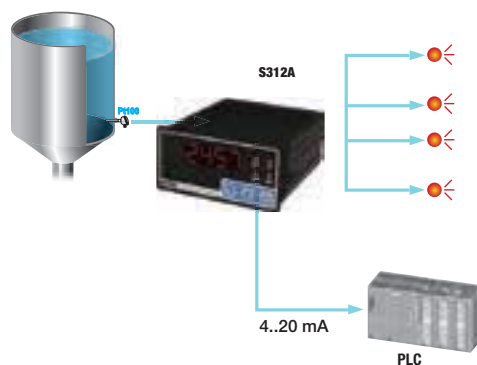
## APPLICATION EXAMPLES

### Visualization of analog signal outgoing from a transducer with active loop

$V_{max} = 30\text{ V}$

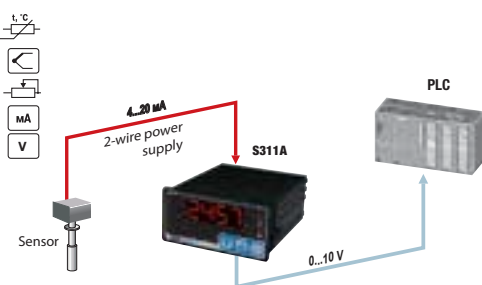


### Visualization and signal retransmission with activation alarms

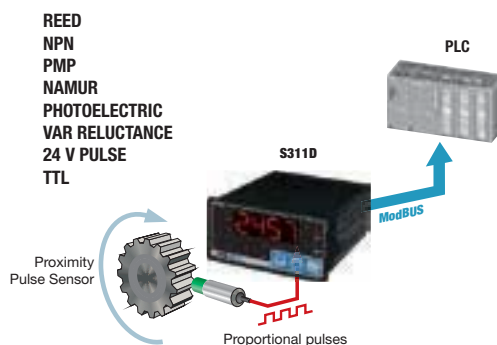


### Analog signal visualization





RTD (PT100)  
TC (J, K, R, S, T, B, E, N)  
Ohm



### Visualization and totalizing of pulse signal



## ANALOG INPUT MODULAR INDICATORS / TOTALIZERS

	S311A-4	S311A-6	S311A-8	S311A-11
				
	<b>4 digit universal analog input indicator - totalizer</b>	<b>6 digit universal analog input indicator - totalizer</b>	<b>8 digit universal analog input indicator - totalizer</b>	<b>11 digit universal analog input indicator - totalizer</b>
<b>GENERAL DATA</b>				
Power supply	80-265 Vac (H version) 10-40 Vdc / 19-28 Vac (L version)	80-265 Vac (H version) 10-40 Vdc / 19-28 Vac (L version)	80-265 Vac (H version) 10-40 Vdc / 19-28 Vac (L version)	80-265 Vac (H version) 10-40 Vdc / 19-28 Vac (L version)
Power transducers	Max 18 V, 25 mA	Max 18 V, 25 mA	Max 18 V, 25 mA	Max 18 V, 25 mA
Power consumption	Max 3 W	Max 3 W	Max 3 W	Max 3 W
Isolation	1.500 Vac	1.500 Vac	1.500 Vac	1.500 Vac
Communication interface	ModBUS RTU slave (optional board)	ModBUS RTU slave (optional board)	ModBUS RTU slave (optional board)	ModBUS RTU slave (optional board)
Memory	EEPROM 10 years, storage memory	EEPROM 10 years, storage memory	EEPROM 10 years, storage memory	EEPROM 10 years, storage memory
<b>VISUALIZATION AND MEASURE</b>				
Display	LED, 4 digit	LED, 6 digit	LED, 8 digit	LED, 11 (4+7) digit
Status indicators	2 alarm leds (enabled threshold trips)	2 alarm leds (enabled threshold trips)	2 alarm leds (enabled threshold trips)	2 alarm leds (enabled threshold trips)
Front Buttons	3 navigation keys	3 navigation keys	3 navigation keys	3 navigation keys
Display errors	Over range, fault sensor	Over range, fault sensor	Over range, fault sensor	Over range, fault sensor
Accuracy	0,10%	0,10%	0,10%	0,10%
Stability	0,01%/K	0,01%/K	0,01%/K	0,01%/K
Linearity error	0,2°C (Pt100) 0,5° (TC J,K,E,N,T) 1°C (TC R,S) 2°C (TC B) 0,05% (0-10 V, 0-20 mA)	0,2°C (Pt100) 0,5° (TC J,K,E,N,T) 1°C (TC R,S) 2°C (TC B) 0,05% (0-10 V, 0-20 mA)	0,2°C (Pt100) 0,5° (TC J,K,E,N,T) 1°C (TC R,S) 2°C (TC B) 0,05% (0-10 V, 0-20 mA)	0,2°C (Pt100) 0,5° (TC J,K,E,N,T) 1°C (TC R,S) 2°C (TC B) 0,05% (0-10 V, 0-20 mA)
Cold joint	±1,5°C	±1,5°C	±1,5°C	±1,5°C
<b>INPUT DATA</b>				
CH	1	1	1	1
