



INDUSTRIAL PLUGS AND SOCKETS

Optima, Eureka, Xenia, IEC309 Series



Scame: a tradition of innovation

**IN FIFTY YEARS WE HAVE WRITTEN A STORY OF INNOVATION
THAT HAS ALWAYS PRESERVED THE SPIRIT OF ITS ORIGINS.**



Scame was founded amidst the enthusiasm of the Italian economic boom of the 60's and has always pursued its strive for excellence by continuous innovation. Today it is an international industrial group of about 800 people employed in 20 subsidiaries and associated companies operating under the parent company headquartered in Parre (Bergamo) in Alta Valle Seriana.

Scame has a capillary presence throughout Italy with its own sales agencies and operates worldwide with branches and loyal distributors.

Led by the genius and foresight of its founder Mr. Giovanni Scainelli, now inspiring the 2nd generation management, Scame has been continuously searching for new opportunities, developing innovative strategies and tailor made solutions for several markets: from residential to heavy industry, including special applications as electric vehicles recharging solutions and products for environments with high risk of explosion.

**CONCEPTS OF RESEARCH AND QUALITY ARE AN INTEGRAL PART OF OUR CULTURE
IN ALL THE ASPECTS AND EVERY ACTIVITY OF OUR WORK.**

ITALIAN EXCELLENCE
SINCE 1963

PRODUCTS INDEX

	PLUGS	P.4		SURFACE MOUNTING SWITCHED SOCKETS O/I - L/O/R	P.26
	FLUSH MOUNTING APPLIANCE INLETS	P.8		PLUGS AND INLETS WITH PHASE INVERTER	P.29
	SURFACE MOUNTING APPLIANCE INLETS	P.10		HEAVY DUTY PLUGS AND CONNECTORS	P.30
	CONNECTORS	P.12		PLUGS AND SOCKETS <50V~	P.32
	FLUSH MOUNTING SOCKET OUTLETS	P.16		SEVEN POLES PLUGS AND CONNECTORS	P.38
	SURFACE MOUNTING SOCKET OUTLETS	P.20			

TECHNICAL SHEETS INDEX

OPTIMA Series Industrial plugs and sockets	P.46	OPTIMA-COMBI Series (switched) Surface mounting switched sockets O/I and L/O/R	P.58
OPTIMA-HD Series Plugs and connectors for demanding applications	P.51	EUREKA Series Industrial plugs and sockets	P.60
OPTIMA BASE-TOP-COMBI Series Industrial surface mounting socket outlets and appliance inlet	P.52	IEC309 Series Industrial plugs and sockets <50V~	P.62
OPTIMA-REVERSE Series Plugs with phase inverter	P.54	OPTIMA-SEVEN Series Industrial plugs and sockets (seven poles)	P.64
OPTIMA-TOP Series (switched) Surface mounting switched sockets O/I	P.56	XENIA Series Industrial plugs and sockets	P.66

Industrial plugs and sockets

PLUGS



Poles	Hz.	Volt	Colour	h.	IP44/IP54		FAST WIRING	
					16A	32A	16A	32A
					cable gland	cable gland	cable gland	cable gland
2P+E	50/60	100-130		4	213.1630 (Δ)	213.3230	213.1630P (Δ)	213.3230F
	50/60	200-250		6	213.1633 (Δ)(Δ)	213.3233 (Δ)	213.1633P (Δ)(Δ)	213.3233F (Δ)
	50/60	380-415		9	213.1638	213.3238	213.1638P	213.3238F
	50/60	480-500		7	213.16336	213.32336		
	50/60	trasf.		12	213.16333	213.32333		
	>300-500	>50		2	213.16332	213.32332		
	c.c.	>50-250		3	213.16334	213.32334		
	c.c.	>250		8	213.16338	213.32338		
3P+E	50/60	100-130		4	213.1631	213.3231		
	50/60	200-250		9	213.1634	213.3234	213.1634P	213.3234F
	50/60	380-415		6	213.1636 (Δ)(◦)	213.3236 (Δ)(◦)	213.1636P (Δ)(Δ)	213.3236F (Δ)
	60	440-460		11	213.16365	213.32365		
	50/60	480-500		7	213.16366	213.32366		
	50/60	600-690		5	213.16367	213.32367		
	50 60	380 440		3	213.16364	213.32364		
	100-300	>50		10	213.16361	213.32361		
>300-500	>50		2	213.16362	213.32362			
3P+N+E	50/60	100-130		4	213.1632	213.3232		
	50/60	208-250		9	213.1635 (Δ)	213.3235 (Δ)		
	50/60	346-415		6	213.1637 (Δ)(◦)	213.3237 (Δ)(◦)	213.1637P (Δ)(Δ)	213.3237F (Δ)
	50/60	480-500		7	213.16376	213.32376		
	50/60	600-690		5	213.16377	213.32377		
	60	440-460		11	213.16375	213.32375		
	50 60	380 440		3	213.16374	213.32374		
	>300-500	>50		2	213.16372	213.32372		

= Screw terminals

= Spring terminals (fast wiring)

= Insulation perforating terminals (fast wiring)

= Mantle terminals



(◦) Phase inverter
Plugs and flush mounting
appliance inlets with phase
inverter, page 29

OPTIMA Series

XENIA Series

EUREKA Series



IP44/IP54



63A

cable gland

213.6330

213.6333

213.6338

213.6336

213.63333

213.63332

213.63334

213.63338

213.6331

213.6334

213.6336

213.63365

213.63366

213.63367

213.63364

213.63361

213.63362

213.6332

213.6335

213.6337

213.63376

213.63377

213.63375

213.63374

213.63372



IP44



16A

cable gland

214.1630

214.1633

32A

cable gland

214.3230

214.3233

214.1636

214.3236

214.1637

214.3237



IP44



ANGLED
OUTLET

16A

cable sleeve

221.1630

221.1633

221.1636

221.1637

32A

cable sleeve

221.3230

221.3233

221.3236

221.3237



(Δ) Black-coloured

Versions also available in black; just add ".K" at the end of the catalogue number.
Example 213.1633.K



(Δ) Transparent grip

Version also available with transparent grip; just add ".TR" at the end of the catalogue number.
Example 213.1633.TR

Industrial plugs and sockets

PLUGS



IP66/IP67/IP69



IP66/IP67/IP69

Poles	Hz.	Volt	Colour	h.	IP66/IP67/IP69		IP66/IP67/IP69	
					16A	32A	63A	125A
					cable gland	cable gland	cable gland	cable gland
2P+E	50/60	100-130		4	218.1630 (Δ)	218.3230	218.6330	218.12530
	50/60	200-250		6	218.1633 (Δ)(Δ)	218.3233 (Δ)	218.6333 (Δ)	218.12533 (Δ)
	50/60	380-415		9	218.1638	218.3238	218.6338	218.12538
	50/60	480-500		7	218.16336	218.32336	218.63336	218.125336
	50/60	trasf.		12	218.16333	218.32333	218.63333	218.125333
	>300-500	>50		2	218.16332	218.32332	218.63332	218.125332
	c.c.	>50-250		3	218.16334	218.32334	218.63334	218.125334
	c.c.	>250		8	218.16338	218.32338	218.63338	218.125338
3P+E	50/60	100-130		4	218.1631	218.3231	218.6331	218.12531
	50/60	200-250		9	218.1634	218.3234	218.6334	218.12534
	50/60	380-415		6	218.1636 (Δ)(●)	218.3236 (Δ)(●)	218.6336 (Δ)	218.12536 (Δ)
	60	440-460		11	218.16365	218.32365	218.63365	218.125365
	50/60	480-500		7	218.16366	218.32366	218.63366	218.125366
	50/60	600-690		5	218.16367	218.32367	218.63367	218.125367
	50 60	380 440		3	218.16364	218.32364	218.63364	218.125364
	100-300	>50		10	218.16361	218.32361	218.63361	218.125361
>300-500	>50		2	218.16362	218.32362	218.63362	218.125362	
3P+N+E	50/60	100-130		4	218.1632	218.3232	218.6332	218.12532
	50/60	208-250		9	218.1635	218.3235	218.6335	218.12535
	50/60	346-415		6	218.1637 (Δ)(●)	218.3237 (Δ)(●)	218.6337 (Δ)	218.12537 (Δ)
	50/60	480-500		7	218.16376	218.32376	218.63376	218.125376
	50/60	600-690		5	218.16377	218.32377	218.63377	218.125377
	60	440-460		11	218.16375	218.32375	218.63375	218.125375
	50 60	380 440		3	218.16374	218.32374	218.63374	218.125374
	>300-500	>50		2	218.16372	218.32372	218.63372	218.125372

= Screw terminals

= Spring terminals (fast wiring)

= Insulation perforating terminals (fast wiring)

= Mantle terminals



(●) Phase inverter
Plugs and flush mounting appliance inlets with phase inverter, page 29

OPTIMA Series

EUREKA Series



FAST WIRING

IP66/IP67

16A	32A
cable gland	cable gland
218.1630P (Δ)	218.3230F
218.1633P (Δ)(Δ)	218.3233F (Δ)
218.1638P	218.3238F
218.1634P	218.3234F
218.1636P (Δ)	218.3236F (Δ)
	218.32364F
218.1637P (Δ)	218.3237F (Δ)

ANGLED OUTLET	
16A	32A
cable gland	cable gland
226.1630	226.3230
226.1633	226.3233
226.1636	226.3236
226.16367	226.32364
226.1637	226.3237



(Δ) Black-coloured
 Versions also available in black; just add ".K" at the end of the catalogue number.
 Example 218.1633.K



