
smilics
TECHNOLOGIES

Energy digitalization

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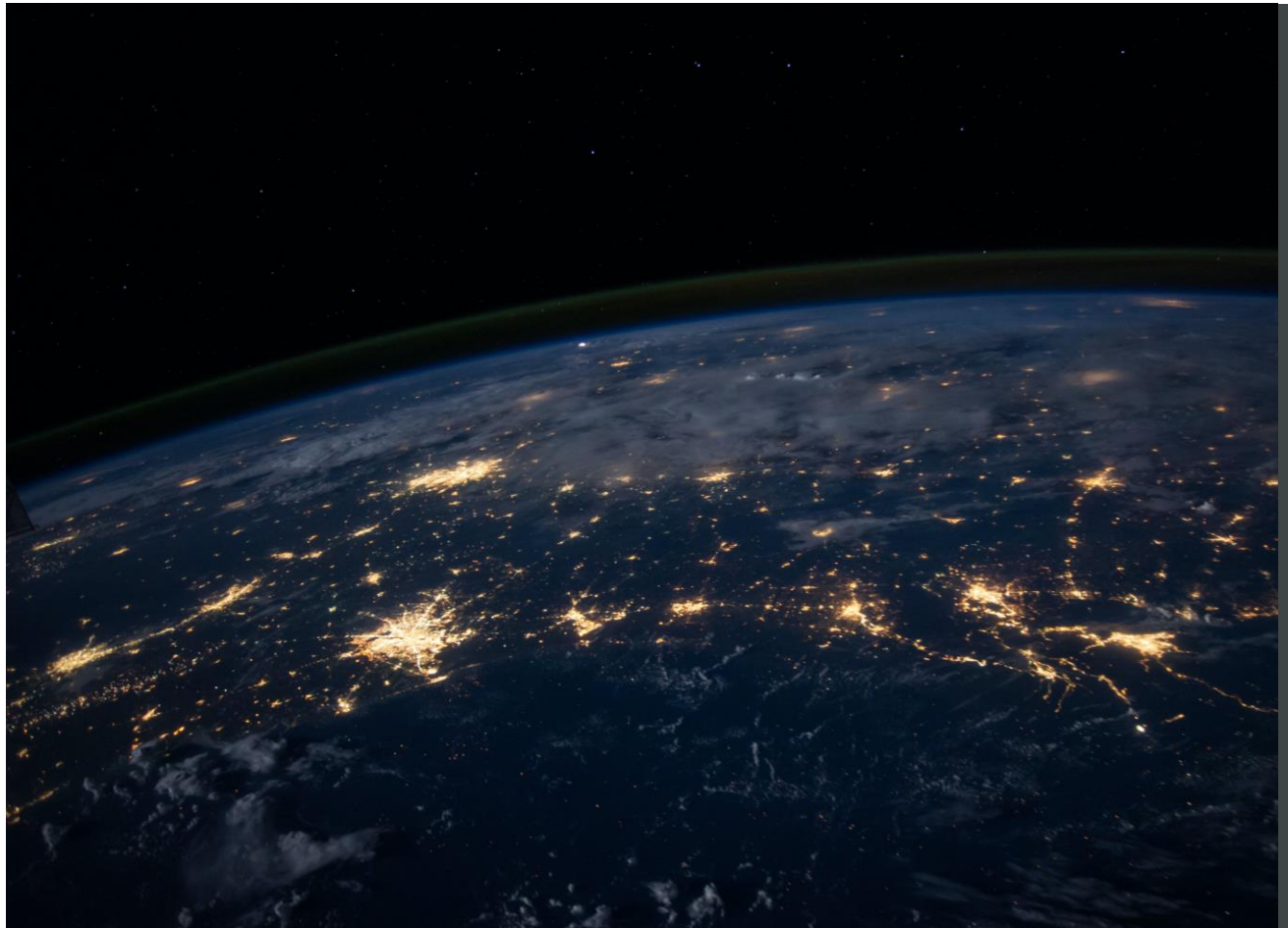
Global Company



We believe in energy efficiency, sustainability, technology serving people and protecting the environment.