Type	Voltage: 0-10 V Active / passive current: 0-20 / 4..20 mA Potentiometer: 1..100 kΩ Pt100 2,3,4 wire (IEC 751 / EN 60751 - ITS90) Thermocouple J,K,R,S,T,B,E,N	Voltage: 0-10 V Active / passive current: 0-20 / 4..20 mA Potentiometer: 1..100 kΩ Pt100 2,3,4 wire (IEC 751 / EN 60751 - ITS90) Thermocouple J,K,R,S,T,B,E,N	Voltage: 0-10 V Active / passive current: 0-20 / 4..20 mA Potentiometer: 1..100 kΩ Pt100 2,3,4 wire (IEC 751 / EN 60751 - ITS90) Thermocouple J,K,R,S,T,B,E,N	Voltage: 0-10 V Active / passive current: 0-20 / 4..20 mA Potentiometer: 1..100 kΩ Pt100 2,3,4 wire (IEC 751 / EN 60751 - ITS90) Thermocouple J,K,R,S,T,B,E,N
Resolution	14 bit	14 bit	14 bit	14 bit
Sampling time	20 ms	20 ms	20 ms	20 ms
Reset (totalizer)	Yes: by digital input and front keys	Yes: by digital input and front keys	Yes: by digital input and front keys	Yes: by digital input and front keys
<b>OUTPUT DATA</b>				
CH	1	1	1	1
Type	0-10 V (min 1k) 0-20 / 4-20 mA (max 500 ohm)	0-10 V (min 1k) 0-20 / 4-20 mA (max 500 ohm)	0-10 V (min 1k) 0-20 / 4-20 mA (max 500 ohm)	0-10 V (min 1k) 0-20 / 4-20 mA (max 500 ohm)
A/D Resolution	10.000 points	10.000 points	10.000 points	10.000 points
Optional board	Nr 2 SPDT 220 Vac (5A resistive, 2 A inductive) relay alarms + Nr 1 RS485ModBUS RTU slave port + nr 1 reset digital input	Nr 2 SPDT 220 Vac (5A resistive, 2 A inductive) relay alarms + Nr 1 RS485ModBUS RTU slave port + nr 1 reset digital input	Nr 2 SPDT 220 Vac (5A resistive, 2 A inductive) relay alarms + Nr 1 RS485ModBUS RTU slave port + nr 1 reset digital input	Nr 2 SPDT 220 Vac (5A resistive, 2 A inductive) relay alarms + Nr 1 RS485ModBUS RTU slave port + nr 1 reset digital input
<b>THEMOMECHANICS DATA</b>				
Operating temperature	-10..+60 °C	-10..+60 °C	-10..+60 °C	-10..+60 °C
Enclosure	PPO self-extinguish DIN 43700	PPO self-extinguish DIN 43700	PPO self-extinguish DIN 43700	PPO self-extinguish DIN 43700
Protection degree	IP65 (frontal)	IP65 (frontal)	IP65 (frontal)	IP65 (frontal)
Terminal blocks	Removable, step 3,5 – 5,08 mm	Removable, step 3,5 – 5,08 mm	Removable, step 3,5 – 5,08 mm	Removable, step 3,5 – 5,08 mm
Dimension (W x H x D)	96x48x98 mm	96x48x98 mm	96x48x98 mm	96x48x98 mm
Panel cut -out	91x45 mm	91x45 mm	91x45 mm	91x45 mm
Weight	200 g	200 g	200 g	200 g
<b>SETTINGS, NORMS</b>				
Software / settings	Display parameters, alarms, signals, timeout, reset, trips	Display parameters, alarms, signals, timeout, reset, trips	Display parameters, alarms, signals, timeout, reset, trips	Display parameters, alarms, signals, timeout, reset, trips
Calibration	Yes, factory-made	Yes, factory-made	Yes, factory-made	Yes, factory-made
Norms	EN 61000-6-4/2002, EN 61000-6-2/2005, EN 61010-1/2001	EN 61000-6-4/2002, EN 61000-6-2/2005, EN 61010-1/2001	EN 61000-6-4/2002, EN 61000-6-2/2005, EN 61010-1/2001	EN 61000-6-4/2002, EN 61000-6-2/2005, EN 61010-1/2001