(Δ) Transparent grip
 Version also available with transparent grip; just add ".TR" at the end of the catalogue number.
 Example 218.1633.TR

Industrial plugs and sockets

FLUSH MOUNTING APPLIANCE INLETS

OPTIMA Series



IP44/IP54

IP44/IP54



Poles	Hz.	Volt	Colour	h.	IP44/IP54		
					16A 75x75	32A 75x75	
2P+E	50/60	100-130		4	243.1690	243.3290	243.6390
	50/60	200-250		6	243.1693 (▲)	243.3293 (▲)	243.6393
	50/60	380-415		9	243.1698	243.3298	243.6398
	50/60	480-500		7			243.63936
	50/60	trasf.		12			243.63933
	>300-500	>50		2			243.63932
	c.c.	>50-250		3			243.63934
	c.c.	>250		8			243.63938
3P+E	50/60	100-130		4	243.1691	243.3291	243.6391
	50/60	200-250		9	243.1694	243.3294	243.6394
	50/60	380-415		6	243.1696 (▲)(●)	243.3296 (▲)(●)	243.6396
	60	440-460		11	243.16965	243.32965	243.63965
	50/60	480-500		7			243.63966
	50/60	600-690		5			243.63967
	50 60	380 440		3	243.16964	243.32964	243.63964
	100-300	>50		10			243.63961
>300-500	>50		2			243.63962	
3P+N+E	50/60	100-130		4	243.1692	243.3292	243.6392
	50/60	208-250		9	243.1695	243.3295	243.6395
	50/60	346-415		6	243.1697 (▲)(●)	243.3297 (▲)(●)	243.6397
	50/60	480-500		7			243.63976
	50/60	600-690		5			243.63977
	60	440-460		11	243.16975	243.32975	243.63975
	50 60	380 440		3	243.16974	243.32974	243.63974
	>300-500	>50		2			243.63972

= Screw terminals

= Mantle terminals

EUREKA Series



IP44

90° ANGLED


16A
32A

70x87

70x87

242.1690

242.3290

242.1693

242.3293

242.1698

242.3298

242.16936

242.32936

242.16933

242.32933

242.16932

242.32932

242.16934

242.32934

242.16938

242.32938

242.1691

242.3291

242.1694

242.3294

242.1696

242.3296

242.16965

242.32965

242.16966

242.32966

242.16967

242.32967

242.16964

242.32964

242.16961

242.32961

242.16962

242.32962

242.1692

242.3292

242.1695

242.3295

242.1697

242.3297

242.16976

242.32976

242.16977

242.32977

242.16975

242.32975

242.16974

242.32974

242.16972

242.32972

OPTIMA Series



IP66/IP67/IP69


16A
32A

75x75

75x75

248.1690

248.3290

248.1693 (▲)

248.3293 (▲)

248.1698

248.3298

248.16936

248.32936

248.16933

248.32933

248.16932

248.32932

248.16934

248.32934

248.16938

248.32938

248.1691

248.3291

248.1694

248.3294

248.1696 (▲)(●)

248.3296 (▲)(●)

248.16965

248.32965

248.16966

248.32966

248.16967

248.32967

248.16964

248.32964

248.16961

248.32961

248.16962

248.32962

248.1692

248.3292

248.1695

248.3295

248.1697 (▲)(●)

248.3297 (▲)(●)

248.16976

248.32976

248.16977

248.32977

248.16975

248.32975

248.16974

248.32974

248.16972

248.32972

IP66/IP67/IP69


63A
125A

100x110

114x114

248.6390

248.12590

248.6393

248.12593

248.6398

248.12598

248.63936

248.125936

248.63933

248.125933

248.63932

248.125932

248.63934

248.125934

248.63938

248.125938

248.6391

248.12591

248.6394

248.12594

248.6396

248.12596

248.63965

248.125965

248.63966

248.125966

248.63967

248.125967

248.63964

248.125964

248.63961

248.125961

248.63962

248.125962

248.6392

248.12592

248.6395

248.12595

248.6397 (▲)

248.12597 (▲)

248.63976

248.125976

248.63977

248.125977

248.63975

248.125975

248.63974

248.125974

248.63972

248.125972

EUREKA Series



IP66/IP67

90° ANGLED


16A
32A

70x87

70x87

247.1690

247.3290

247.1693

247.3293

247.1698

247.3298

247.16936

247.32936

247.16933

247.32933

247.16932

247.32932

247.16934

247.32934

247.16938

247.32938

247.1691

247.3291

247.1694

247.3294

247.1696

247.3296

247.16965

247.32965

247.16966

247.32966

247.16967

247.32967

247.16964

247.32964

247.16961

247.32961

247.16962

247.32962

247.1692

247.3292

247.1695

247.3295

247.1697

247.3297

247.16976

247.32976

247.16977

247.32977

247.16975

247.32975

247.16974

247.32974

247.16972

247.32972


(●) Phase inverter

 Plugs and flush mounting
appliance inlets with phase
inverter, page 29

(▲) Black-coloured

 Versions also available in black;
just add ".K" at the end of the catalogue
number. Example 243.1693.K

Industrial plugs and sockets

■ SURFACE MOUNTING APPLIANCE INLETS

OPTIMA Series

OPTIMA-TOP Series
























IP44/IP54

METRIC ENTRY 



IP44/IP54

METRIC ENTRY 

Poles	Hz.	Volt	Colour	h.	OPTIMA Series		OPTIMA-TOP Series
					16A M25	32A M32	63A M40
2P+E	50/60	100-130		4	240.1690	240.3290	240.6390T
	50/60	200-250		6	240.1693	240.3293	240.6393T
	50/60	380-415		9	240.1698	240.3298	240.6398T
	50/60	480-500		7			240.63936T
	50/60	trasf.		12			240.63933T
	>300-500	>50		2			240.63932T
	c.c.	>50-250		3			240.63934T
	c.c.	>250		8			240.63938T
3P+E	50/60	100-130		4	240.1691	240.3291	240.6391T
	50/60	200-250		9	240.1694	240.3294	240.6394T
	50/60	380-415		6	240.1696	240.3296	240.6396T
	60	440-460		11	240.16965	240.32965	240.63965T
	50/60	480-500		7			240.63966T
	50/60	600-690		5			240.63967T
	50 60	380 440		3	240.16964	240.32964	240.63964T
	100-300	>50		10			240.63961T
>300-500	>50		2			240.63962T	
3P+N+E	50/60	100-130		4	240.1692	240.3292	240.6392T
	50/60	208-250		9	240.1695	240.3295	240.6395T
	50/60	346-415		6	240.1697	240.3297	240.6397T
	50/60	480-500		7			240.63976T
	50/60	600-690		5			240.63977T
	60	440-460		11	240.16975	240.32975	240.63975T
	50 60	380 440		3	240.16974	240.32974	240.63974T
	>300-500	>50		2			240.63972T

 = Screw terminals

 = Mantle terminals

OPTIMA Series: open threaded cable entry on top side.
IP44 Cable sleeve provided.

OPTIMA-TOP Series: open threaded cable entry/reversible base.
Cable gland provided.

OPTIMA Series



IP66/IP67/IP69

METRIC ENTRY



16A

32A

M25

M32

245.1690

245.3290

245.1693

245.3293

245.1698

245.3298

245.16936

245.32936

245.16933

245.32933

245.16932

245.32932

245.16934

245.32934

245.16938

245.32938

245.1691

245.3291

245.1694

245.3294

245.1696

245.3296

245.16965

245.32965

245.16966

245.32966

245.16967

245.32967

245.16964

245.32964

245.16961

245.32961

245.16962

245.32962

245.1692

245.3292

245.1695

245.3295

245.1697

245.3297

245.16976

245.32976

245.16977

245.32977

245.16975

245.32975

245.16974

245.32974

245.16972

245.32972

OPTIMA-TOP Series



IP66/IP67/IP69

METRIC ENTRY



63A

125A

M40

M63

245.6390T

245.12590T

245.6393T

245.12593T

245.6398T

245.12598T

245.63936T

245.125936T

245.63933T

245.125933T

245.63932T

245.125932T

245.63934T

245.125934T

245.63938T

245.125938T

245.6391T

245.12591T

245.6394T

245.12594T

245.6396T

245.12596T

245.63965T

245.125965T

245.63966T

245.125966T

245.63967T

245.125967T

245.63964T

245.125964T

245.63961T

245.125961T

245.63962T

245.125962T

245.6392T

245.12592T

245.6395T

245.12595T

245.6397T

245.12597T

245.63976T

245.125976T

245.63977T

245.125977T

245.63975T

245.125975T

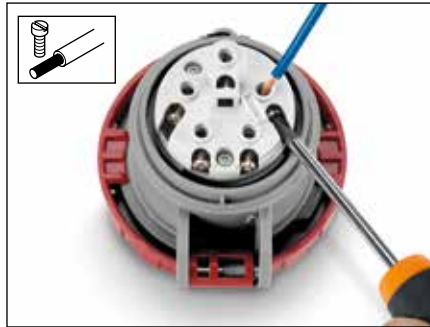
245.63974T

245.125974T

245.63972T

245.125972T

SCREW TERMINALS - CONVENTIONAL WIRING



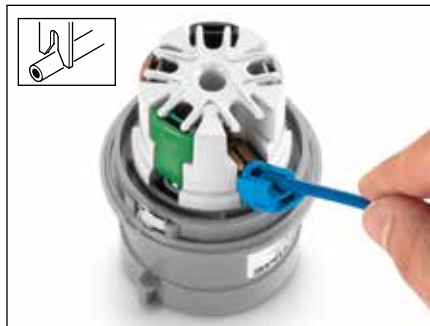
Versions: 16A-32A
Plugs and connectors
16A-32A
Flush mounting plugs
and sockets – 16-32A
TOP version surface
mounting sockets.