Smilics Technologies, S.L © was founded in 1991.
Is an ISO 9001, 14001, and 45001 company.

Our facilities are based in Terrassa (Barcelona), where we design, manufacture and commercialize sensors and wireless energy monitoring devices for Energy Supply Companies and Distribution Utilities, Smart Homes, Energy Efficiency, Submetering, Solar Applications and Telecom Operators.

Introduction

1

Sustainable means resilient and enduring.

At Smilics Technologies ©, we understand that acting socially, focusing on sustainability is a long-term task, but achieving it, means a future for our planet full of possibilities.

2

Energy knowledge

Making energy consumption accessible and a conscious choice for every consumer starts with providing learning tools to interpret that consumption.

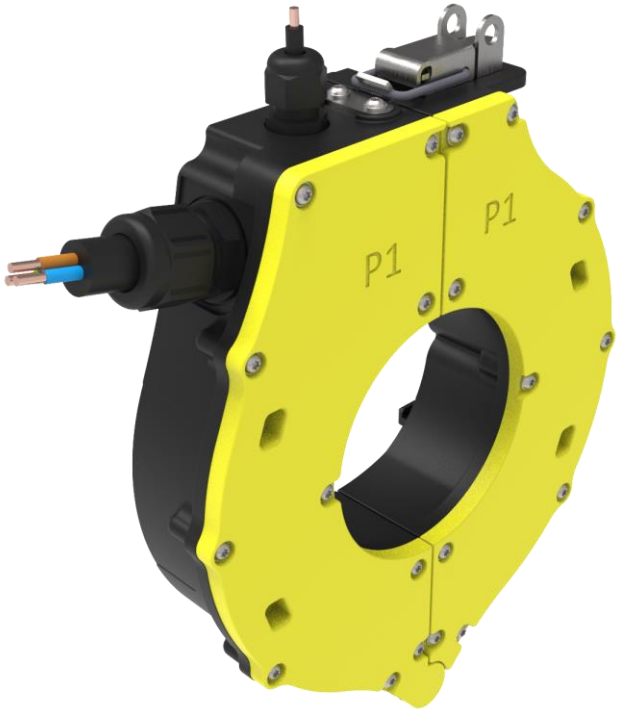
3

Efficient spaces with zero wasted surpluses

Having complete and precise control over energy consumed allows you to understand your expenses and provides the opportunity to take action on savings and maximizing your energy consumption efficiency.

sensors
smilics

Energy efficiency leads to positive results. Transformers and current sensors by Smilics Technologies, S.L. © have been designed with a split core to allow easy opening and installation without interrupting the power supply.




Split-core transformers

	PUSH	TP	420	WG
Rated primary current	50 – 6000 A	50 – 5000 A	100 – 4000 A	250 mA – 30 A
Rated secondary current	1 A / 5 A	1 A / 5 A / 1.5 V	4 - 20 mA	60 mA
Accuracy class	0.5 / 1 / 3	0.5 / 1 / 3 / 0.2 / 0.2s / 0.5s	0.5	1 / 3
Window size	30 X 20 mm 60 x 80 mm 80 x 120 mm 80 x 160 mm	20 x 30 mm 50 x 80 mm 80 x 80 mm 80 x 120 mm 80 x 160 mm	20 x 30 mm 50 x 80 mm 80 x 80 mm 80 x 120 mm 80 x 160 mm	20 x 30 mm 50 x 80 mm 80 x 80 mm 80 x 120 mm 80 x 160 mm

