



ADVANCE-GRP SYSTEM

Switched Interlocked socket outlets



ADVANCE-GRP System



SWITCHED INTERLOCKED SOCKET OUTLETS 16A-32A-63A



REFERENCE STANDARDS

EN 60309-1

Plugs, socket outlets and couplers for industrial purposes.
Part 1: general requirements.

EN 60309-2

Plugs, socket outlets and couplers for industrial purposes.
Part 2: dimensional interchangeability requirements for pin and contact-tube accessories of harmonised configurations.

EN 60309-4

Plugs, socket-outlets and couplers for industrial purposes.
Part 4: switched socket-outlets and connectors with or without interlock.

VERSIONS WITH MECHANICAL INTERLOCK

	With switch-disconnector
	With switch-disconnector and fuse
	Molded case circuit breaker with thermal magnetic trip unit

TECHNICAL CHARACTERISTICS

Rated current:	16A-32A-63A
Rated voltage:	100÷690V~
Frequency:	50÷60Hz
Insulating voltage:	500/690V~
Protection degree:	IP66/IP67/IP69
Operating ambient temperature according to the reference standard:	-25°C +40°C
Minimum operating ambient temperature:	-40°C
Max. operating ambient temperature:	+60°C
Self-extinguishing GW test:	960°C
Self-extinguishing UL94:	V0
Material:	Thermosetting
IK degree at 20°C:	IK10 (20J)
Switch-disconnectors 16A-32A-63A:	COMMAND Series
Fuse:	
16A-32A	gG 10,3x38mm
63A	gG 22x58mm
Colour:	Grey RAL7037
Insulation class:	Class II (double insulation) □

■ BEHAVIOUR WITH CHEMICAL AND ATMOSPHERIC AGENTS

Saline solution	Acids		Bases		Solvents				Mineral oil	UV rays
	Concentrated	Diluted	Concentrated	Diluted	Hexane	Benzol	Acetone	Alcohol		
Resistant	Limited Resistance	Resistant	Limited Resistance	Resistant	Resistant	Resistant	Resistant	Resistant	Resistant	Resistant

For specific substances please contact our technical service.

■ CABLE ENTRY

Maximum entry with cable glands

Rated current (A)	Single socket		Socket with switchboard		
	Upper	Lower	Upper	Lower	Side
16A / 32A	M32	M32	M32	M32	M32
63A	M40	M40	M40	M40	M32

■ WIRING OPERATIONS

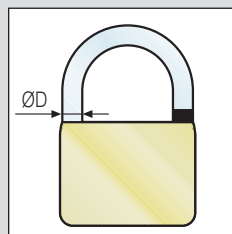
Wiring capacity of the terminals (mm²)

Rated current (A)	Socket outlets	
	Min	Max
16A	1,5	4
32A	2,5	10
63A	6	25

■ PADLOCK TO BE USED

Choice of padlock for socket knob, fuse door and switchboard door

Rated current (A)	Padlock arc diameter (mm)
16A-32A	5
63A	6,3





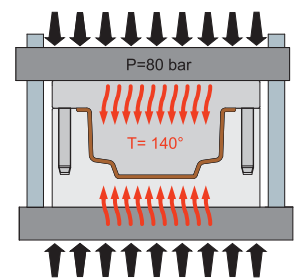
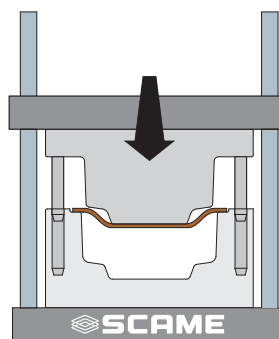
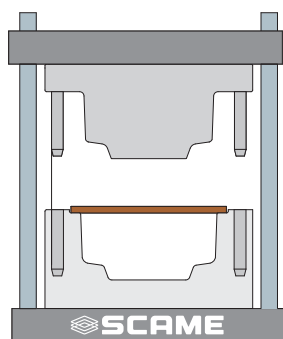
SPECIAL CHARACTERISTICS

ADVANCE-GRP CHARACTERISTICS

The **ADVANCE-GRP** product line includes a series of 16A, 32A, 63A, 125A interlocked sockets (compliant with EN60309-4 standards) and the casings to contain them. It's the most complete range of interlocked sockets produced in GRP (*Glass Reinforced Polyester*) thermosetting material.

A unique feature which enhances the exceptional mechanical strength of **ADVANCE-GRP** products is the **SMC** (*Sheet Moulding Compound*) production process used for the casings.

SMC is a technology which uses exclusively non-woven sheets, pre-impregnated with polyester resin. This method consists in preparing the sheet material inside a mould which, equipped with a negative mould, presses the composite so as to allow compaction.



SMC is an advanced technology which enhances the quality of the raw material without reducing the high-strength characteristics during transformation; it's a high-performing technology in terms of the mechanical performance of the resultant product (glass fibre length, homogeneity of the material, integrity of the fibres).

On the contrary, the **BMC** (*Bulk Moulding Compound*) technology is a technology for moulding composite materials which uses a raw material available in "blocks" (short, charged fibres) which are subjected to high thermomechanical stress during the transformation process, consequently diminishing the mechanical properties of the details, thereby reducing the impact strength and flexural strength.

The glass-fibre reinforced polyester used in **ADVANCE-GRP** guarantees excellent mechanical strength and a long lifetime: this material is highly resistant to contamination, completely corrosion resistant and suited for applications requiring the use of components with low smoke emission and no halogens, **LSOH** (*Low Smoke Zero Halogen*) components. The outstanding properties of the material are also guaranteed over time, thanks to the high **RTI** value (*Relative Temperature Index*), measured to be 20,000h. Numerous verifications and tests have been carried out, even UV resistance tests, in order to guarantee the long duration of the material's initial performance.

The thickness of the walls is sufficient to offer an excellent alternative to aluminium, stainless steel or cast iron.



OUTSTANDING HEAT AND FIRE RESISTANCE

The glass-fibre reinforced polyester used in **ADVANCE-GRP** guarantees excellent heat and fire resistance: it does not propagate flames, emit halogens or smoke.

This material has outstanding flame retardancy: Glow Wire 960°C according to EN 60695-2-1; V0 according to UL94. It's suited for applications requiring the use of components with low smoke emission and no halogens, LSOH (*Low Smoke Zero Halogen*).



OUTSTANDING IMPACT RESISTANCE

The glass-fibre reinforced polyester used in **ADVANCE GRP** and the high thickness of the casing walls guarantee an excellent mechanical resistance to impacts.

The **SMC** technology used to produce the casings makes **ADVANCE-GRP** an indestructible product.

The impact resistance of the casings is higher than 20J (IK10) according to EN50102, even under limit temperature conditions (-40°C +60°C).



RESISTANCE TO CHEMICAL AGENTS

The **ADVANCE-GRP** interlocked sockets and casings, thanks to the glass-fibre reinforced polyester with which they are produced, have excellent resistance to aggressive chemical substances, saline solutions, diluted acids, hydrocarbons, mineral oils, alcoholic substances. They are ideal for use in highly corrosive atmospheres.



RESISTANCE TO ATMOSPHERIC AGENTS

The structure and materials used also make **ADVANCE-GRP** a product suited for the most extreme environmental conditions. The triple degree of protection IP66, IP67 and IP69 (IP66 for 125A), guarantees an excellent seal against the entry of solid objects or liquids into the casings.