SPRING TERMINALS - FAST WIRING



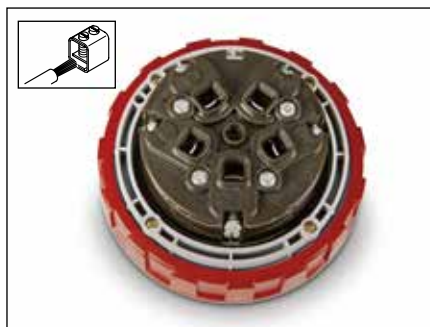
Versions: 32A
Plugs and connectors - 32A
Flush mounting
sockets – 16-32A
TOP version surface
mounting sockets.

INSULATION PERFORATING TERMINALS - FAST WIRING



Versions: 16A
Plugs and connectors.

MANTLE TERMINALS



Versions: 63 - 125A
Plugs and connectors.

Industrial plugs and sockets

CONNECTORS



IP44/IP54

SAFE-IN

Poles	Hz.	Volt	Colour	h.	IP44/IP54		SAFE-IN
					16A cable gland	32A cable gland	16A cable gland
2P+E	50/60	100-130		4	313.1640 (Δ)	313.3240	313.1640H
	50/60	200-250		6	313.1643 (Δ) (Δ)	313.3243 (Δ)	313.1643H (Δ)
	50/60	380-415		9	313.1648	313.3248	313.1648H
	50/60	480-500		7	313.16436	313.32436	
	50/60	trasf.		12	313.16433	313.32433	
	>300-500	>50		2	313.16432	313.32432	
	c.c.	>50-250		3	313.16434	313.32434	
	c.c.	>250		8	313.16438	313.32438	
3P+E	50/60	100-130		4	313.1641	313.3241	
	50/60	200-250		9	313.1644	313.3244	313.1644H
	50/60	380-415		6	313.1646 (Δ)	313.3246 (Δ)	313.1646H (Δ)
	60	440-460		11	313.16465	313.32465	
	50/60	480-500		7	313.16466	313.32466	
	50/60	600-690		5	313.16467	313.32467	
	50 60	380 440		3	313.16464	313.32464	
	100-300	>50		10	313.16461	313.32461	
>300-500	>50		2	313.16462	313.32462		
3P+N+E	50/60	100-130		4	313.1642	313.3242	
	50/60	208-250		9	313.1645 (Δ)	313.3245 (Δ)	
	50/60	346-415		6	313.1647 (Δ)	313.3247 (Δ)	313.1647H (Δ)
	50/60	480-500		7	313.16476	313.32476	
	50/60	600-690		5	313.16477	313.32477	
	60	440-460		11	313.16475	313.32475	
	50 60	380 440		3	313.16474	313.32474	
	>300-500	>50		2	313.16472	313.32472	

= Screw terminals

= Spring terminals (fast wiring)

= Insulation perforating terminals (fast wiring)

= Mantle terminals

Industrial plugs and sockets

CONNECTORS



IP66/IP67/IP69



IP66/IP67/IP69

Poles	Hz.	Volt	Colour	h.	IP66/IP67/IP69		IP66/IP67/IP69	
					16A	32A	63A	125A
					cable gland	cable gland	cable gland	cable gland
2P+E	50/60	100-130		4	318.1640 (Δ)	318.3240	318.6340	318.12540
	50/60	200-250		6	318.1643 (Δ) (Δ)	318.3243 (Δ)	318.6343 (Δ)	318.12543 (Δ)
	50/60	380-415		9	318.1648	318.3248	318.6348	318.12548
	50/60	480-500		7	318.16436	318.32436	318.63436	318.125436
	50/60	trasf.		12	318.16433	318.32433	318.63433	318.125433
	>300-500	>50		2	318.16432	318.32432	318.63432	318.125432
	c.c.	>50-250		3	318.16434	318.32434	318.63434	318.125434
	c.c.	>250		8	318.16438	318.32438	318.63438	318.125438
3P+E	50/60	100-130		4	318.1641	318.3241	318.6341	318.12541
	50/60	200-250		9	318.1644	318.3244	318.6344	318.12544
	50/60	380-415		6	318.1646 (Δ)	318.3246 (Δ)	318.6346 (Δ)	318.12546 (Δ)
	60	440-460		11	318.16465	318.32465	318.63465	318.125465
	50/60	480-500		7	318.16466	318.32466	318.63466	318.125466
	50/60	600-690		5	318.16467	318.32467	318.63467	318.125467
	50 60	380 440		3	318.16464	318.32464	318.63464	318.125464
	100-300	>50		10	318.16461	318.32461	318.63461	318.125461
>300-500	>50		2	318.16462	318.32462	318.63462	318.125462	
3P+N+E	50/60	100-130		4	318.1642	318.3242	318.6342	318.12542
	50/60	208-250		9	318.1645	318.3245	318.6345	318.12545
	50/60	346-415		6	318.1647 (Δ)	318.3247 (Δ)	318.6347 (Δ)	318.12547 (Δ)
	50/60	480-500		7	318.16476	318.32476	318.63476	318.125476
	50/60	600-690		5	318.16477	318.32477	318.63477	318.125477
	60	440-460		11	318.16475	318.32475	318.63475	318.125475
	50 60	380 440		3	318.16474	318.32474	318.63474	318.125474
	>300-500	>50		2	318.16472	318.32472	318.63472	318.125472

= Screw terminals

= Spring terminals (fast wiring)

= Insulation perforating terminals (fast wiring)

= Mantle terminals

OPTIMA Series

EUREKA Series



SAFE-IN	FAST WIRING	
16A cable gland	16A cable gland	32A cable gland
318.1640H	318.1640P (Δ)	318.3240F
318.1643H (▲)	318.1643P (▲) (Δ)	318.3243F (▲)
318.1648H	318.1648P	318.3248F
318.1644H	318.1644P	318.3244F
318.1646H (▲)	318.1646P (▲)	318.3246F (▲)
		318.32464F
318.1647H (▲)	318.1647P (▲)	318.3247F (▲)

IP66/IP67	
16A cable gland	32A cable gland
326.1640	326.3240
326.1643	326.3243
326.1646	326.3246
	326.32464
326.1647	326.3247



(▲) Black-coloured
Versions also available in black;
just add ".K" at the end of the catalogue number.
Example 318.1643.K



(Δ) Transparent grip
Version also available with transparent grip;
just add ".TR" at the end of the catalogue number.
Example 318.1643.TR

Industrial plugs and sockets

FLUSH MOUNTING SOCKET OUTLETS



Poles	Hz.	Volt	Colour	h.	IP44/IP54		SAFE-IN	FAST WIRING	
					ANGLED OUTLET STANDARD FLANGE				
					16A 70x87	32A 84x106	16A 70x87	16A 70x87	32A 84x106
2P+E	50/60	100-130		4	413.1660	413.3260	413.1660H	413.1660F	413.3260F
	50/60	200-250		6	413.1663 (▲)	413.3263 (▲)	413.1663H (▲)	413.1663F (▲)	413.3263F (▲)
	50/60	380-415		9	413.1668	413.3268	413.1668H	413.1668F	413.3268F
	50/60	480-500		7	413.16636	413.32636			
	50/60	trasf.		12	413.16633	413.32633			
	>300-500	>50		2	413.16632	413.32632			
	c.c.	>50-250		3	413.16634	413.32634			
	c.c.	>250		8	413.16638	413.32638			
3P+E	50/60	100-130		4	413.1661	413.3261			
	50/60	200-250		9	413.1664	413.3264	413.1664H	413.1664F	413.3264F
	50/60	380-415		6	413.1666 (▲)	413.3266 (▲)	413.1666H (▲)	413.1666F (▲)	413.3266F (▲)
	60	440-460		11	413.16665	413.32665			
	50/60	480-500		7	413.16666	413.32666			
	50/60	600-690		5	413.16667	413.32667			
	50 60	380 440		3	413.16664	413.32664			
	100-300	>50		10	413.16661	413.32661			
>300-500	>50		2	413.16662	413.32662				
3P+N+E	50/60	100-130		4	413.1662	413.3262			
	50/60	208-250		9	413.1665	413.3265			
	50/60	346-415		6	413.1667 (▲)	413.3267 (▲)	413.1667H (▲)	413.1667F (▲)	413.3267F (▲)
	50/60	480-500		7	413.16676	413.32676			
	50/60	600-690		5	413.16677	413.32677			
	60	440-460		11	413.16675	413.32675			
	50 60	380 440		3	413.16674	413.32674			
	>300-500	>50		2	413.16672	413.32672			

= Screw terminals

= Spring terminals (fast wiring)

= Mantle terminals



(▲) Black-coloured

Version also available in black; just add ".K" at the end of the catalogue number.
Example 413.1663.K