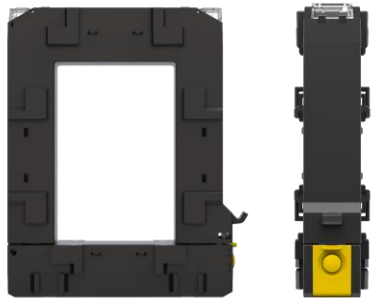
	LOOP	STP	CLIP	SC3
Rated primary current	400 – 3000 A	100 – 700 A	40 – 250 A	125 A
Rated secondary current	1 A / 5 A	250 mA / 1 A / 5 A	1 A / 5 A	250 mA
Accuracy class	0.5 / 1 / 3 / 0.2 / 0.2s / 0.5s	1 / 3	3	1
Window size	Ø 80 / Ø 105 mm	Ø 24 / Ø 40 40 x 80 mm	Ø 20 mm	Ø 14 mm

SENSORS

Push

Has been carefully developed to improve the installation of the TP series CTs: it has a **pushing button to open the core allowing the separation of the device in two pieces** in order to be easily installed in complex wiring systems.

The complete range covers a primary current range of 100 – 5000 A, with 1 or 5 A secondary outputs. This device offers an accuracy class of 0.5, 1 and 3.



FEATURES	
Rated primary current	100 – 5000 A
Rated secondary	1 A / 5 A
Accuracy	0.5 / 1 / 3
Rated output	0.5 VA / 1 VA / 1.5 VA
Frecuency range	50 – 60 Hz
Sort-time thermal current, Ith	2.5 In
Rated dynamic current, Idyn	2.5 Ith
Highest voltage for equipment, Um	0.72 kV ac
Rated insulation level	3kV

SENSORS

TP

Transformer series that includes several models, allowing **installation on a wide range of busbars or power cables without interrupting the power supply.** The complete range covers a primary current range of 50 - 5000 A, with secondary outputs of 1 or 5 A or, on request, 1.5 V.

All models offer an accuracy class of 0.5, 1 and 3, plus 0.2s, 0.2 and 0.5s classes for the TP 88, TP 812 and TP 816 models.

FEATURES	
Rated primary current	50 – 5000 A
Rated secondary	1 A / 5 A (or 1.5 V)
Frecuency range	50 – 60 Hz
Sort-time thermal current, Ith	60 In
Rated dynamic current, Idyn	2.5 Ith
Highest voltage for equipment, Um	0.72 kV ac
Rated insulation level	3kV

SENSORS

420

420 series transformers include a converter to obtain a secondary current in the range 4-20 mA.

This device have a use recommendation where a process signal proportional to the current **needs to be carried to an automaton or PLC** and commonly used in industrial automation and process control.

FEATURES	
Rated primary current	50 – 5000 A
Rated secondary	1 A / 5 A (or 1.5 V)
Frecuency range	50 – 60 Hz
Sort-time thermal current, Ith	60 In
Rated dynamic current, Idyn	2.5 Ith
Highest voltage for equipment, Um	0.72 kV ac
Rated insulation level	3kV

SENSORS

WG

WG family products are homopolar current transformers, which **measure the current of the three phases** and verify that the circuit is well balanced.

They are used combining ground leaks or homopolar relays.

FEATURES	
Rated primary current	250 mA – 30 A
Rated secondary current	60 mA
Nominal ratio	Kn = 30 / 0.06 A
Max. Resistance of burden	480 Ohm
Rated output	0.06 VA
Accuracy	± 15%
Frecuency range	45 – 60 Hz
Sort-time thermal current, Ith	1.8 kA
Rated dynamic current, Idyn	4.5 kA
Highest voltage for equipment, Um	0.72 kV ac
Rated insulation level	3kV

SENSORS

Loop

Has a **circular shape and an inner window**, for the pass-through of cables, up to 80 or 105 mm in diameter.

The assortment of devices provides a primary current range of 400 - 3000 A, with 1 or 5 A secondary outputs. An accuracy class of 0.5 is offered for regular devices, while for high accuracy class device it is 0.2s.