Outstanding resistance to UV radiation, exceptional reliability under environmental stress and use at both low and high ambient temperatures (-40°C +60°C).

ADVANCE-GRP System



■ APPLICATION EXAMPLES



■ TECHNICAL DATA SWITCH DISCONNECTORS (EN60947-3)



Rated current In				with and without fuse				
				16A	32A	63A	125A	
Rated insulation voltage		Ui	VAC	690	690	690	750	
			VDC	400	400	-	750	
Rated impulse withstand voltage		Uimp	kV	4	4	8	12	
Thermal current		Ith	A	30	40	63	200	
Thermal current		Ithe	A	30	40	63	-	
Rated operational current – Ie	AC21A		415V	A	16	32	63	200
	Resistive loads, including moderate overloads		500V	A	16	32	63	-
			690V	A	16	32	63	160
	AC22A		415V	A	16	32	63	200
	Mixed resistive and inductive loads, including moderate overloads		500V	A	16	32	63	-
			690V	A	16	32	63	160
	AC23A		415V	A	16	32	63	135
	Switching of motor loads or other highly inductive loads (3 phase / 3 pole)		500V	A	16	32	40	125
			690V	A	16	25	30	80
	AC3 Squirrel-cage motor: starting, switching off motor during running (3 phase/ 3 pole)		400V	A	16	28,5	40	-
			690V	A	12	20	25	-
DC21A		300V	A	20(*)	32(*)	-	160(*)	
DC22A Mixed resistive and inductive loads, including moderate overloads		250V	A	25(*)	32(*)	-	160(*)	
		600V	A	10(*)	10(*)	-	-	
Rated short-time withstand current Icw (s)			A	400	400	1500	4000	
Rated operational current - Ie	Conditional short-circuit current		KAeff	10	10	10	24	
	Associate fuse size for conditional short-circuit current - Type gG		A	16	32	63	-	
	Rated short-circuit making capacity Icm		A	1500	1500	2850	24000	
Cable section	Flexible wire		mm²	1,5-10	1,5-10	10-35	10-70	
			AWG	16-8	16-8	10-2	8-1/10	
	Rigid wire		mm²	1,5-16	1,5-16	10-35	10-70	
			AWG	16-8	16-8	10-2	8-1/10	

(*) 2+2 poles in series

ADVANCE-GRP System



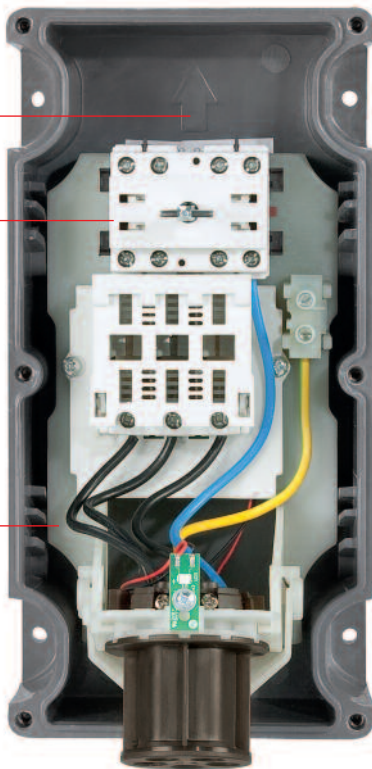
■ TECHNICAL CHARACTERISTICS 16A-32A-63A VERSIONS

WITH FUSES

Ample space for easy wiring

Switch-disconnector with mechanical lock that can be accessorized with auxiliary contacts

Easily extractable support



WITH MCB

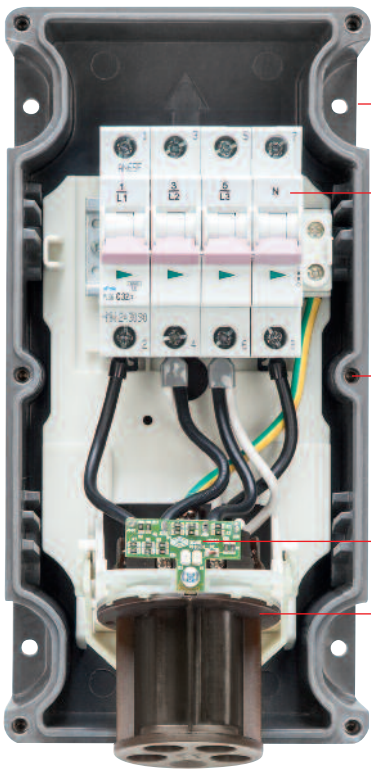
Outdoor wall fastening

Under-plate cable runway

Threaded metal inserts

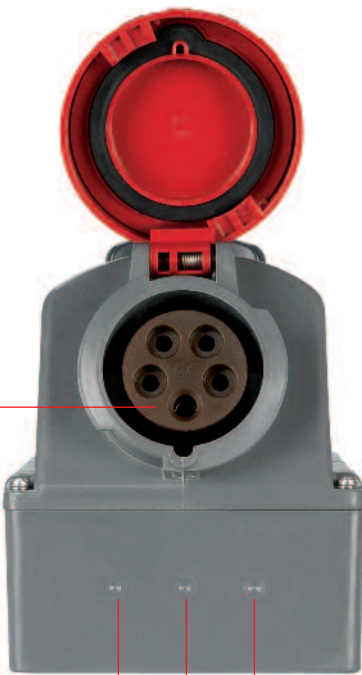
Indicator light

Possibility for plug-inserted control microswitch assembly



BOTTOM VIEW

Module in high-temperature resistant engineering polymer



Possible entry from bottom side (input-output also)

TOP VIEW



Self-centering punch marks to facilitate drilling

Single-piece waterproof gasket

Dual mechanical lock



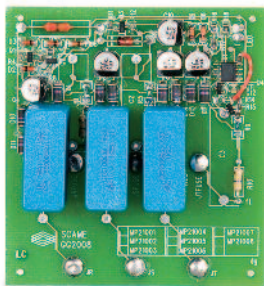
High-strength material with superior UV and chemical resistance

Ergonomic knob which can be padlocked in position 0 and 1, manoeuvrable even with gloves

Fuse inspection door, tamper-proof, lockable, with assisted opening

Cover entirely separate from the base for easy installation

Captive stainless steel closing screws



I-Device

An electronic device controls (*Intelligence Device*) the status of the interlocked socket, monitoring the electrical functionality:

- operation of the signalling and control card is guaranteed even when the load is not connected;

● INDICATOR LIGHT ON

- indicates that the fuses are not open and all the phases are present;
- indicates that the socket outlet is powered correctly;



● INDICATOR LIGHT FLASHING

- signals the interruption of one or more fuses;
- signals the absence of a phase*;



○ INDICATOR LIGHT OFF

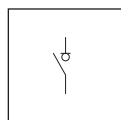
- indicates that the socket outlet is not powered.

* for single-phase products in the event of phase/neutral loss led signaling appears off.