OPTIMA Series

EUREKA Series



IP44/IP54

IP44/IP54

IP44/IP54

IP44

STRAIGHT OUTLET

ANGLED OUTLET
STANDARD FLANGE

STRAIGHT OUTLET
STANDARD FLANGE

90° ANGLED

STRAIGHT OUTLET				ANGLED OUTLET STANDARD FLANGE	STRAIGHT OUTLET STANDARD FLANGE	90° ANGLED	
16A	16A	16A	32A	63A	63A	16A	32A
75x75	62x62	55x55	75x75	100x110	100x110	70x87	70x87
423.1660	423.1660/R	423.1660/RR	423.3260	413.6360	423.6360	452.1660	452.3260
423.1663	423.1663/R	423.1663/RR	423.3263	413.6363	423.6363	452.1663	452.3263
423.1668	423.1668/R	423.1668/RR	423.3268	413.6368	423.6368	452.1668	452.3268
423.16636			423.32636	413.63636	423.63636	452.16636	452.32636
423.16633			423.32633	413.63633	423.63633	452.16633	452.32633
423.16632			423.32632	413.63632	423.63632	452.16632	452.32632
423.16634			423.32634	413.63634	423.63634	452.16634	452.32634
423.16638			423.32638	413.63638	423.63638	452.16638	452.32638
423.1661	423.1661/R		423.3261	413.6361	423.6361	452.1661	452.3261
423.1664	423.1664/R		423.3264	413.6364	423.6364	452.1664	452.3264
423.1666	423.1666/R		423.3266	413.6366	423.6366	452.1666	452.3266
423.16665			423.32665	413.63665	423.63665	452.16665	452.32665
423.16666			423.32666	413.63666	423.63666	452.16666	452.32666
423.16667			423.32667	413.63667	423.63667	452.16667	452.32667
423.16664			423.32664	413.63664	423.63664	452.16664	452.32664
423.16661			423.32661	413.63661	423.63661	452.16661	452.32661
423.16662			423.32662	413.63662	423.63662	452.16662	452.32662
423.1662			423.3262	413.6362	423.6362	452.1662	452.3262
423.1665			423.3265	413.6365	423.6365	452.1665	452.3265
423.1667			423.3267	413.6367	423.6367	452.1667	452.3267
423.16676			423.32676	413.63676	423.63676	452.16676	452.32676
423.16677			423.32677	413.63677	423.63677	452.16677	452.32677
423.16675			423.32675	413.63675	423.63675	452.16675	452.32675
423.16674			423.32674	413.63674	423.63674	452.16674	452.32674
423.16672			423.32672	413.63672	423.63672	452.16672	452.32672



Accessories

Empty boxes for creating surface mounting versions, page 31



Auxiliary contact

For flush mounting sockets angled outlet.

Industrial plugs and sockets

FLUSH MOUNTING SOCKET OUTLETS



Poles	Hz.	Volt	Colour	h.	IP66/IP67/IP69		SAFE-IN	FAST WIRING	
					ANGLED OUTLET STANDARD FLANGE				
					16A	32A	16A	16A	32A
					70x87	84x106	70x87	70x87	84x106
2P+E	50/60	100-130		4	418.1660	418.3260	418.1660H	418.1660F	418.3260F
	50/60	200-250		6	418.1663 (▲)	418.3263 (▲)	418.1663H (▲)	418.1663F (▲)	418.3263F (▲)
	50/60	380-415		9	418.1668	418.3268	418.1668H	418.1668F	418.3268F
	50/60	480-500		7	418.16636	418.32636			
	50/60	trasf.		12	418.16633	418.32633			
	>300-500	>50		2	418.16632	418.32632			
	c.c.	>50-250		3	418.16634	418.32634			
	c.c.	>250		8	418.16638	418.32638			
3P+E	50/60	100-130		4	418.1661	418.3261			
	50/60	200-250		9	418.1664	418.3264	418.1664H	418.1664F	418.3264F
	50/60	380-415		6	418.1666 (▲)	418.3266 (▲)	418.1666H (▲)	418.1666F (▲)	418.3266F (▲)
	60	440-460		11	418.16665	418.32665			
	50/60	480-500		7	418.16666	418.32666			
	50/60	600-690		5	418.16667	418.32667			
	50 60	380 440		3	418.16664	418.32664			
	100-300	>50		10	418.16661	418.32661			
>300-500	>50		2	418.16662	418.32662				
3P+N+E	50/60	100-130		4	418.1662	418.3262			
	50/60	208-250		9	418.1665	418.3265			
	50/60	346-415		6	418.1667 (▲)	418.3267 (▲)	418.1667H (▲)	418.1667F (▲)	418.3267F (▲)
	50/60	480-500		7	418.16676	418.32676			
	50/60	600-690		5	418.16677	418.32677			
	60	440-460		11	418.16675	418.32675			
	50 60	380 440		3	418.16674	418.32674			
	>300-500	>50		2	418.16672	418.32672			

= Screw terminals

= Spring terminals (fast wiring)

= Mantle terminals



(▲) Black-coloured

Version also available in black; just add ".K" at the end of the catalogue number. Example 418.1663.K

OPTIMA Series

EUREKA Series



IP66/IP67/IP69

STRAIGHT OUTLET



IP66/IP67/IP69

ANGLED OUTLET
STANDARD FLANGE



IP66/IP67/IP69

STRAIGHT OUTLET
STANDARD FLANGE



IP66/IP67

90° ANGLED



STRAIGHT OUTLET				ANGLED OUTLET STANDARD FLANGE		STRAIGHT OUTLET STANDARD FLANGE		90° ANGLED	
16A	16A	16A	32A	63A	125A	63A	125A	16A	32A
75x75	62x62	55x55	75x75	100x110	114x114	100x110	114x114	70x87	70x87
428.1660	428.1660/R	428.1660/RR	428.3260	418.6360	418.12560	428.6360	428.12560	457.1660	457.3260
428.1663	428.1663/R	428.1663/RR	428.3263	418.6363	418.12563	428.6363	428.12563	457.1663	457.3263
428.1668	428.1668/R	428.1668/RR	428.3268	418.6368	418.12568	428.6368	428.12568	457.1668	457.3268
428.16636			428.32636	418.63636	418.125636	428.63636	428.125636	457.16636	457.32636
428.16633			428.32633	418.63633	418.125633	428.63633	428.125633	457.16633	457.32633
428.16632			428.32632	418.63632	418.125632	428.63632	428.125632	457.16632	457.32632
428.16634			428.32634	418.63634	418.125634	428.63634	428.125634	457.16634	457.32634
428.16638			428.32638	418.63638	418.125638	428.63638	428.125638	457.16638	457.32638
428.1661	428.1661/R		428.3261	418.6361	418.12561	428.6361	428.12561	457.1661	457.3261
428.1664	428.1664/R		428.3264	418.6364	418.12564	428.6364	428.12564	457.1664	457.3264
428.1666	428.1666/R		428.3266	418.6366	418.12566	428.6366	428.12566	457.1666	457.3266
428.16665			428.32665	418.63665	418.125665	428.63665	428.125665	457.16665	457.32665
428.16666			428.32666	418.63666	418.125666	428.63666	428.125666	457.16666	457.32666
428.16667			428.32667	418.63667	418.125667	428.63667	428.125667	457.16667	457.32667
428.16664			428.32664	418.63664	418.125664	428.63664	428.125664	457.16664	457.32664
428.16661			428.32661	418.63661	418.125661	428.63661	428.125661	457.16661	457.32661
428.16662			428.32662	418.63662	418.125662	428.63662	428.125662	457.16662	457.32662
428.1662			428.3262	418.6362	418.12562	428.6362	428.12562	457.1662	457.3262
428.1665			428.3265	418.6365	418.12565	428.6365	428.12565	457.1665	457.3265
428.1667			428.3267	418.6367 (A)	418.12567	428.6367	428.12567	457.1667	457.3267
428.16676			428.32676	418.63676	418.125676	428.63676	428.125676	457.16676	457.32676
428.16677			428.32677	418.63677	418.125677	428.63677	428.125677	457.16677	457.32677
428.16675			428.32675	418.63675	418.125675	428.63675	428.125675	457.16675	457.32675
428.16674			428.32674	418.63674	418.125674	428.63674	428.125674	457.16674	457.32674
428.16672			428.32672	418.63672	418.125672	428.63672	428.125672	457.16672	457.32672



Accessories

Empty boxes for creating surface mounting versions, page 31



Auxiliary contact

For flush mounting sockets angled outlet.

Industrial plugs and sockets

■ SURFACE MOUNTING SOCKET OUTLETS

OPTIMA-TOP Series



Poles	Hz.	Volt	Colour	h.	IP44		SAFE-IN	FAST WIRING	
					16A	32A	16A	16A	32A
					M20/M25	M32	M20/M25	M20/M25	M32
2P+E	50/60	100-130		4	513.1650T (◇)	513.3250T	513.1650TH (◇)	513.1650TF (◇)	513.3250TF
	50/60	200-250		6	513.1653T (◇)	513.3253T	513.1653TH (◇)	513.1653TF (◇)	513.3253TF
	50/60	380-415		9	513.1658T (◇)	513.3258T	513.1658TH (◇)	513.1658TF (◇)	513.3258TF
	50/60	480-500		7	513.16536T (◇)	513.32536T			
	50/60	trasf.		12	513.16533T (◇)	513.32533T			
	>300-500	>50		2	513.16532T (◇)	513.32532T			
	c.c.	>50-250		3	513.16534T (◇)	513.32534T			
	c.c.	>250		8	513.16538T (◇)	513.32538T			
3P+E	50/60	100-130		4	513.1651T	513.3251T			
	50/60	200-250		9	513.1654T	513.3254T	513.1654TH	513.1654TF	513.3254TF
	50/60	380-415		6	513.1656T	513.3256T	513.1656TH	513.1656TF	513.3256TF
	60	440-460		11	513.16565T	513.32565T			
	50/60	480-500		7	513.16566T	513.32566T			
	50/60	600-690		5	513.16567T	513.32567T			
	50 60	380 440		3	513.16564T	513.32564T			
	100-300	>50		10	513.16561T	513.32561T			
>300-500	>50		2	513.16562T	513.32562T				
3P+N+E	50/60	100-130		4	513.1652T	513.3252T			
	50/60	208-250		9	513.1655T	513.3255T			
	50/60	346-415		6	513.1657T	513.3257T	513.1657TH	513.1657TF	513.3257TF
	50/60	480-500		7	513.16576T	513.32576T			
	50/60	600-690		5	513.16577T	513.32577T			
	60	440-460		11	513.16575T	513.32575T			
	50 60	380 440		3	513.16574T	513.32574T			
	>300-500	>50		2	513.16572T	513.32572T			



= Screw terminals



= Spring terminals (fast wiring)

(◇) = 2P+E 16A only M20

OPTIMA-TOP Series: 2+1 blind threaded knockout/reversible base.