According to their use, these transformers are manufactured with an output cable for outdoor installation, or with a terminal block connector, this last one recommended for indoor use.

FEATURES	
Rated primary current	400 – 3000 A
Rated secondary	1 A / 5 A
Accuracy	0.5 / 1 / 3 / 0.5s / 0.2s
Frecuency range	50 – 60 Hz
Sort-time thermal current, Ith	60 In
Rated dynamic current, Idyn	2.5 Ith
Highest voltage for equipment, Um	0.72 kV ac
Rated insulation level	3kV

SENSORS

STP

STP series split-core transformers range in current rating from 100 to 1000 A, according to the model, and provides 0,25, 1 or 5 A secondary outputs.

FEATURES	
Rated primary current	100 – 300 A
Rated secondary	1 A / 5 A / 0.25 A
Accuracy	1 / 3
Frecuency range	50 – 60 Hz
Sort-time thermal current, Ith	60 In
Rated dynamic current, Idyn	2.5 Ith
Highest voltage for equipment, Um	0.72 kV ac
Rated insulation level	3kV

SENSORS

Clip

Clip device is a small clamp type current transformer for cables up to 20 mm in diameter.

This line of devices covers a primary current range of 40 - 250 A, with secondary outputs of 1 or 5 A.

FEATURES	
Rated primary current	40 – 150 A (/1A) 50 – 250 A (/5A)
Rated secondary	1 A / 5 A
Accuracy	3
Frecuency range	50 – 60 Hz
Sort-time thermal current, Ith	60 In
Rated dynamic current, Idyn	2.5 Ith
Highest voltage for equipment, Um	0.72 kV ac
Rated insulation level	3kV

SENSORS

SC3

SC3 current transformer is composed by three holes for three wire independent installation, with a maximum diameter of 14 mm.

This device has been designed to perfectly match the size of a 125 A MCCB.

FEATURES	
Rated primary current	100 A, 125 A
Rated secondary	250 mA
Accuracy	± 1
Typical phase shift	1.5º
Rated output	0.1 VA
Frecuency range	50 – 60 Hz
Sort-time thermal current, Ith	60 In
Rated dynamic current, Idyn	2.5 Ith
Highest voltage for equipment, Um	0.72 kV ac
Rated insulation level	3kV


Flexible current transformers

ACTIVE

	AM Flex	AMS Flex	R Flex
Voltage output	1.28 V	1.28 V	2 V
Frecuency range	20 Hz – 10 kHz	100 – 240 V	100 – 400 V
Power supply	5 V	5 V	9 – 12 V
Rated primary current	100 A / 1k A / 10k A	100 A / 200 A	100 A / 1k A / 10k A 200 A / 2k A / 20k A
Accuracy	1 %	1 %	1 %
Inner diameter	170 mm, 350 mm	50 mm, 80 mm	170 mm, 260 mm, 380 mm
Lenght	540 mm, 1100 mm	140 mm, 250 mm	540 mm, 800 mm, 1200 mm
Probe diameter	14 mm	8 mm	140 mm

ACTIVE

AM Flex

AM Flex range of active coils are powered at 5V, and the standard full scale output voltage is 1.28V.

This product supports 100A/1kA/10kA scaling using a train of pulses.

FEATURES	
Typical voltage output	1.28 V f.s.
Frecuency range	20 Hz – 10k Hz
Power supply	5 VDC
Operating voltage	600 VAC
Rated primary current	100 A / 1k A / 10k A
Typical phase shift	< 1º
Linearity (10% to 100%)	± 0.6%
Accuracy	± 1%
Temperature coefficient max.	± 0.13% / ºC
Position sensibility	± 3%
External fields	± 2%

ACTIVE

AMS Flex

AMS Flex models have been designed with an easy-to-install grip and an open connector.

The device is powered at 5V, provides 100A/200A scale change and 1.28 V output.