ADVANCE-GRP System



■ IP66/IP67/IP69 WITHOUT BASE VERSION - VOLTAGE >50V



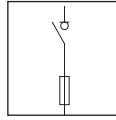
Without fuse holder

Poles	Hz	Volt	Colour	h.	16A	32A	63A
					☐ 1	☐ 1	☐ 1
2P+E	50/60	100-130		4	402.1670	402.3270	402.6370
	50/60	200-250		6	402.1683	402.3283	402.6383
	50/60	380-415		9	402.1678	402.3278	402.6378
	50/60	480-500		7	402.16836	402.32836	402.63836
	50/60	trasf.		12	402.16833	402.32833	402.63833
	>300-500	>50 (1)		2	402.16832	402.32832	402.63832
	c.c.	>50-250		3	on request	on request	-
	c.c.	>250		8	on request	on request	-
3P+E	50/60	100-130		4	402.1672	402.3272	402.6372
	50/60	200-250		9	402.1674	402.3274	402.6374
	50/60	380-415		6	402.1686	402.3286	402.6386
	60	440-460		11	402.16865	402.32865	402.63865
	50/60	480-500		7	402.16866	402.32866	402.63866
	50/60	600-690 (2)		5	402.16867	402.32867	402.63867
	50...60	380...440		3	402.16864	402.32864	402.63864
	100-300	>50 (1)		10	402.16861	402.32861	402.63861
	>300-500	>50 (1)		2	402.16862	402.32862	402.63862
3P+N+E	50/60	100-130		4	402.1679	402.3279	402.6379
	50/60	208-250		9	402.1675	402.3275	402.6375
	50/60	346-415		6	402.1687	402.3287	402.6387
	50/60	480-500		7	402.16876	402.32876	402.63876
	50/60	600-690 (2)		5	402.16877	402.32877	402.63877
	60	440-460		11	402.16875	402.32875	402.63875
	50...60	380...440		3	402.16874	402.32874	402.63874
	>300-500	>50 (1)		2	402.16872	402.32872	402.63872

(1) Versions >60Hz = 25% Reduced current.

(2) Particular attention is required in selecting the fuse suited to the system's voltage.

☐ Pack Quantity.



With fuse holder

16A

□ 1

32A

□ 1

63A

□ 1

402.1670-F	402.3270-F	402.6370-F
402.1683-F	402.3283-F	402.6383-F
402.1678-F	402.3278-F	402.6378-F
402.16836-F	402.32836-F	402.63836-F
402.16833-F	402.32833-F	402.63833-F
402.16832-F	402.32832-F	402.63832-F
on request	on request	-
on request	on request	-
402.1672-F	402.3272-F	402.6372-F
402.1674-F	402.3274-F	402.6374-F
402.1686-F	402.3286-F	402.6386-F
402.16865-F	402.32865-F	402.63865-F
402.16866-F	402.32866-F	402.63866-F
402.16867-F	402.32867-F	402.63867-F
402.16864-F	402.32864-F	402.63864-F
402.16861-F	402.32861-F	402.63861-F
402.16862-F	402.32862-F	402.63862-F
402.1679-F	402.3279-F	402.6379-F
402.1675-F	402.3275-F	402.6375-F
402.1687-F	402.3287-F	402.6387-F
402.16876-F	402.32876-F	402.63876-F
402.16877-F	402.32877-F	402.63877-F
402.16875-F	402.32875-F	402.63875-F
402.16874-F	402.32874-F	402.63874-F
402.16872-F	402.32872-F	402.63872-F



Base



Base with consumer unit



Base with derivation box

Bases and switchboards available on page 16

ADVANCE-GRP System



■ IP66/IP67/IP69 WITHOUT BASE VERSION I-Device - VOLTAGE >50V

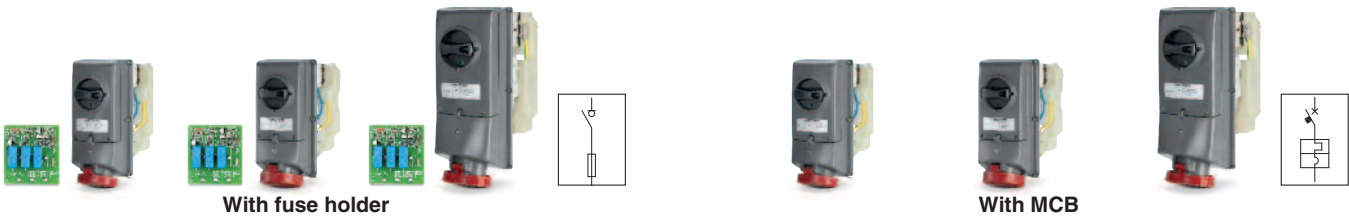








Poles	Hz	Volt	Colour	h.	16A	32A	63A
					☐ 1	☐ 1	☐ 1
2P+E	50/60	100-130		4	403.1670	403.3270	403.6370
	50/60	200-250		6	403.1683	403.3283	403.6383
	50/60	380-415		9	403.1678	403.3278	403.6378
	50/60	480-500		7	403.16836	403.32836	403.63836
	50/60	trasf.		12	403.16833	403.32833	403.63833
	>300-500	>50 (1)		2	on request	on request	on request
	c.c.	>50-250		3	-	-	-
	c.c.	>250		8	-	-	-
3P+E	50/60	100-130		4	403.1672	403.3272	403.6372
	50/60	200-250		9	403.1674	403.3274	403.6374
	50/60	380-415		6	403.1686	403.3286	403.6386
	60	440-460		11	403.16865	403.32865	403.63865
	50/60	480-500		7	403.16866	403.32866	403.63866
	50/60	600-690 (2)		5	403.16867	403.32867	403.63867
	50...60	380...440		3	403.16864	403.32864	403.63864
	100-300	>50 (1)		10	on request	on request	on request
	>300-500	>50 (1)		2	on request	on request	on request
3P+N+E	50/60	100-130		4	403.1679	403.3279	403.6379
	50/60	208-250		9	403.1675	403.3275	403.6375
	50/60	346-415		6	403.1687	403.3287	403.6387
	50/60	480-500		7	403.16876	403.32876	403.63876
	50/60	600-690 (2)		5	403.16877	403.32877	403.63877
	60	440-460		11	403.16875	403.32875	403.63875
	50...60	380...440		3	403.16874	403.32874	403.63874
	>300-500	>50 (1)		2	on request	on request	on request

(1) Versions >60Hz = 25% Reduced current.

(2) Particular attention is required in selecting the fuse suited to the system's voltage.

☐ Pack Quantity.



16A	32A	63A	16A	32A	63A
					
403.1670-F	403.3270-F	403.6370-F	403.1670-M	403.3270-M	403.6370-M
403.1683-F	403.3283-F	403.6383-F	403.1683-M	403.3283-M	403.6383-M
403.1678-F	403.3278-F	403.6378-F	403.1678-M	403.3278-M	403.6378-M
403.16836-F	403.32836-F	403.63836-F	-	-	-
403.16833-F	403.32833-F	403.63833-F	-	-	-
on request	on request	on request	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
403.1672-F	403.3272-F	403.6372-F	403.1672-M	403.3272-M	403.6372-M
403.1674-F	403.3274-F	403.6374-F	403.1674-M	403.3274-M	403.6374-M
403.1686-F	403.3286-F	403.6386-F	403.1686-M	403.3286-M	403.6386-M
403.16865-F	403.32865-F	403.63865-F	403.16865-M	403.32865-M	403.63865-M
403.16866-F	403.32866-F	403.63866-F	-	-	-
403.16867-F	403.32867-F	403.63867-F	-	-	-
403.16864-F	403.32864-F	403.63864-F	403.16864-M	403.32864-M	403.63864-M
on request	on request	on request	-	-	-
on request	on request	on request	-	-	-
403.1679-F	403.3279-F	403.6379-F	403.1679-M	403.3279-M	403.6379-M
403.1675-F	403.3275-F	403.6375-F	403.1675-M	403.3275-M	403.6375-M
403.1687-F	403.3287-F	403.6387-F	403.1687-M	403.3287-M	403.6387-M
403.16876-F	403.32876-F	403.63876-F	-	-	-
403.16877-F	403.32877-F	403.63877-F	-	-	-
403.16875-F	403.32875-F	403.63875-F	403.16875-M	403.32875-M	403.63875-M
403.16874-F	403.32874-F	403.63874-F	403.16874-M	403.32874-M	403.63874-M
on request	on request	on request	-	-	-