### ORDER CODES

Code	Description
Model S311A	Universal analog input indicator - totalizer
Display -4 -6 / -8 / -11	4 / 6 / 8 / 4+7 digit
Power Supply -H / -L	80-265 Vac / 10-40 Vdc; 19-28 Vac
Options -O -T	Optional board: nr 2 SPDT relay alarms, ModBUS RTU interface, reset input Calibration service





### EASY SETUP

**Plug&Play software suite**  
**Accessible via serial**  
**RS485/USB converter**  
**(i.e. S107USB)**



# DIGITAL INDICATORS - S-LINE

## DIGITAL / FREQUENCY INPUT MODULAR INDICATORS / TOTALIZERS

	S311D-4	S311D-6	S311D-8	S311D-11
				
	<b>4 digit frequency / digital input indicator - totalizer</b>	<b>6 digit frequency / digital input indicator - totalizer</b>	<b>8 digit frequency / digital input indicator - totalizer</b>	<b>11 digit frequency / digital input indicator - totalizer</b>
<b>GENERAL DATA</b>				
Power supply	80-265 Vac (H version) 10-40 Vdc / 19-28 Vac (L version)	80-265 Vac (H version) 10-40 Vdc / 19-28 Vac (L version)	80-265 Vac (H version) 10-40 Vdc / 19-28 Vac (L version)	80-265 Vac (H version) 10-40 Vdc / 19-28 Vac (L version)
Power transducers	Max 18 V, 25 mA	Max 18 V, 25 mA	Max 18 V, 25 mA	Max 18 V, 25 mA
Power consumption	Max 3 W	Max 3 W	Max 3 W	Max 3 W
Isolation	1.500 Vac	1.500 Vac	1.500 Vac	1.500 Vac
Communication interface	ModBUS RTU slave (optional board)	ModBUS RTU slave (optional board)	ModBUS RTU slave (optional board)	ModBUS RTU slave (optional board)
Memory	EEPROM 10 years storage memory	EEPROM 10 years storage memory	EEPROM 10 years storage memory	EEPROM 10 years storage memory
<b>VISUALIZATION AND MEASURE</b>				
Display	LED, 4 digit	LED, 6 digit	LED, 8 digit	LED, 11 (4+7) digit
Status indicators	2 alarm leds (enabled threshold trips)	2 alarm leds (enabled threshold trips)	2 alarm leds (enabled threshold trips)	2 alarm leds (enabled threshold trips)
Front Buttons	3 navigation keys	3 navigation keys	3 navigation keys	3 navigation keys
Display errors	Over range, fault sensor	Over range, fault sensor	Over range, fault sensor	Over range, fault sensor
<b>INPUT DATA</b>				
CH	1	1	1	1
Type	Contact, Reed, Npn 2 / 3 wire, Pnp 3 wire with 24 Vdc power supply, Namur, photoelectric, variable reluctance, 24V pulse, TTL	Contact, Reed, Npn 2 / 3 wire, Pnp 3 wire with 24 Vdc power supply, Namur, photoelectric, variable reluctance, 24V pulse, TTL	Contact, Reed, Npn 2 / 3 wire, Pnp 3 wire with 24 Vdc power supply, Namur, photoelectric, variable reluctance, 24V pulse, TTL	Contact, Reed, Npn 2 / 3 wire, Pnp 3 wire with 24 Vdc power supply, Namur, photoelectric, variable reluctance, 24V pulse, TTL
