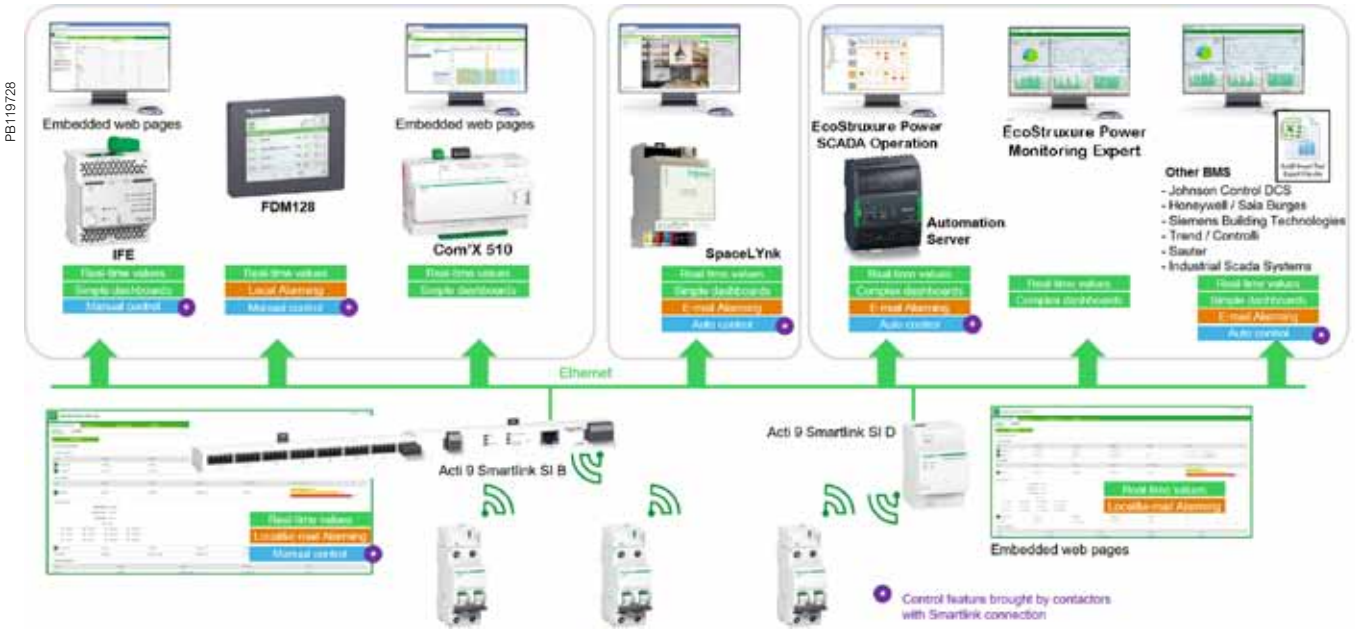
PowerTag
Technical datasheet

PowerTag are wireless energy sensors for 1P, 1P+N, 3P and 3P+N networks upto 63A. They can be mounted directly on Acti 9 and Multi 9 ranges of equipment for installation in final distribution boards. All the measurements from PowerTag can be viewed in real-time on the webpages of Acti 9 Smartlink SI B and SI D.

Applications

- Measurement of electrical parameters for circuit diagnosis and load monitoring.
- Energy measurement with accuracy of Class 1 directly at the load level.
- Install in new or retrofit in existing switchboards for commercial and residential applications.



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A9MEM1520

A9MEM1520

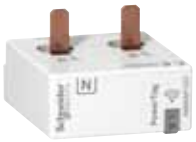
A9MEM1521

A9MEM1521

A9MEM15240

A9MEM1540

A9MEM1522



A9MEM1522

A9MEM1541

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A9MEM1542

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PowerTag functions

Characteristics

Combined with Acti 9 Smartlink SI B (Ethernet) or Acti 9 Smartlink SI D (Ethernet) by radio-frequency communication, PowerTag sensors measure the following values in accordance with the IEC 61557-12 standard Class 1.

- Cumulative active energy, total and partial (kWh).
- RMS values:
  - phase-to-neutral and phase-to-phase voltages (V)
  - currents per phase (A)
  - total active power and active power per phase (W),
  - power factor.

Installed upstream or downstream of a protective device, they measure useful data for diagnosis of the associated circuit.

Configuration

- Auto discovery of PowerTag devices for configuration from Smartlink webpages or Ecoreach configuration software. Device locator button identifies the right PowerTag making it easy to name the circuit.
- Add information for each circuit such Name of the load, Phase sequence, Type of load connected, etc.
- Partial energy counter to enable resetting of Energy value for check metering application.