Base



Base with consumer unit



Base with derivation box

Bases and switchboards available on page 16

ADVANCE-GRP System



EXTRA LOW VOLTAGE SWITCHED INTERLOCKED SOCKET OUTLETS <50V 16A-32A



REFERENCE STANDARDS

EN 60309-1

Plugs, socket outlets and couplers for industrial purposes.
Part 1: general requirements.

EN 60309-2

Plugs, socket outlets and couplers for industrial purposes.
Part 2: dimensional interchangeability requirements for pin and contact-tube accessories of harmonised configurations.

VERSIONS



Version with transformer.
SELV transformer 230/24V~ 150VA



Version without transformer.

TECHNICAL CHARACTERISTICS

Rated current:	16A-32A
Rated voltage:	20÷50V~
Frequency:	50÷60Hz
SELV transformer 220/24V:	150VA
Insulating voltage:	500/690V~
Protection degree:	IP66/IP67/IP69
Operating ambient temperature according to the reference standard:	-25°C +40°C
Minimum operating ambient temperature:	-40°C
Max. operating ambient temperature:	+60°C
Self-extinguishing GW test:	850°C (socket housing) 960°C (enclosure)
Material:	Thermosetting
IK degree at 20°C:	IK10
Colour:	Grey RAL7037
Insulation class:	Class III

BEHAVIOUR WITH CHEMICAL AND ATMOSPHERIC AGENTS

Saline solution	Acids		Bases		Solvents				Mineral oil	UV rays
	Concentrated	Diluted	Concentrated	Diluted	Hexane	Benzol	Acetone	Alcohol		
Resistant	Limited Resistance	Resistant	Limited Resistance	Resistant	Resistant	Resistant	Resistant	Resistant	Resistant	Resistant

For specific substances please contact our technical service.

Dimensional drawings: **ScameOnLine**
www.scame.com

EXTRA LOW VOLTAGE SOCKET OUTLETS <50V - IP66/IP67/IP69

Description	Plug	Colour	Rated voltage	Pack Quantity	
With transformer (*)	2P-16A		20-25V~	1	403.2416
Without transformer	2P-16A		20-25V~	1	403.2420
			40-50V~	1	403.2421
	2P-32A		20-25V~	1	403.2620
			40-50V~	1	403.2621
With transformer with fuse holder(*)	2P-16A		20-25V~	1	503.2416-F

(*) SELV transformer 220/24V~ 150VA.

For the choice of bottoms, refer to the 16A-32A module.

Pack Quantity.

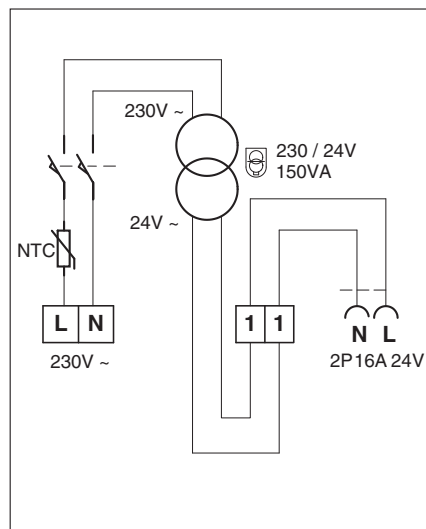
WIRING OPERATIONS

Wiring capacity of the terminals (mm²)

Rated current (A)	Socket outlets	
	Min	Max
16A	4	4
32A	4	10

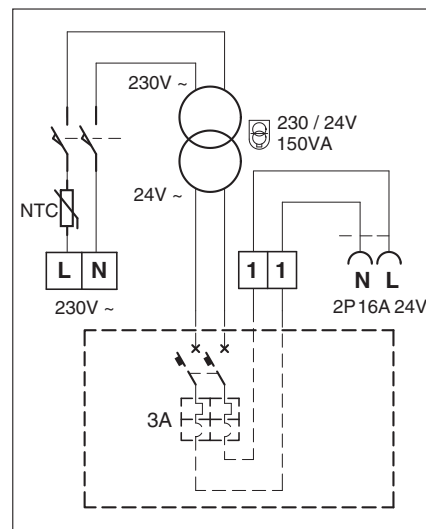
VERSION WITH TRANSFORMER

Unprotected socket diagram (standard)



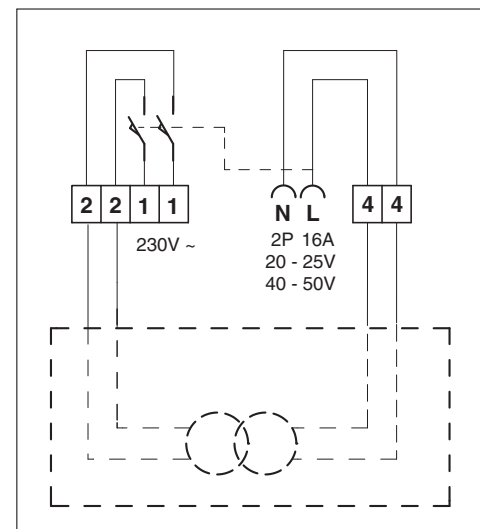
L-N 230V supply
1-1 24V secondary transformer

Secondary protected socket diagram (protection by the installer)



VERSION WITHOUT TRANSFORMER

Socket without transformer diagram (standard)







1-1 230V supply
2-2 Primary transformer
4-4 20 - 25V~ / 40 - 50V~ socket outlet



ADVANCE-GRP System





■ IP66/IP67/IP69 BASES AND CONSUMER UNIT

Description	Module	DIN modules	HxB (mm)	Power dissipation (W)	□	 16A-32A		 63A	
						579.5100		579.5200	
Base for one socket	16A-32A	-	260x130	-	1				
	63A	-	380x170	-	1				

Description	Module	DIN modules	HxB (mm)	Power dissipation (W)	□	 16A-32A		 63A	
						579.5110		579.5210	
Base for one socket with derivation box	16A-32A	-	460x130	9	1				
	63A	-	580x170	13	1				

Description	Module	DIN modules	HxB (mm)	Power dissipation (W)	□	 16A-32A		 63A	
						579.5111		579.5211	
Base for one socket with consumer unit	16A-32A	6	460x130	9	1				
	63A	8	580x170	13	1				







Description	Module	DIN modules	HxB (mm)	Power dissipation (W)	□	 16A-32A			
						579.5120			
Base for two sockets with derivation box	16A-32A	-	460x260	16	1				

Description	Module	DIN modules	HxB (mm)	Power dissipation (W)	□	 16A-32A			
						579.5121			
Base for two sockets with consumer unit	16A-32A	13	460x260	16	1				

Power dissipation in conformity with CEI 23-48 CEI 23-49.
IP66/IP67/IP69 when coupled with the respective component.