OPTIMA-BASE Series: open threaded cable entry on top side.

IP44 version: cable sleeve provided.

Industrial plugs and sockets

■ SURFACE MOUNTING SOCKET OUTLETS



IP44/IP54

IP44/IP54

STRAIGHT BOX 

ANGLED BOX 

16A

32A

16A






32A

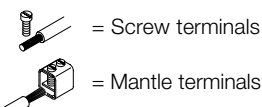
Drilling point
mark

Drilling point
mark

M20/M25

M32

Poles	Hz.	Volt	Colour	h.	Drilling point mark	Drilling point mark	M20/M25	M32
2P+E	50/60	100-130		4	522.1650	522.3250	512.1650	512.3250
	50/60	200-250		6	522.1653	522.3253	512.1653	512.3253
	50/60	380-415		9	522.1658	522.3258	512.1658	512.3258
	50/60	480-500		7				
	50/60	trasf.		12				
	>300-500	>50		2				
	c.c.	>50-250		3				
	c.c.	>250		8				
3P+E	50/60	100-130		4	522.1651	522.3251	512.1651	512.3251
	50/60	200-250		9	522.1654	522.3254	512.1654	512.3254
	50/60	380-415		6	522.1656	522.3256	512.1656	512.3256
	60	440-460		11				
	50/60	480-500		7				
	50/60	600-690		5				
	50 60	380 440		3				
	100-300	>50		10				
>300-500	>50		2					
3P+N+E	50/60	100-130		4	522.1652	522.3252	512.1652	512.3252
	50/60	208-250		9	522.1655	522.3255	512.1655	512.3255
	50/60	346-415		6	522.1657	522.3257	512.1657	512.3257
	50/60	480-500		7				
	50/60	600-690		5				
	60	440-460		11				
	50 60	380 440		3				
>300-500	>50		2					



OPTIMA Series IP44/IP54: cable sleeve provided.

OPTIMA-TOP Series: open threaded cable entry/reversible base.
Cable gland provided.







ANGLED BOX: open threaded cable entry on top side.

STRAIGHT BOX: blank side and drilling point mark.

Industrial plugs and sockets






■ SURFACE MOUNTING SOCKET OUTLETS

IP44/IP54

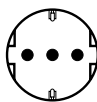

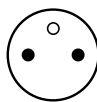



Industrial socket	Poles	Volt	Colour	h.	Cable Inlet		
16A	2P+E	200-250		6	M32x1,5	513.1653-PN	513.1653-BN
	3P+E	380-415		6	M32x1,5	513.1656-PN	513.1656-BN
	3P+N+E	346-415		6	M32x1,5	513.1657-PN	513.1657-BN
	3P+N+E	346-415		6	M32x1,5		

- (*) BS standard sockets provided with 10A fuse protection.
 - Available in further domestic sockets standard (contact technical service).
 (▲) Household Swiss socket 3P+N+E.
 - Solution already wired up to the power supply terminal board.
 - Open threaded cable entry on top side.
 - Cable sleeve provided.

IP44/IP54

Industrial socket	Poles	Volt	Colour	h.	Cable Inlet		
32A	2P+E	200-250		6	M32x1,5	513.3253-PF	513.3253-BF
	3P+E	380-415		6	M32x1,5	513.3256-PF	513.3256-BF
	3P+N+E	346-415		6	M32x1,5	513.3257-PF	513.3257-BF








- Household socket protected by 10A fuse (time-delay).
 - Available in further domestic sockets standard (contact technical service).
 - Solution already wired up to the power supply terminal board.
 - Open threaded cable entry on top side.
 - Cable sleeve provided.

ITALIAN STANDARD P30 - 16A	BRITISH STANDARD 13A	FRENCH STANDARD 16A	PLURISTANDARD STANDARD P40-16A	BRAZILIAN-SWISS STANDARD 10A	DANISH STANDARD 10A
					


 = Screw terminals










WITHOUT PROTECTION 

						
513.1653-FN	513.1653-LN	513.1653-CF	513.1653-KN	513.1653-DN	513.1653-SN	513.1653-AF
513.1656-FN	513.1656-LN	513.1656-CF	513.1656-KN	513.1656-DN	513.1656-SN	513.1656-AF
513.1657-FN	513.1657-LN	513.1657-CF	513.1657-KN	513.1657-DN	513.1657-SN	513.1657-AF
					513.1657-S5N (▲)	



WITH FUSE PROTECTION 

						
513.3253-FF	513.3253-LF	513.3253-CF	513.3253-KF	513.3253-DF	513.3253-SF	513.3253-AF
513.3256-FF	513.3256-LF	513.3256-CF	513.3256-KF	513.3256-DF	513.3256-SF	513.3256-AF
513.3257-FF	513.3257-LF	513.3257-CF	513.3257-KF	513.3257-DF	513.3257-SF	513.3257-AF

ARGENTINIAN
STANDARD
10A



GERMAN
STANDARD
16A



Industrial plugs and sockets

■ SURFACE MOUNTING SWITCHED SOCKETS 0/I

OPTIMA-COMBI Series



IP44/IP54



Industrial socket	Poles	Volt	Colour	h.	Cable Inlet	
16A	2P+E	200-250		6	M25	513.1653TS
	3P+E	380-415		6	M25	513.1656TS
	3P+N+E	346-415		6	M25	513.1657TS
32A	2P+E	200-250		6	M25	513.3253TS.A
	2P+E	200-250		6	M32	513.3253TS
	3P+E	380-415		6	M25	513.3256TS.A
	3P+E	380-415		6	M32	513.3256TS
	3P+N+E	346-415		6	M25	513.3257TS.A
	3P+N+E	346-415		6	M32	513.3257TS

- M25: 2+1 open threaded cable entry/reversible base.
- M32: 2+1 blind threaded knockout/reversible base.

- Cable sleeve provided.

■ SURFACE MOUNTING SWITCHED SOCKETS 0/I

OPTIMA-COMBI Series



IP66/IP67/IP69



Industrial socket	Poles	Volt	Colour	h.	Cable Inlet	
16A	2P+E	200-250		6	M25	518.1653TS
	3P+E	380-415		6	M25	518.1656TS
	3P+N+E	346-415		6	M25	518.1657TS
32A	2P+E	200-250		6	M25	518.3253TS.A
	2P+E	200-250		6	M32	518.3253TS
	3P+E	380-415		6	M25	518.3256TS.A
	3P+E	380-415		6	M32	518.3256TS
	3P+N+E	346-415		6	M25	518.3257TS.A
	3P+N+E	346-415		6	M32	518.3257TS

- M25: 2+1 open threaded cable entry/reversible base.
- M32: 2+1 blind threaded knock out/reversible base.

= Screw terminals

**SURFACE MOUNTING
SWITCHED SOCKETS O/I**

OPTIMA-COMBI Series



IP44/IP54

WITHOUT PROTECTION

Industrial socket	Poles	Volt	Colour	h.	Cable Inlet	Domestic sockets				
16A	2P+E	200-250		6	M32	1	513.1653-1DNS	513.1653-1FNS		
	2P+E	200-250		6	M32	2	513.1653-2DNS	513.1653-2FNS	513.1653-2AFS	
	3P+E	380-415		6	M32	1	513.1656-1DNS	513.1656-1FNS		
	3P+E	380-415		6	M32	2	513.1656-2DNS	513.1656-2FNS	513.1656-2AFS	513.1656-2KNS
	3P+N+E	346-415		6	M32	1	513.1657-1DNS	513.1657-1FNS		
	3P+N+E	346-415		6	M32	2	513.1657-2DNS	513.1657-2FNS	513.1657-2AFS	513.1657-2KNS

- Open threaded cable entry on top side.
- Cable sleeve provided.

- Available in further domestic sockets standard (contact technical service).



IP44/IP54

WITH FUSE PROTECTION

Industrial socket	Poles	Volt	Colour	h.	Cable Inlet	Domestic sockets			
32A	2P+E	200-250		6	M32	1	513.3253-1DFS	513.3253-1FFS	
	2P+E	200-250		6	M32	2	513.3253-2DFS	513.3253-2FFS	513.3253-2AFS
	3P+E	380-415		6	M32	1	513.3256-1DFS	513.3256-1FFS	
	3P+E	380-415		6	M32	2	513.3256-2DFS	513.3256-2FFS	513.3256-2AFS
	3P+N+E	346-415		6	M32	1	513.3257-1DFS	513.3257-1FFS	
	3P+N+E	346-415		6	M32	2	513.3257-2DFS	513.3257-2FFS	513.3257-2AFS

- Household socket protected by 10A fuse (time-delay).
- Open threaded cable entry on top side.

- Cable sleeve provided.

- Available in further domestic sockets standard (contact technical service).