Integration in Acti 9 Smartlink

- Use of a wireless concentrator to report data:
  - Acti 9 Smartlink SI B (Ethernet) for a complete metering, monitoring and control solution.
  - Acti 9 Smartlink SI D (Ethernet) for a metering and monitoring solution only.
- Native display, in Smartlink's embedded web pages, of the quantities measured by the PowerTag sensors.
- Load monitoring:
  - alarm sent by the sensor in the event of a voltage loss.
  - pre-alarms on predefined thresholds (50 %, 80 %) or customized. thresholds (thresholds on currents, power, voltages and cumulative energies).
- Alarm management on current/voltage/load level thresholds by email.
- Display of alarms and pre-alarms on Smartlink embedded web pages.
- Easy integration into system with Com'X 210, Com'X 510 and other Schneider Electric software and third-party Building Management Systems (BMS's) thanks to the Acti 9 Ecoreach report in pdf format. This report provides dynamically all the Modbus registers, including bits and meanings associated, for easy integration into the software.
- Remote metering possible using the Smartlink monitoring page.

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Configuration and Test software: Ecoreach

- A simple tool to automatically discover, configure and commission your PowerTag and Smartlink devices as well as Smart Panel electrical smart devices.
- Generate a test report (PDF, Excel) with the Modbus communication registers of PowerTag and Smartlink devices for easy integration into a supervision system.
- Firmware upgrade of your Smartlink gateway.
- PowerTag is compatible with Ecoreach version 2.5 and above.
- Windows XP, Windows 7, Windows 8 and Windows 10 compatible.
- Downloadable from: schneider-electric.com.

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Acti 9 Smartlink SI B

Acti 9 Smartlink main features

Metering, monitoring and control

Acti 9 Smartlink SI B (Ethernet)

Embedded web pages:
- Monitoring display.
- Alarm management and display.
- Email sending.

Integrated Modbus gateway for Acti 9 Smartlink Modbus and iEM meters

Channels for monitoring/control:
- Status monitoring via OF/SD auxiliaries.
- Control of lighting and other loads via contactor and relays.
- Monitoring of analogue signals via 4-20 mA or 0-10 V signals.

PowerTag:
- Wireless communication.
- Up to 20 sensors connected.

Installation:
- DIN rail.
- 24 V AC power supply.

Metering and monitoring only

A9XMWA20

Acti 9 Smartlink SI D

Acti 9 Smartlink SI D (Ethernet)

Embedded web pages:
- Monitoring display.
- Alarm management and display.
- Email sending.

PowerTag:
- Wireless communication.
- Up to 20 sensors connected.

Installation:
- DIN rail.
- 230 V AC power supply.

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PowerTag technical characteristics

«Single terminal» circuit breakers and switches at intervals of 18 mm, ratings less than or equal to 63 A:

- Acti 9 : iC60/iID/iID K/iSW (< 63 A)/iSW-NA/Reflex iC60/iK60/i65N-K
- Multi9 : C32/C45/C60/K60/ID/ISW/I-NA
- DT60

Main characteristics			
Rated voltage	Un	Phase-to-neutral	230 V AC ± 20 %
		Phase-to-phase	400 V AC ± 20 %
Frequency			50/60 Hz
Maximum operating current	Imax		63 A
Saturation current			130 A
Maximum consumption			≤ 2 VA
Starting current	Ist		40 mA
Base current	Ib		10 A
Additional characteristics			
Operating temperature			-25°C to 60°C
Storage temperature			-40°C to 85°C
Overvoltage category		As per IEC 61010-1	Cat. III
Measuring category		As per IEC 61010-2-30	Cat. III
Pollution degree			3
Altitude			≤ 2000 m
Degree of protection		Device only	IP20
		IK	05
Radio-frequency communication			
ISM band 2.4 GHz			2.4 GHz to 2.4835 GHz
Channels		As per IEEE 802.15.4	11 to 26
Isotropic Radiated Power		Equivalent (EIRP)	0 dBm
Maximum transmission time			< 5ms
Channel occupancy		For 1 device	Messages sent every 5 seconds
Characteristics of measuring functions			
Function		**Performance category as per IEC 61557-12**	
Active power	P	1	9 W to 63 kW
Active energy	Ea	1	Total and partial 0 to 99999999.9 kWh
Current	I	1	2 A to 63 A
Voltage	U	0.5	Un ± 20 %
Power factor	PFA	1	0 to 1
PowerTag weight in grams			
1P			16.4
1P+N			17.5
3P			28
3P+N			35

Commercial reference numbers

PowerTag		
Type	**Type of mounting**	**Commercial Ref. no.**
1P	Top and bottom	**A9MEM1520**
1P+N	Top	**A9MEM1521**
	Bottom	**A9MEM1522**
3P	Top and bottom	**A9MEM1540**
3P+N	Top	**A9MEM1541**
	Bottom	**A9MEM1542**

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Not compatible with double terminal devices