□ Pack Quantity.

■ GALVANIZED STEEL SUPPORTS


Description	HxB (mm)	☐		
3 x 16A-32A	555x390	1		
4 x 16A-32A	555x520	1		
Description	HxB (mm)	☐		
2 x 16A-32A + 1 x 63A	685x430	1		
3 x 16A-32A + 1 x 63A	685x560	1		
2 x 16A-32A + 2 x 63A	685x610	1		

☐ Pack Quantity.


■ COMPOSITION EXAMPLES




579.0030




579.0040




579.0021



579.0031



579.0022



M32 bottom joining Kit (page 24)

ADVANCE-GRP System



SWITCHED INTERLOCKED SOCKET OUTLETS 125A



REFERENCE STANDARDS

EN 60309-1

Plugs, socket outlets and couplers for industrial purposes.
Part 1: general requirements.

EN 60309-2

Plugs, socket outlets and couplers for industrial purposes.
Part 2: dimensional interchangeability requirements for pin and contact-tube accessories of harmonised configurations.

EN 60309-4

Plugs, socket-outlets and couplers for industrial purposes.
Part 4: switched, socket-outlets and connectors with or without interlock.

VERSIONS WITH MECHANICAL INTERLOCK

	With switch-disconnector
	With switch-disconnector and fuse
	With fuse and switch-disconnector
	With molded case circuit breaker with thermal magnetic trip unit
	With molded case circuit breaker with thermal magnetic and residual current release trip units
	With contactor

TECHNICAL CHARACTERISTICS

Rated current:	125A
Rated voltage:	100÷690V~
Frequency:	50÷60Hz
Insulating voltage:	500/690V~
Protection degree:	IP66
Minimum operating ambient temperature:	-40°C
Maximum operating ambient temperature:	+60°C
Self-extinguishing GW test:	960°C
Self-extinguishing UL94:	V0
Switched socket outlets with interlock material:	Thermosetting
Impact Resistance:	IK10 (20J)
Switch-disconnectors:	125A
MCCB:	ABB T-MAX XT 1B 160
Fuse:	gG 10,3x38mm gG 22x58mm NH00
Sockets colour:	Grey RAL7037
Insulation class:	Class II (double insulation) □

■ BEHAVIOUR WITH CHEMICAL AND ATMOSPHERIC AGENTS

Saline solution	Acids		Bases		Solvents				Mineral oil	UV rays
	Concentrated	Diluted	Concentrated	Diluted	Hexane	Benzol	Acetone	Alcohol		
Resistant	Limited Resistance	Resistant	Limited Resistance	Resistant	Resistant	Resistant	Resistant	Resistant	Resistant	Resistant

■ CABLE ENTRY

Maximum entry with cable glands

Rated current (A)	Single socket	
	Upper	Lower
125A	M63	M63

■ WIRING OPERATIONS

Wiring capacity of the terminals (mm²)

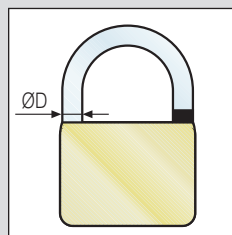
Rated current (A)	Socket outlets		Plugs	
	Min	Max	Min	Max
125A	50	95 (*)	25	50

(*) In case of flexible cable max 70 mm².

■ PADLOCK TO BE USED

Choice of padlock for socket knob, fuse door and switchboard door

Rated current (A)	Padlock arc diameter (mm)
125A	6,3



ADVANCE-GRP System



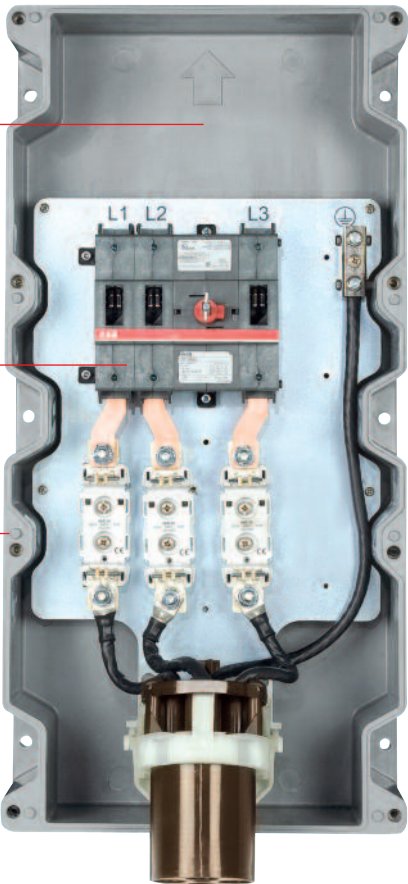
■ TECHNICAL CHARACTERISTICS VERSION 125A

WITH FUSES

Ample space for easy wiring

Switch-disconnector with mechanical lock that can be accessorized with auxiliary contacts

Punched marks for easy closure of the cover



WITH MCCB + RCD

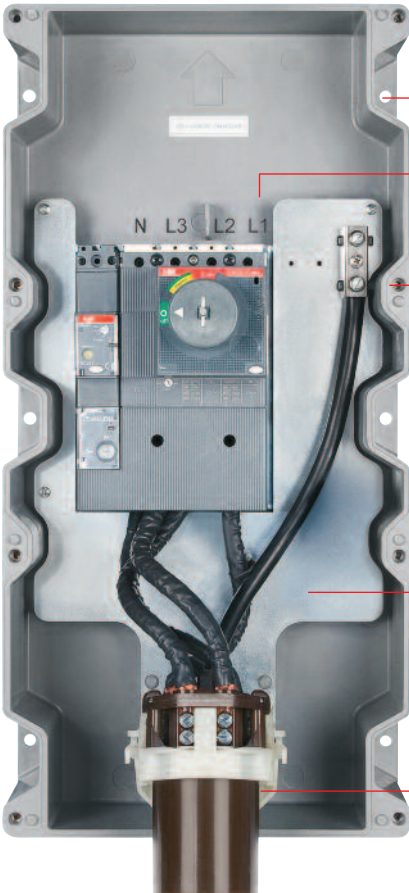
Outdoor wall fastening

Under-plate cable runway

Threaded metal inserts

Easily extractable bottom plate

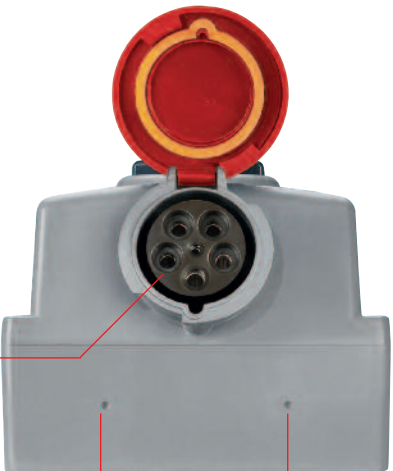
Possibility to assemble microswitch



BOTTOM VIEW

Module in high-temperature resistant engineering polymer

Possible entry from bottom side (input-output also)