Frequency	0.001 – 9.9999 Hz	0.001 – 9.9999 Hz	0.001 – 9.9999 Hz	0.001 – 9.9999 Hz
Reset (totalizer)	Yes: by digital input and front keys	Yes: by digital input and front keys	Yes: by digital input and front keys	Yes: by digital input and front keys
<b>OUTPUT DATA</b>				
CH	1	1	1	1
Type	0-10 V (min 1K) 0-20 / 4-20 mA (max 500 ohm)	0-10 V (min 1K) 0-20 / 4-20 mA (max 500 ohm)	0-10 V (min 1K) 0-20 / 4-20 mA (max 500 ohm)	0-10 V (min 1K) 0-20 / 4-20 mA (max 500 ohm)
Resolution	10.000 points	10.000 points	10.000 points	10.000 points
Optional board	Nr 2 SPDT 220 Vac (5A resistive, 2 A inductive) relay alarms + Nr 1 RS485ModBUS RTU slave port + nr 1 reset digital input	Nr 2 SPDT 220 Vac (5A resistive, 2 A inductive) relay alarms + Nr 1 RS485ModBUS RTU slave port + nr 1 reset digital input	Nr 2 SPDT 220 Vac (5A resistive, 2 A inductive) relay alarms + Nr 1 RS485ModBUS RTU slave port + nr 1 reset digital input	Nr 2 SPDT 220 Vac (5A resistive, 2 A inductive) relay alarms + Nr 1 RS485ModBUS RTU slave port + nr 1 reset digital input
<b>THEMOMECHANICS DATA</b>				
Operating temperature	10..+60 °C	10..+60 °C	10..+60 °C	10..+60 °C
Case	PPO self-extinguish DIN 43700	PPO self-extinguish DIN 43700	PPO self-extinguish DIN 43700	PPO self-extinguish DIN 43700
Protection degree	IP65 (frontal)	IP65 (frontal)	IP65 (frontal)	IP65 (frontal)
Terminal blocks	Removable, step 3,5 – 5,08 mm	Removable, step 3,5 – 5,08 mm	Removable, step 3,5 – 5,08 mm	Removable, step 3,5 – 5,08 mm
Dimension (W x H x D)	96x48x98 mm	96x48x98 mm	96x48x98 mm	96x48x98 mm
Panel dimension	91x45 mm	91x45 mm	91x45 mm	91x45 mm
Weight	200 g	200 g	200 g	200 g
<b>SETTINGS, NORMS</b>				
Software / settings	Display parameters, alarms, signals, timeout, reset, trips	Display parameters, alarms, signals, timeout, reset, trips	Display parameters, alarms, signals, timeout, reset, trips	Display parameters, alarms, signals, timeout, reset, trips
Calibration	Yes, factory-made	Yes, factory-made	Yes, factory-made	Yes, factory-made
Norms	EN 61000-6-4/2002, EN 61000-6-2/2005, EN 61010-1/2001	EN 61000-6-4/2002, EN 61000-6-2/2005, EN 61010-1/2001	EN 61000-6-4/2002, EN 61000-6-2/2005, EN 61010-1/2001	EN 61000-6-4/2002, EN 61000-6-2/2005, EN 61010-1/2001

### ORDER CODES




Code	Description
Model S311D	Frequency / digital input indicator - totalizer
Display -4 -6 / -8 / -11	4 / 6 / 8 / 4+7 digit
Power Supply -H / -L	80-265 Vac / 10-40 Vdc; 19-28 Vac
Options -O	Optional board: nr 2 SPDT relay alarms, ModBUS RTU interface, reset input
-T	Calibration service