GERMAN STANDARD 16A	FRENCH STANDARD 16A	ARGENTINIAN STANDARD 10A	DANISH STANDARD 10A

Industrial plugs and sockets

■ SURFACE MOUNTING SWITCHED SOCKETS L/O/R (WITH REVERSING SWITCH)







OPTIMA-COMBI Series



IP44/IP54

WITHOUT PROTECTION



Industrial socket	Poles	Volt	Colour	h.	Cable Inlet	Domestic sockets		
16A	3P+E	380-415		6	M32	1	513.1656-1DNR	513.1656-1FNR
	3P+E	380-415		6	M32	2	513.1656-2DNR	513.1656-2FNR
	3P+N+E	346-415		6	M32	1	513.1657-1DNR	513.1657-1FNR
	3P+N+E	346-415		6	M32	2	513.1657-2DNR	513.1657-2FNR

- Open threaded cable entry on top side.
- Cable sleeve provided.







- Available in further domestic sockets standard (contact technical service).



IP44/IP54

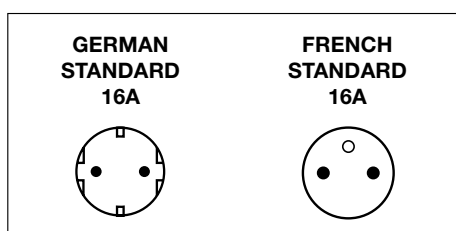
WITH FUSE PROTECTION




Industrial socket	Poles	Volt	Colour	h.	Cable Inlet	Domestic sockets		
32A	3P+E	380-415		6	M32	1	513.3256-1DFR	513.3256-1FFR
	3P+E	380-415		6	M32	2	513.3256-2DFR	513.3256-2FFR
	3P+N+E	346-415		6	M32	1	513.3257-1DFR	513.3257-1FFR
	3P+N+E	346-415		6	M32	2	513.3257-2DFR	513.3257-2FFR

- Household socket protected by 10A fuse (time-delay).
- Open threaded cable entry on top side.

- Cable sleeve provided.
- Available in further domestic sockets standard (contact technical service).



 = Screw terminals

PLUGS WITH PHASE INVERTER

OPTIMA-REVERSE Series

Poles	Hz.	Volt	Colour	h.	IP44/IP54		IP66/IP67/IP69	
					16A	32A	16A	32A
					cable gland	cable gland	cable gland	cable gland
3P+E	50/60	380-415		6	213.1636RV	213.3236RV	218.1636RV	218.3236RV
3P+N+E	50/60	346-415		6	213.1637RV	213.3237RV	218.1637RV	218.3237RV

FLUSH MOUNTING APPLIANCE INLETS WITH PHASE INVERTER

OPTIMA-REVERSE Series

Poles	Hz.	Volt	Colour	h.	IP44/IP54		IP66/IP67/IP69	
					16A	32A	16A	32A
					75x75	75x75	75x75	75x75
3P+E	50/60	380-415		6	243.1696RV	243.3296RV	248.1696RV	248.3296RV
3P+N+E	50/60	346-415		6	243.1697RV	243.3297RV	248.1697RV	248.3297RV

SURFACE MOUNTING APPLIANCE INLET WITH PHASE INVERTER

OPTIMA-REVERSE Series

Poles	Hz.	Volt	Colour	h.	IP44/IP54		IP66/IP67/IP69	
					16A	32A	16A	32A
					M25	M32	M25	M32
3P+E	50/60	380-415		6	240.1696RV	240.3296RV	245.1696RV	245.3296RV
3P+N+E	50/60	346-415		6	240.1697RV	240.3297RV	245.1697RV	245.3297RV

- Open threaded cable entry on top side.
 - IP44/IP54: cable sleeve provided.

Industrial plugs and sockets

PLUGS - HEAVY DUTY

OPTIMA-HD Series



IP66/IP67/IP69



Poles	Hz.	Volt	Colour	h.	16A		32A		63A		125A	
					cable gland	cable gland	cable gland	cable gland	cable gland	cable gland		
2P+E	50/60	200-250		6	218.1633.KX	218.3233.KX	218.6333.KX	218.12533.KX				
	50/60	380-415		6	218.1636.KX	218.3236.KX	218.6336.KX	218.12536.KX				
3P+E	50...60	380...440		3		218.32364.KX						
	60	440-460		11			218.63365.KX	218.125365.KX				
3P+N+E	50/60	346-415		6	218.1637.KX	218.3237.KX	218.6337.KX	218.12537.KX				
	50/60	208-250		9	218.1635.KX	218.3235.KX	218.6335.KX	218.12535.KX				

- Other earth clock positions (h) available on request.
- Available special versions with twisted cable entries.

CONNECTORS - HEAVY DUTY

OPTIMA-HD Series



IP66/IP67/IP69



Poles	Hz.	Volt	Colour	h.	16A		32A		63A		125A	
					cable gland	cable gland	cable gland	cable gland	cable gland	cable gland		
2P+E	50/60	200-250		6	318.1643.KX	318.3243.KX	318.6343.KX	318.12543.KX				
3P+E	50/60	380-415		6	318.1646.KX	318.3246.KX	318.6346.KX	318.12546.KX				
	50...60	380...440		3		318.32464.KX						
3P+N+E	50/60	346-415		6	318.1647.KX	318.3247.KX	318.6347.KX	318.12547.KX				

- Other earth clock positions (h) available on request.
- Available special versions with twisted cable entries.

= Screw terminals

ACCESSORIES



Description		
Plug caps 16/20A - 2P+E		570.90163
Plug caps 16/20A - 3P+E		570.90164
Plug caps 16/20A - 3P+N+E		570.90165
Plug caps 32/30A - 2P+E & 3P+E		570.90324
Plug caps 32/30A - 3P+N+E		570.90325
Plug caps 63/60A - all polarity		570.9063
Plug caps 125/100A - all polarity		570.9125
Loop in/out terminal block - 5 poles 6mm ²		654.0382
Threaded cable sleeve IP55	M20	805.5020
	M25	805.5025
	M32	805.5032
Microswitch kit 16/32 NO		654.0391 (▲)
Microswitch kit 16/32 NC		654.0392 (▲)
Microswitch kit 63/125 NO		654.0393 (▲)
Microswitch kit 63/125 NC		654.0394 (▲)
Cover for surface mounting appliance inlet 16A 2P+E / 3P+E		570.9001
Cover for surface mounting appliance inlet 16A 3P+N+E / 32A all poles		570.9002

(▲) For plug inserted detection. Suited for flush mounting angled outlet versions only.

EMPTY SURFACE MOUNTING BOXES - IP67



Description	Cable Inlet	Suitable for sockets	Flange (mm)	Cable Inlet	
Straight box	Blank side with drilling point (cable sleeve)	16A	70x87	-	570.0016
		32A	84x106	-	570.0032
Angled box	Blank side with drilling point (cable sleeve)	16A	70x87	M20/M25	570.0116
		32A	84x106	M32	570.0132
	Threaded entry (cap/cable sleeve)	16A	70x87	M20x1,5	570.0116.20
		16A	70x87	M25x1,5	570.0116.25
		32A	84x106	M32x1,5	570.0132.32
		63A	100x110	M40x1,5	570.M0163 (●)
	125A	114x114	M63x1,5	570.M0125 (●)	
	Flange adaptor 75x75mm on 84x106mm				

- Supplied with socket fastening screws.

(●) Cable gland provided.

Industrial plugs and sockets <50V

PLUGS AND CONNECTORS <50V



IP44



IP66/IP67

Poles	Hz.	Volt	Colour	h.	IP44		IP66/IP67	
					16A cable sleeve	32A cable sleeve	16A cable gland	32A cable gland
2P	50/60	20-25		-	230.1600	230.3200	235.1600	235.3200
	50/60	40-50		12	230.1601	230.3201	235.1601	235.3201
	100-200	20-25 40-50		4	230.16010	230.32010	235.16010	235.32010
	300	20-25 40-50		2	230.16012	230.32012	235.16012	235.32012
	400	20-25 40-50		3	230.16014	230.32014	235.16014	235.32014
	>400-500	20-25 40-50		11	230.16015	230.32015	235.16015	235.32015
	c.c.	20-25 40-50		10	230.1602	230.3202	235.1602	235.3202
3P	50/60	20-25		-	230.1604	230.3204	235.1604	235.3204
	50/60	40-50		12	230.1603	230.3203	235.1603	235.3203
	100-200	20-25 40-50		4	230.16030	230.32030	235.16030	235.32030
	300	20-25 40-50		2	230.16032	230.32032	235.16032	235.32032
	400	20-25 40-50		3	230.16034	230.32034	235.16034	235.32034
	>400-500	20-25 40-50		11	230.16035	230.32035	235.16035	235.32035

= Screw terminals

IEC309 Series



IP44		IP66/IP67	
16A	32A	16A	32A
cable sleeve	cable sleeve	cable gland	cable gland
330.1605	330.3205	335.1605	335.3205
330.1606	330.3206	335.1606	335.3206
330.16060	330.32060	335.16060	335.32060
330.16062	330.32062	335.16062	335.32062
330.16064	330.32064	335.16064	335.32064
330.16065	330.32065	335.16065	335.32065
330.1607	330.3207	335.1607	335.3207
330.1609	330.3209	335.1609	335.3209
330.1608	330.3208	335.1608	335.3208
330.16080	330.32080	335.16080	335.32080
330.16082	330.32082	335.16082	335.32082
330.16084	330.32084	335.16084	335.32084
330.16085	330.32085	335.16085	335.32085