TOP VIEW

Self-centering punch marks to facilitate drilling



Single-piece
waterproof gasket



Dual mechanical
lock

Thermal magnetic
protection:

Molded case circuit breaker ABB T-MAX XT 1B 160 (18kA) with thermal magnetic trip unit TMD (adjustable thermal threshold 0,7...1 x In fixed magnetic threshold 10 x In)

Thermal-magnetic
and residual
current protection:

Molded case circuit breaker ABB T-MAX XT 1B 160 (18kA) with thermal magnetic trip unit TMD (adjustable thermal threshold 0,7...1 x In fixed magnetic threshold 10 x In) + residual current release trip units RC221/1 (adjustable residual current trip 0,03 - 0,1 - 3A and time limit for non-trip instantaneous)

Version with contactor: **Contactor CL09 GE POWER CONTROL**

Rating on metal
plate

Captive stainless
steel closing
screws

Ergonomic knob
which can be
padlocked in
position 0 and 1,
manoeuvrable
even with gloves

High-strength
material with
superior UV
and chemical
resistance

Residual current
release trip units
test push button

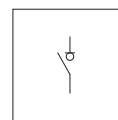
Cover entirely
separate from the
base for easy
installation



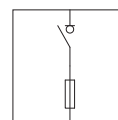
ADVANCE-GRP System



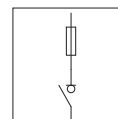
MECHANICALLY INTERLOCKED SOCKET OUTLETS 125A - IP66



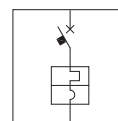
Description	Plug	Hz	Volt	Colour	h	□	
Switch-disconnector	2P+E 125A	50/60	200-250V		6	1	503.12583
	3P+E 125A	50/60	380-415V		6	1	503.12586
	3P+N+E 125A	50/60	346-415V		6	1	503.12587



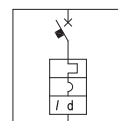
Description	Plug	Hz	Volt	Colour	h	□	
Switch-disconnector and fuse (*)	2P+E 125A	50/60	200-250V		6	1	503.12583-F
	3P+E 125A	50/60	380-415V		6	1	503.12586-F
	3P+N+E 125A	50/60	346-415V		6	1	503.12587-F



Description	Plug	Hz	Volt	Colour	h	□	
Fuse (*) and switch-disconnector	2P+E 125A	50/60	200-250V		6	1	503.12583-FS
	3P+E 125A	50/60	380-415V		6	1	503.12586-FS
	3P+N+E 125A	50/60	346-415V		6	1	503.12587-FS



Description	Plug	Hz	Volt	Colour	h	□	
Molded case circuit breaker with thermal magnetic trip unit	2P+E 125A	50/60	200-250V		6	1	503.12583-M
	3P+E 125A	50/60	380-415V		6	1	503.12586-M
	3P+N+E 125A	50/60	346-415V		6	1	503.12587-M



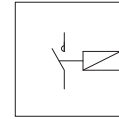
Description	Plug	Hz	Volt	Colour	h	□	
Molded case circuit breaker with thermal magnetic and residual current release trip units	2P+E 125A	50/60	200-250V		6	1	503.12583-RM
	3P+E 125A	50/60	380-415V		6	1	503.12586-RM
	3P+N+E 125A	50/60	346-415V		6	1	503.12587-RM





(*) Fuses not included

- Other clock position configurations available on demand.

□ Pack Quantity.

■ ELECTRICALLY INTERLOCKED SOCKET OUTLETS - IP66



Description	Plug	Hz	Volt	Colour	h		
	2P+E 125A	50/60	200-250V		6	1	503.12583-T
Contactor (*)	3P+E 125A	50/60	380-415V		6	1	503.12586-T
	3P+N+E 125A	50/60	346-415V		6	1	503.12587-T

(*) Microswitch already provided.
Contactor operated by microswitch.

 Pack Quantity.

■ ACCESSORIES



Description	Contacts		
Microswitch kit 400V 10A (microswitch + terminal block) 125A for plug-inserted control (*)	1NO+1NC	579.0125	
Microswitch Kit for Advance-GRP 16A-32A-63A for plug-inserted control	1NO/1NC	579.0100	


Max 2 kit. for 125A and 63A sockets. Max 1 kit for 16A-32A sockets.

(*) Not suitable for electrically interlocked socket.

 Pack Quantity.

■ AUXILIARY CONTACTS






Description	For switches		
NC contact	16A-32A	10	590.PL004001
	63A	10	590.PL004003
NO contact	16A-32A	10	590.PL004002
	63A	10	590.PL004004




For auxiliary contact suitable for 125A socket contact technical support.  Pack Quantity.
NC= normally closed. NO= normally open.

ADVANCE-GRP System







ACCESSORIES

Description				
		16A-32A-63A	63A	
Junction box Kit IP66/IP67/IP69 M40 (*)	1/12	579.0200		
Junction box Kit IP66/IP67/IP69 M50 (*)	1/12		579.0201	
M32 bottom jointing Kit M32	1/12			579.0332
(*) Includes cable gland and gasket. IP66/IP67/IP69 when coupled with the respective component.		Pack Quantity.		

Description				
		579.0450	579.0400	579.5001
4 DIN modules cover	10			
Thumb Screws (°)	1/12		579.0400	
Base blank cover (Δ)	10			579.5001
Pack Quantity.		(Δ) Cover used to close the socket compartment; allows other devices to be installed		
(°) For bases with control units instead of screws for closing the doors.				

COVER KIT FOR SOCKET

Poles	Colour		16A	32A	63A
2P+E		1/25	654.12160	654.12320	
		1/25	654.12163	654.12323	654.12633 (*)
3P+E		1/25	654.12164	654.12324	
3P+N+E		1/25	654.12165	654.12325	654.12635 (*)
(*) All polarities					
Pack Quantity.					



■ AMR SYSTEM

SCAME, always focused on innovation and technological research, has developed a smart system called **AMR SYSTEM (Automated Meter Reading)**, to apply to its products. The SCAME products equipped with this smart system are the ADV GRP interlocked sockets and the DOMINO switch panels with two and four sockets.

A smart system features technology through which it is able to control and manage, on its own and in remote, industrial electrical systems aimed at improving the user's service.

In addition to being an effective solution for preventing failures and quickly resolving them, remote management systems are also a valid instrument for cost containment and for system monitoring and control.

This system is equipped with an extremely versatile and accurate energy analyser with microprocessor, designed to meet the needs of the most advanced applications for the monitoring of electrical parameters and for the management of energy consumption, allowing real-time reading via the Internet of all acquisition data and threshold management in automatic mode; moreover, it is possible to send, by e-mail, local alarms pertaining to anomalies or control of the status of manoeuvring switch and inserted plug.

The system is preset for load management. Preventing overload risks is important in order to avoid the tripping of circuit breakers and consequently the resulting malfunction (partial or total power failure), and to significantly reducing energy costs. In fact, as everyone knows, exceeding certain limits and parameters pertaining to the supply of electricity agreed upon with the grid operator results in the application of penalties or higher rates.

Therefore, it will be possible to automatically disable or reinstate devices or loads connected to the ADV GRP AMR socket.

The various functions include the sending of commands. Commands can be sent to a single socket or to a group of sockets, in both local or remote mode. In the latter case, an Internet connection is required.

Lastly, it allows the Energy Manager to be informed in real time on the condition of the system through any device capable of displaying a web page.