### EASY SETUP

**Plug&Play software suite**  
**Accessible via serial**  
**RS485/USB converter**  
**(i.e. S107USB)**



## ANALOG INPUT COMPACT INDICATORS / TOTALIZERS

	S315	S311AK	S312A
			
	4 digit loop powered display with 4-20 mA input signal	4 digit display with mA/V analog input	4 digit display with universal analog input, 4 relay outputs / RS485 ModBUS
<b>GENERAL DATA</b>			
Power supply	By loop (max 30 V)	10-40 Vdc, 19-28 Vac	10-40 Vdc, 19-28 Vac (S312A-4-L-4R) 85-265 Vac (S312A-4-H-4R)
Drop voltage	Max 7 V		
Power transducers		Max 16 V, 25 mA	Max 16 V, 25 mA
Power consumption		Max 0,9 W	Max 3 W
Isolation		1.500 Vac between measure port and power supply	1.500 Vac between measure port and power supply
Memory	EEPROM, 10 years	EEPROM, 10 years	EEPROM, 10 years
<b>VISUALIZATION AND MEASURE</b>			
Display	4 digit, red LEDs	4 digit, red LEDs	4 digit, red LEDs
Status indicators			Alarms visualization
Front buttons	3 (down, up, menu)	3 (down, up, menu)	3 (down, up, menu)
Display errors			0,10%
Accuracy	0,05%	0,05%	0,05%
Stability	0,005%/°K	0,005%/°K	0,005%/°K
Linearity error	0,05%	0,05% (0-10 V, 0-20 mA)	0,05% (0-10 V, 0-20 mA)
A/D resolution	16 bit	16 bit	16 bit
EMI	< 1%		
<b>INPUT DATA</b>			
Channels	1	1	1
Type	4-20 mA	Voltage: 0-10 V (protection $\pm 30$ Vdc), impedance $\sim 25$ k $\Omega$ , ADC 16 bit, settable scales: 0-10, 1-5 V etc. Current: 0-20 / 4-20 mA (protection $\pm 25$ mA), impedance $\sim 20$ $\Omega$ , ADC 16 bit, settable scales 0-20.	Voltage: 0-10 V Active / passive current: 0-20 / 4..20 mA Potentiometer: 1-100 k $\Omega$ Pt100 2,3,4 wire (IEC 751 / EN 60751 – ITS90) Thermocouple J,K,R,S,T,B,E,N
<b>OUTPUT DATA</b>			
Channels	1	1	1
Type	0-10 V (min 1K) 0-20 / 4-20 mA (max 500 ohm)	0-10 V (min 1K) 0-20 / 4-20 mA (max 500 ohm)	0-10 V (min 1K) 0-20 / 4-20 mA (max 500 ohm) Nr 4 SPDT 220 Vac (5A resistive, 2 A inductive) relay alarms + Nr 1 RS485ModBUS RTU slave port + nr 1 reset digital input
<b>THEMOMECHANICS DATA</b>			
Operating temperature	-10..+65°C	-10..+65°C	-10..+60°C
Enclosure	PPO self-extinguish, DIN 43700	PPO self-extinguish, DIN 43700	ABS RAL 7035
Protection degree	IP65 (frontal)	IP65 (frontal)	IP65 (frontal)
Terminal block	Removable 2-way screw terminals, 5,08mm pitch, 3 way screw terminals, 5,08 mm pitch	Removable 2-way screw terminals, 5,08mm pitch, 3 way screw terminals, 5,08 mm pitch	Removable 2-way screw terminals, 5,08mm pitch, 3 way screw terminals, 5,08 mm pitch
Dimension (W x H x D)	96 x 48 x 40 mm	96 x 48 x 40 mm	96 x 48 x 40 mm
Panel cut-out	91x45 mm	91x45 mm	91x45 mm
Weight	200 g	200 g	200 g
<b>SETTINGS, NORMS</b>			
Programming	Front keys (enabling password, input type, electric start / full scale, display start / full scale, decimal point, filter)	Front keys (enabling password, input type, electric start / full scale, display start / full scale, decimal point, filter)	Front keys, jumper, software (EASY SETUP)
Access protection	By password	By password	By password
Approvals	CE	CE	CE, EN
Norms	EN 61000-6-4, EN 64000-6, EN 61010-1, EN 60742	61000-6-4, EN 64000-6, EN 61010-1, EN 60742	EN 61000-6-4, EN 64000-6, EN 61010-1, EN 60742

### ORDER CODES

Code	Description
S315	4 digit loop powered indicator, 4-20 mA input
S311AK-4-L	4 digit display with mA/V analog input, power 10-40 Vdc, 19-28 Vac
S312A-4-L	4 digit display with universal analog input, 4 relay outputs, power 10-40 Vdc, 19-28 Vac
S312A-4-H	4 digit display with universal analog input, 4 relay outputs, power 85-265 Vac

\*Available also in IP66 protection degree version

### ORDER CODES

Code	Description
S315-IP66	S315 with IP66 field case, dimensions 130*80*60 mm
S315-IP66D	N.2 display S315 with IP66 field case, dimensions 180*130*75 mm
S311AK-4-L-IP66	S311AK-4-L with IP66 field case, dimensions 130*80*60 mm
S311AK-4-L-IP66D	N.2 display S311AK-4-L with IP66 field case, dimensions 180*130*75 mm