FEATURES	
Typical voltage output	1.28 V f.s.
Frecuency range	20 Hz – 10k Hz
Power supply	5 VDC
Operating voltage	600 VAC
Rated primary current	100 A / 200 A
Typical phase shift	< 1º
Linearity (10% to 100%)	± 0.6%
Accuracy	± 1%
Temperature coefficient max.	± 0.13% / ºC
Position sensibility	± 3%
External fields	± 2%

ACTIVE

R Flex

R Flex active devices are powered at 9 - 12 V and allow 100/1kA/10kA or 200A/2kA/20kA scale switching through logical selection.

Typical full scale output voltage is 2V.

FEATURES	
Typical voltage output	2 V f.s.
Frecuency range	20 Hz – 10k Hz
Power supply	9 – 12 VDC
Operating voltage	600 VAC
Rated primary current	10k A / 1k A / 100 A 20k A / 2k A / 200 A
Typical phase shift	< 1º
Linearity (10% to 100%)	± 0.6%
Accuracy	± 1%
Temperature coefficient max.	± 0.13% / ºC
Position sensibility	± 3%
External fields	± 2%

DIN Flex

Din Flex adapter **converts the typical mV output of Rogowski coils to any standard** .../1A measuring or protection device. Due to its compact design, it requires only one DIN module.

This kit of devices includes both, the adapter and a flexible sensor. Furthermore, an external DC power supply can be included to power the adapter.

FEATURES

Current sensors	Measurement scale	Max. conductor Ø
AM Flex 54	100A / 1kA / 10kA 50A / 500A / 5kA	170 mm
AM Flex 110	100A / 1kA / 10kA 50A / 500A / 5kA	350 mm
AMS Flex 14	100A / 200A	50 mm
AMS Flex 25	100A / 200A	80 mm

PASSIVE

	C Flex	S Flex	Magnetic Flex
Voltage output	89 mV	10 mV	100 mV
Frecuency range	10 Hz – 100 Hz	50 – 60 Hz	50 – 60 Hz
Accuracy	1 %	1 %	1 %
Inner diameter	150 mm, 170 mm, 260 mm, 350 mm, 380 mm	50 mm, 80 mm	170 mm, 260 mm, 380 mm
Lenght	450 mm, 540 mm, 800 mm, 1100 mm, 1200 mm	140 mm, 250 mm	219 mm, 376 mm, 628 mm
Probe diameter	14 mm	8 mm	8 mm

PASSIVE

C Flex

Flexible passive sensors in the C Flex series allow alternating current measurements with a ratio of 89mV/kA@50Hz.

FEATURES	
Typical voltage output	(1.78 x 10-6) x IRMS x f 89mV/kA@50Hz
Frecuency range	10 Hz – 100k Hz
Linearity (10% to 100%)	± 0.2%
Accuracy	± 1%
Temperature coefficient max.	± 0.05% / ºC
Position sensibility	± 3%
External fields	± 2%

PASSIVE

S Flex

S Flex passive models have been designed with an easy-to-install grip and an open connector.

The output ratio of these devices is 37 mV/1kA@50Hz.

FEATURES	
Typical voltage output	100uV/A @50Hz
Frecuency range	50 – 60 Hz
Linearity (10% to 100%)	± 0.2%
Accuracy	± 1%
Temperature coefficient max.	± 0.05% / ºC
Position sensibility	± 3%
External fields	± 2%

PASSIVE

Magnetic Flex

Magnetic Flex passive models have been designed with a magnetic sealable connector to hold both ends and make installation easier.

The output ratio of it is 100 mV/1kA@50Hz.

FEATURES	
Typical voltage output	100mV/kA@50Hz
Frecuency range	50 – 60 Hz
Linearity (10% to 100%)	± 0.2%
Accuracy	± 1%
Temperature coefficient max.	± 0.05% / ºC
Position sensibility	± 3%
External fields	± 2%

Positive energy, positive results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