Therefore, the product can be used to diagnose, command, control and manage remote units towards a central server through specific communication protocols. The system consists of one or more sockets and management software. In order for the two parts to communicate one with the other, a basic communication infrastructure needs to be set up. The communication channels can be RS485, Canbus and wireless. The main carrier is the Wi-Fi.

In case the Wi-Fi connection is not working, the **AMR SYSTEM** can store processing reports in a circular buffer for over a month. Once communication is restored, it sends the stored data to the management software.

The system fitted to the GRP and DOMINO sockets is suited for applications on all kinds of electric grids, 3 and 4-wire three-phase, single-phase, low and medium voltage.

All operating parameters can be set through the software, including the input and output, the alarms, the Canbus/RS485 port.

The digital input is typically used as a status indicator for inserted plug and as an ON/OFF manoeuvre selector, as well as for earth presence signalling purposes.

■ DATA ACQUISITION AND MONITORING FROM A SINGLE POINT

The AMR system allows the management and monitoring of loads from a single "socket" point, ensuring the highest functionality, reliability and operating potential, in addition to simplifying installation.

In this case, the interlocked socket carries out a "multi-service", supplying electricity for proper operation to the connected load, at the same time performing monitoring and management functions.

This is a huge advantage in terms of installation costs and times.

- All energy-related data can be detected using a single card
- The card is located inside the socket
- No wiring required. Significant savings as far as time and materials are concerned.
- Accuracy class: 1% current/voltage, 1.5% power/energy
- Local and remote control with alarm and/or signalling of manoeuvre status and inserted plug

- Control with the signalling of anomalies and system status on the socket through a warning light
- Warning light on the socket for no earth
- Through the socket, the SCAME system can monitor refrigerated containers; however it is not designed for controlling the temperature inside the containers
- The SCAME system does not carry out checks other than electricity-related ones.

The products fitted with the AMR system (from the acronym AMR "automated meter reading") feature advanced technology. Through the AMR system, you can analyse the power grid for current and power consumption, as well as read all acquisition data in real time via the Internet;

ADVANCE-GRP System



PRODUCT RANGE – AMR SYSTEM



ADVANCE-GRP Series



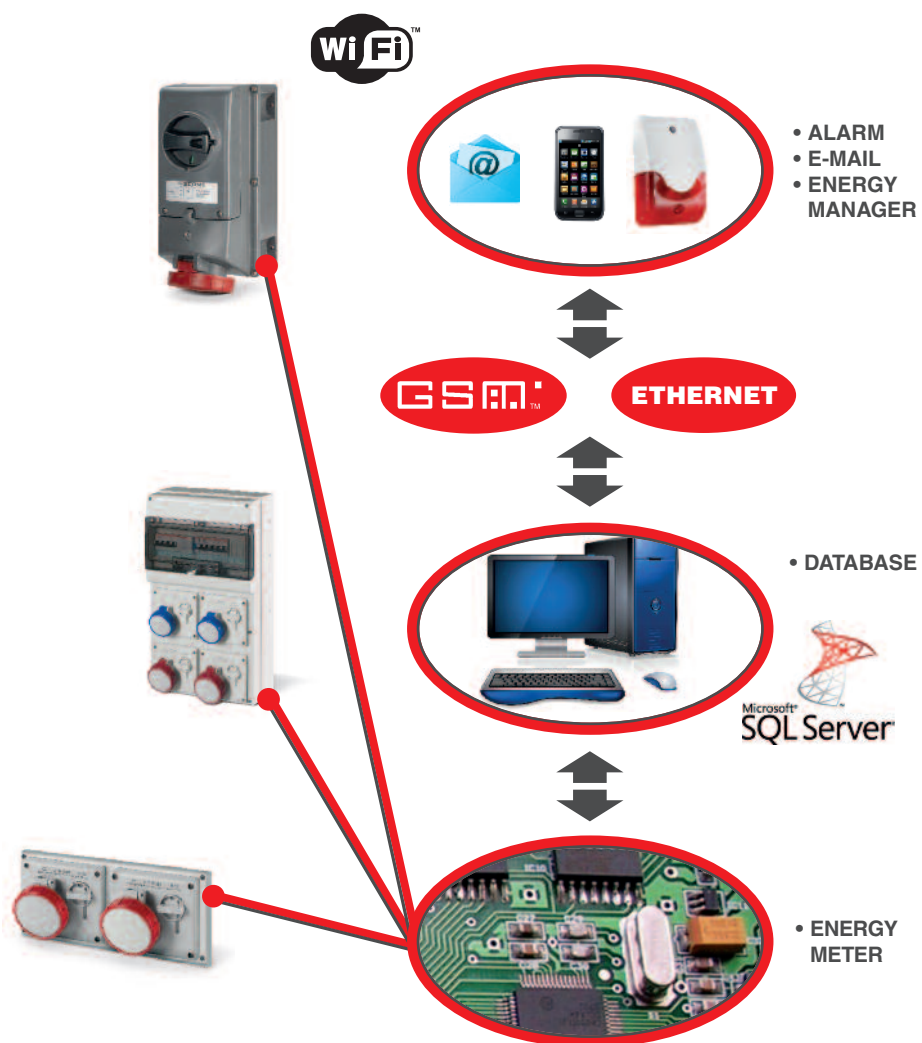
DOMINO Series



OMNIA Series

Available functions

- Socket monitoring
- Monitoring of consumption
- Fuse check
- Internal temperature
- Plug presence
- Earth presence
- Energy management
- Data collection
- Graphs
- Alarms
- Reports
- Remote control
- Load management
- Notifications by e-mail
- Text messages (optional)