PowerTag compatibility

«Single terminal» devices at modules of 18 mm, rating ⩽ 63A	
iC60	■
iC65	■
Reflex iC60	■
iK60	■
i65N-K	■
DT40/DPN/C40	-
DT60	■
iKQ	-
C32	■
C45	■
C60	■
K60	■
C120	-
Resi9 circuit breaker*	■
Residual current devices	
iC60 RCBO	-
iKQE RCBO	-
C60H RCBO	-
iC60 Vigi	-
ISW 20/32 A	-
iID	■
iID K	■
RCCB-ID type B	■ ⩽ 63 A
IDc/ITG40/C40	-
iKQ	-
DPN Vigi K DPN Vigi K	-
RED	-
RCCB	■
Resi9 RCCB*	■
Resi9 RCBO*	■ only to the bottom
Switches	
iSW u 40 A	9 W to 63 kW
iSW-NA	Total and partial 0 to 99999999.9 kWh
I-NA	2 A to 63 A

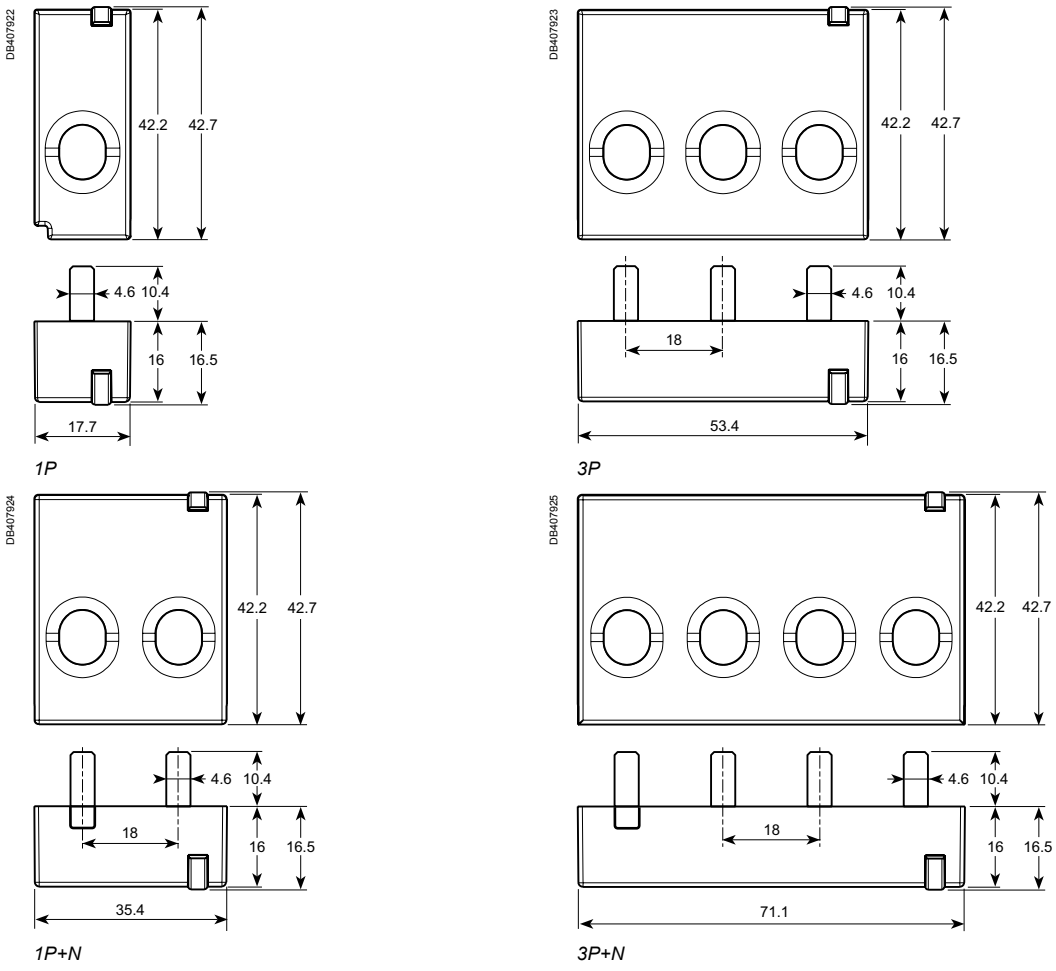
* only in certain countries - ask your Schneider Electric representative

Stripping length	Copper cables					
	Rigid		Flexible		Flexible with ferrule	
	 DB122945	 DB112804	 DB123553	 DB112805	 DB123554	 DB123008
18 mm[1]	1.5 to 16 mm²	2 x 1.5 to 2.5 mm²	1.5 to 16 mm²	2 x 1.5 to 2.5 mm²	-	-
18 mm	-	-	-	-	1.5 to 16 mm²	2 x 1.5 to 2.5 mm²

Mounting with 18 mm ferrule recommended.
[1] Without ferrule/cable ends, respect the stripping length stated on the associated products.

PowerTag dimensions

mm



See the appropriate Installation Guide for these products

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Capital social 896 313 776
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PowerTag
PLSED310154EN

Design: Schneider Electric
Photos: Schneider Electric

Over 75 % of Schneider Electric products have been awarded the Green Premium ecolabel

09-2017

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