Industrial plugs and sockets <50V

FLUSH MOUNTING SOCKET OUTLETS <50V



IP44

IP66/IP67

ANGLED OUTLET
STANDARD FLANGE

ANGLED OUTLET
STANDARD FLANGE



16A

32A

16A

32A

70x87

70x87

70x87

70x87



Poles	Hz.	Volt	Colour	h.	IP44		IP66/IP67	
					16A 70x87	32A 70x87	16A 70x87	32A 70x87
2P	50/60	20-25		-	430.1615	430.3215	435.1615	435.3215
	50/60	40-50		12	430.1616	430.3216	435.1616	435.3216
	100-200	20-25 40-50		4	430.16160	430.32160	435.16160	435.32160
	300	20-25 40-50		2	430.16162	430.32162	435.16162	435.32162
	400	20-25 40-50		3	430.16164	430.32164	435.16164	435.32164
	>400-500	20-25 40-50		11	430.16165	430.32165	435.16165	435.32165
	c.c.	20-25 40-50		10	430.1617	430.3217	435.1617	435.3217
3P	50/60	20-25		-	430.1619	430.3219	435.1619	435.3219
	50/60	40-50		12	430.1618	430.3218	435.1618	435.3218
	100-200	20-25 40-50		4	430.16180	430.32180	435.16180	435.32180
	300	20-25 40-50		2	430.16182	430.32182	435.16182	435.32182
	400	20-25 40-50		3	430.16184	430.32184	435.16184	435.32184
	>400-500	20-25 40-50		11	430.16185	430.32185	435.16185	435.32185



= Screw terminals

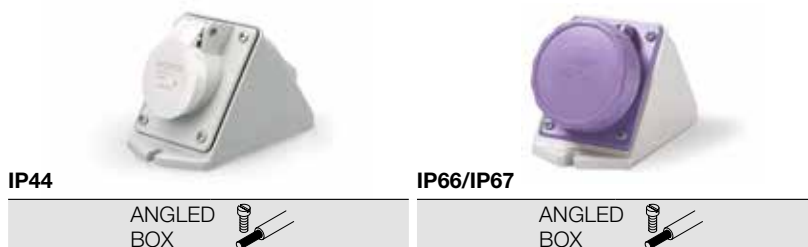
IEC309 Series



IP44		IP66/IP67	
STRAIGHT OUTLET REDUCED FLANGE		STRAIGHT OUTLET REDUCED FLANGE	
16A	32A	16A	32A
55x55	55x55	55x55	55x55
430.1615/R	430.3215/R	435.1615/R	435.3215/R
430.1616/R	430.3216/R	435.1616/R	435.3216/R
430.16160/R	430.32160/R	435.16160/R	435.32160/R
430.16162/R	430.32162/R	435.16162/R	435.32162/R
430.16164/R	430.32164/R	435.16164/R	435.32164/R
430.16165/R	430.32165/R	435.16165/R	435.32165/R
430.1617/R	430.3217/R	435.1617/R	435.3217/R
430.1619/R	430.3219/R	435.1619/R	435.3219/R
430.1618/R	430.3218/R	435.1618/R	435.3218/R
430.16180/R	430.32180/R	435.16180/R	435.32180/R
430.16182/R	430.32182/R	435.16182/R	435.32182/R
430.16184/R	430.32184/R	435.16184/R	435.32184/R
430.16185/R	430.32185/R	435.16185/R	435.32185/R

Industrial plugs and sockets <50V

■ SURFACE MOUNTING SOCKET OUTLETS <50V



Poles	Hz.	Volt	Colour	h.	IP44		IP66/IP67	
					16A M20	32A M32	16A M20	32A M32
2P	50/60	20-25		-	530.01610	530.03210	535.01610	535.03210
	50/60	40-50		12	530.01611	530.03211	535.01611	535.03211
	100-200	20-25 40-50		4	530.016110	530.032110	535.016110	535.032110
	300	20-25 40-50		2	530.016112	530.032112	535.016112	535.032112
	400	20-25 40-50		3	530.016114	530.032114	535.016114	535.032114
	>400-500	20-25 40-50		11	530.016115	530.032115	535.016115	535.032115
	c.c.	20-25 40-50		10	530.01612	530.03212	535.01612	535.03212
3P	50/60	20-25		-	530.01614	530.03214	535.01614	535.03214
	50/60	40-50		12	530.01613	530.03213	535.01613	535.03213
	100-200	20-25 40-50		4	530.016130	530.032130	535.016130	535.032130
	300	20-25 40-50		2	530.016132	530.032132	535.016132	535.032132
	400	20-25 40-50		3	530.016134	530.032134	535.016134	535.032134
	>400-500	20-25 40-50		11	530.016135	530.032135	535.016135	535.032135

- STRAIGHT BOX: blank side and drilling point mark.
- ANGLED BOX: open threaded cable entry on top side.
- IP44: cable sleeve provided.

= Screw terminals

IEC309 Series



IP44

STRAIGHT
BOX 

16A

32A

Drilling point mark

Drilling point mark

530.1610

530.3210

530.1611

530.3211

530.16110

530.32110

530.16112

530.32112

530.16114

530.32114

530.16115

530.32115

530.1612

530.3212

530.1614

530.3214

530.1613

530.3213

530.16130

530.32130

530.16132

530.32132

530.16134

530.32134

530.16135

530.32135



IP66/IP67

STRAIGHT
BOX 

16A

32A

Drilling point mark

Drilling point mark

535.1610

535.3210

535.1611

535.3211

535.16110

535.32110

535.16112

535.32112

535.16114

535.32114

535.16115

535.32115

535.1612

535.3212

535.1614

535.3214

535.1613

535.3213

535.16130

535.32130

535.16132

535.32132

535.16134

535.32134

535.16135

535.32135

Plugs and sockets for special applications

PLUGS

OPTIMA-SEVEN Series



IP44



IP66/IP67

Poles	Hz.	Volt	Colour	h.	IP44		IP66/IP67	
					16A	32A	16A	32A
					cable gland		cable gland	
6P+E	50/60	380-415		6	213.1637-7	213.3237-7	218.1637-7	218.3237-7

FLUSH MOUNTING APPLIANCE INLETS

OPTIMA-SEVEN Series



IP44



IP66/IP67

Poles	Hz.	Volt	Colour	h.	IP44		IP66/IP67	
					16A	32A	16A	32A
					75x75	75x75	75x75	75x75
6P+E	50/60	380-415		6	243.1697-7	243.3297-7	248.1697-7	248.3297-7

SURFACE MOUNTING APPLIANCE INLETS

OPTIMA-SEVEN Series



IP44



IP66/IP67

Poles	Hz.	Volt	Colour	h.	IP44		IP66/IP67	
					16A	32A	16A	32A
					M25	M25	M25	M25
6P+E	50/60	380-415		6	240.1697-7	240.3297-7	245.1697-7	245.3297-7

- Open threaded cable entry on top side.

= Screw terminals

CONNECTORS

OPTIMA-SEVEN Series



IP44



IP66/IP67

Poles	Hz.	Volt	Colour	h.	IP44		IP66/IP67	
					16A	32A	16A	32A
6P+E	50/60	380-415		6	cable gland	cable gland	cable gland	cable gland
					313.1647-7	313.3247-7	318.1647-7	318.3247-7

FLUSH MOUNTING SOCKET OUTLETS

OPTIMA-SEVEN Series



IP44



IP66/IP67

Poles	Hz.	Volt	Colour	h.	IP44		IP66/IP67	
					16A	32A	16A	32A
6P+E	50/60	380-415		6	75x75	75x75	75x75	75x75
					413.1667-7	413.3267-7	418.1667-7	418.3267-7

SURFACE MOUNTING SOCKET OUTLETS

OPTIMA-SEVEN Series



IP44



IP66/IP67

Poles	Hz.	Volt	Colour	h.	IP44		IP66/IP67	
					16A	32A	16A	32A
6P+E	50/60	380-415		6	M25	M25	M25	M25
					512.1657-7	512.3257-7	517.1657-7	517.3257-7


































- Open threaded cable entry on top side.



**INDUSTRIAL
PLUGS AND
SOCKETS**
technical sheets

■ SYNOPTIC TABLE OF STANDARD INDUSTRIAL PLUGS AND SOCKETS TO IEC 60309-2

Rated operating voltage > 50 V (LV)

Number of contact	Poles	Frequency Hz	Rated operating voltage V	Clock face pos. (h) Earth contact (1)		Colour code
				16/20A 32/30A	63/60A 125/100A	
3 Contact 2P3W	1P+N+E II Series	50 and 60	100÷130	4	4	
		60	277	5	5	
	2P+E I and II Series	50 and 60	100÷130	4	4	
			200÷250	6	6	
			380÷415	9	9	
			480÷500	7	7	
			suppl. by isol. transf.	12	12	- (5)
		100÷300	> 50	10	10	 (4)
		>300÷500	> 50	2	2	 (4)
		d.c.	>50÷250	3	3	- (5)
> 250	8		8	- (5)		
4 Contact 3P4W	2P+N+E II Series	50 and 60	125/250	12	12	 
		50 and 60	100÷130	4	4	
	200÷250		9	9		
	380÷415		6	6		
	60	440÷460 (4)	11	11		
	3P+E I and II Series	50 and 60	480÷500	7	7	
			600÷690	5	5	
		50	380	3	3	
		60	440 (3)	3	3	
		50 and 60	1000	8	8	
100÷300	> 50	10	-	 (4)		
>300÷500	> 50	2	-	 (4)		
5 Contact 4P5W	3P+N+E I and II Series	50 and 60	57/100÷75/130	4	4	
			120/208÷144/250	9	9	
			200/346÷240/415	6	6	
			277/480÷288/500	7	7	
			347/600÷400/690	5	5	
		60	250/440÷265/460 (4)	11	11	
		50	220/380	3	3	
		60	250/440 (3)	3	3	
		50 and 60	1000	8	8	
		50 and 60	suppl. by isol. transf.	12	12	
100÷300	> 50	10	10	 (4)		
>300÷500	> 50	2	2	 (4)		
ALL TYPES	All types of voltage and/or frequency not within these standardised configurations		1	1	-	

- (1) The positions shown by a dash (-) are not standardised
- (2) For ISO standard refrigerated containers
- (3) Mainly for shipboard installations
- (4) Combinations of green with the colour of the rated operating voltage can be used to identify frequencies between 60 Hz and 500 Hz inclusive.
- (5) Plugs and sockets for which the IEC 60309-2 standard sets only the clock face position (h) of the earth contact and not the colour, are supplied by SCAME in RAL 7035 grey

SERIES I AND SERIES II

Series I and Series II have more or less the same dimensions, but are classified according to different rated currents. For Series I, currents are 16A, 32A, 63A, and 125A and for Series II, rated currents are 20A, 30A, 60A and 100A.