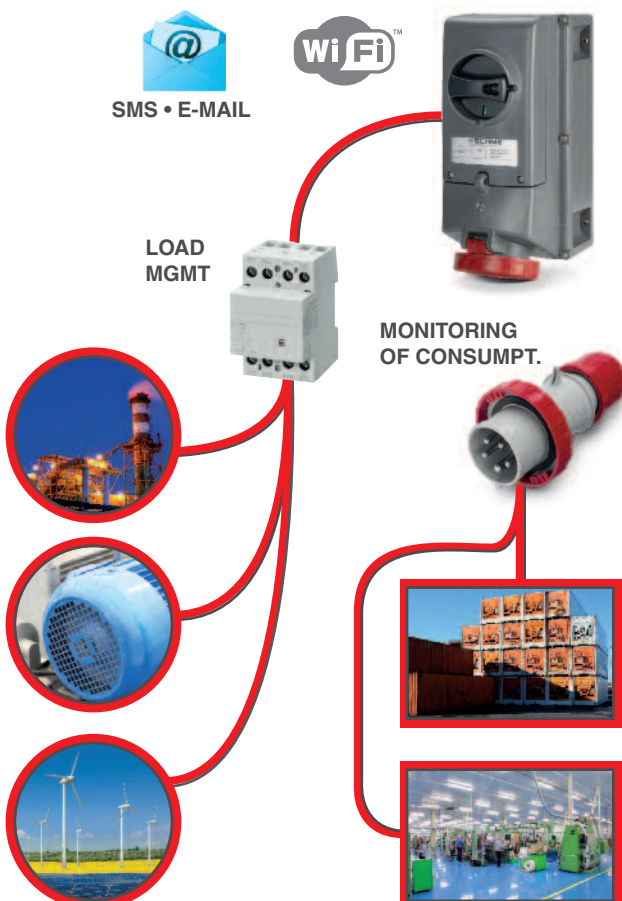
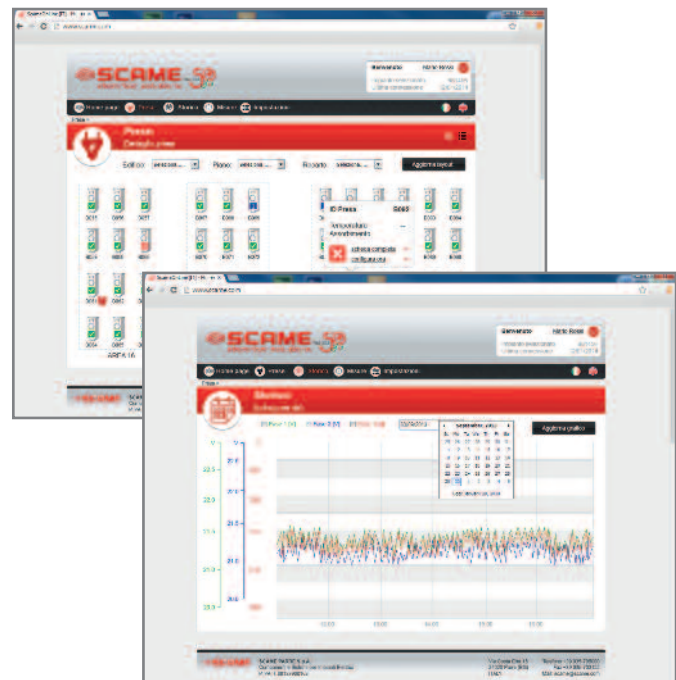
■ MANAGEMENT SOFTWARE

The system is also preset for communicating in local mode with other AMR devices through RS485 or Canbus channels (optional), while it communicates with the data collection server through a Wi-Fi connection.

The computer assigned the task of monitoring the devices, process their status and retaining it for a defined time period, issues notices in case of anomalous operating conditions. Through the sampling of energy data, the system is also able to process information on the energy and consumption profile as well as represent data in graph form.

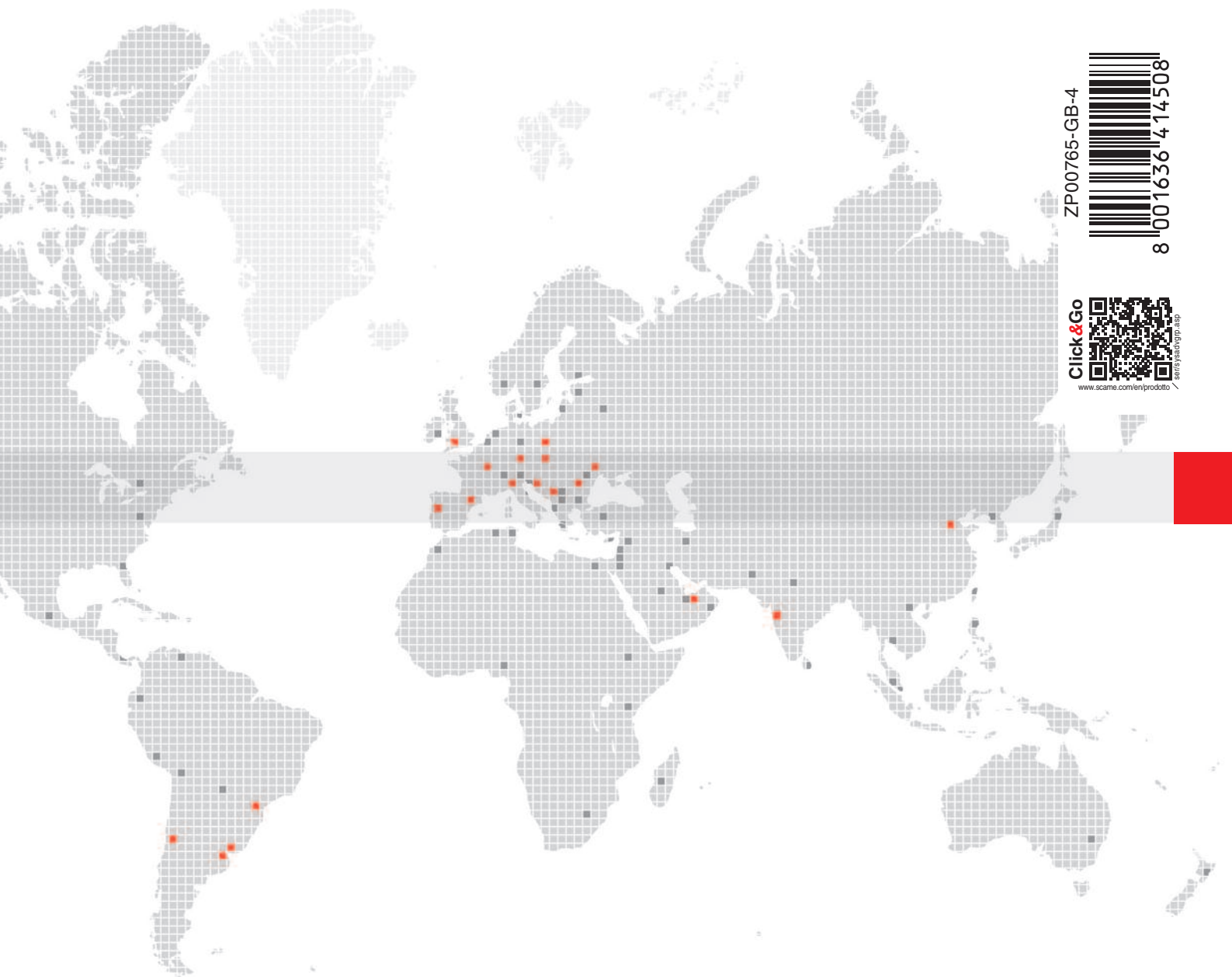
The software can be structured according to the customer's needs. The system can carry out quality measurements, make decisions on its own and inform the Energy Manager in real time with regards to the system status.

It is also possible to **monitor** energy parameters so as to avoid penalties applied for a low COS-FI (power factor). **Eliminate waste** by checking motors, lighting, heating, air-conditioning, compressors, refrigerators, transformers, distribution lines and other utilities.



A few good reasons for choosing the AMR system

- **Small investment** that yields significant benefits at a reasonable cost.
- **Simple to install** and to manage, at the same time ensuring reliable performance.
- **User interface that is simple to use**, also suited for users with no prior experience.
- **Networked installation**, in order to share information and improve communication.
- **Flexible**, quick start-up and installation, with no additional installations required.
- **Improved service** to the system, thus reducing the number of failures and downtime.
- **More integrated functions** in a single instrument that can be used to both manage maintenance jobs and to control the systems quickly and directly.
- **It provides useful information**, constantly populating a database in order to subsequently carry out statistical analyses.
- **It handles emergencies** quickly and effectively, sending anomaly notices to the Energy Manager.
- **It cuts operator involvement down to a minimum.**
- **It oversees the processes**, with constant control of the systems being managed.



ZP00765-GB-4



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- SCAME-UK United Kingdom
- SCAME-UY Uruguay
- SCAME-UA Ukraine



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