Series I products are used in all European countries and some countries in South America, Asia, Australia and Africa. On the contrary, Series II products are mainly marketed in North America (USA, Mexico and Canada) and some countries in South America.














NOTE

- SCAME plugs and sockets for specific uses other than 4 - 6 - 9 h are available only on demand and are therefore not kept in stock. Minimum order quantities: 50 pieces.

General technical informations

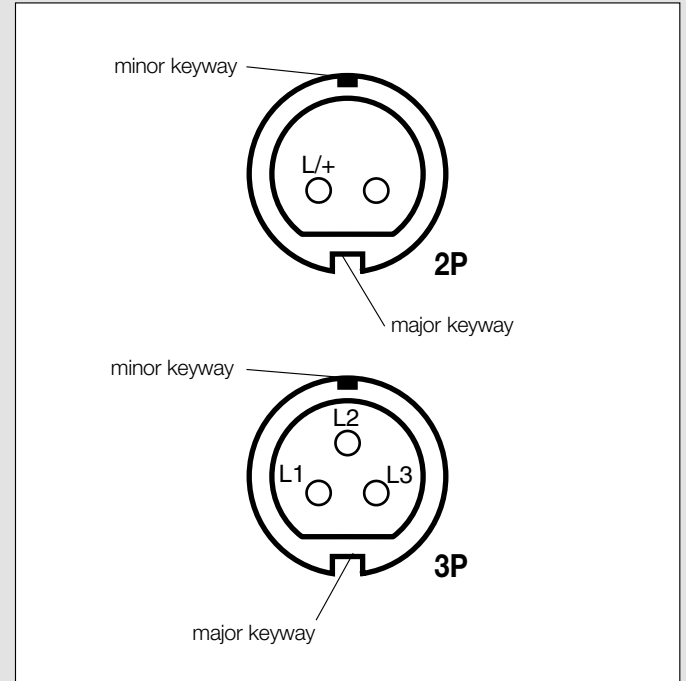
SYNOPTIC TABLE OF STANDARD INDUSTRIAL PLUGS AND SOCKETS TO IEC 60309-2

Rated operating voltage > 50 V (LV)

Poles	Frequency Hz	Rated operating voltage V	Minor keyway (1) clock face position (h) 16A and 32A without reference	Colour code
2P	50 and 60	20÷25	without ref.	
	50 and 60	40÷50	12	
	100÷200	20÷25 and 40÷50	4	 (2)
	300		2	 (2)
	400		3	 (2)
	>400÷500		11	 (2)
	c.c.		10	
3P	50 and 60	20÷25	without ref.	
	50 and 60	40÷50	12	
	100÷200	20÷25 and 40÷50	4	 (2)
	300		2	 (2)
	400		3	 (2)
	>400÷500		11	 (2)
	c.c.		25	8

- (1) 1, 8 and 9 h positions are reserved for future standards; 5, 6 and 7 h positions cannot be used for reasons connected with the design.
- (2) Combinations of green with the colour of the rated operating voltage can be used to identify frequencies between 60 Hz and 500 Hz inclusive.
- (3) Portable electric incubators - use at 12 Vd.c. or 24 Vd.c. on ambulances or helicopters.

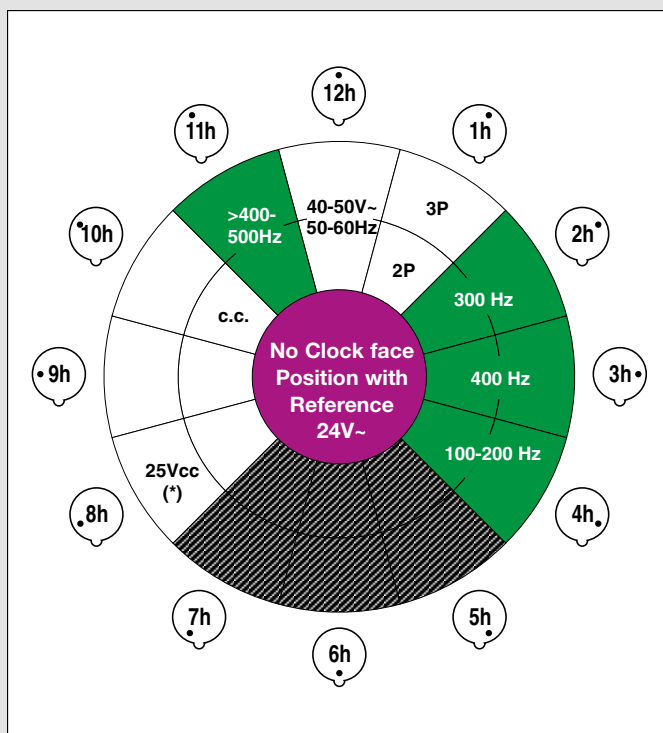
SOCKET (front view)



Clock face position

Viewing the socket from the front, the clock face position h is established by observing the position of the minor keyway with respect to the major keyway, which is always situated at 6 o'clock.

The different voltages are identified by conventional colour codes.



Clock diagram

Clock face position (h) of the minor keyway of extra-low voltage (<50 V) industrial plugs and sockets to IEC 309-2 for different applications (polarity, voltage, frequency, current).

(*)

Portable electric incubators - use at 12 Vd.c. or 24 Vd.c. on ambulances or helicopters.

■ APPLICATIONS OF INDUSTRIAL PLUGS AND SOCKETS

	IP44	IP67
Agriculture	Mobile or portable equipment or appliances used or stored on sheltered premises.	Outdoor installation of pumping, ventilation, drying equipment.
Chemical industry	Indoors on premises for storage and maintenance purposes where connections are not exposed to the risk of immersion or chemicals.	On premises without risk of explosions but where the connections are exposed to chemicals and subject to possible immersion.
Construction sites and shipyards	On covered construction sites sheltered against weathering but exposed to splashing with water.	On outdoor construction sites where the connections are left on damp ground exposed to freezing, dust and weathering.
Sports complexes and other places of public entertainment, TV and film studios	On sheltered premises protected against the weather, though exposed to splashing, without high connected loads.	Outdoor connections exposed to rain, snow, mud, freezing and other critical weather conditions. Where mated safety is required. Where high voltage for lighting installations, T.V. and audio are foreseen.
Food industry	In sheltered locations, on indoor premises used for storage and maintenance.	In locations subject to washing by hosing down and where connections are subject to heavy duty.
Heavy industry	In sheltered warehouses, maintenance workshops, assembly and moulding areas.	In rolling mills, foundries, blast furnaces, etc., where the connections are exposed to dust, metallic shavings, coolants and are subject to vibrations and impact.
Light industry	Locations without high humidity or ambient pollution serving for assembly, moulding, maintenance and storage	On premises subject to cleaning by means of chemical solvents. Also where heavy loads require high safety in connections.
Installations for IT centres	For electrical connections executed above floor level.	For electrical connections under raised floors with risk of immersion. Where heavy loads require high safety in connections.
Ports	In sheltered locations such as docks, repair shops, offices, etc.	Quays, docks, piers, etc. where there is risk of high waves and partial flooding.
Airports	In sheltered locations, hangars, repair shops, warehouses.	Outdoors for connection between mobile or portable appliances and aircraft.
Water treatment plants	Indoor use in repair shops, etc.	In all locations with risk of flooding and for outdoor use with pumps, aeration and ventilation systems.

OPTIMA Series

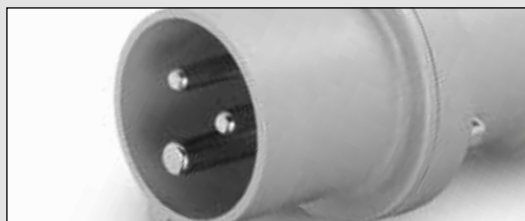
INDUSTRIAL PLUGS AND SOCKETS



VERSIONS

	Plugs
	Connectors
	Appliance inlets
	Flush mounting socket outlets
	Surface mounting socket outlets

NICKEL-PLATED PINS



Nickel-plated brass pins to guarantee long-lasting efficiency of the electrical contact.

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.

QUALITY MARKS



TECHNICAL CHARACTERISTICS

Rated current:	16A-32A-63A-125A
Rated voltage:	100÷690V~
Frequency:	d.c - 50÷500Hz
Insulating voltage:	500/690V~
Protection degree:	IP44/IP54 - IP66/IP67/IP69
Operating ambient temperature according to the reference standard:	-25°C +40°C
Max operating ambient temperature:	60°C
Glow Wire test:	650°C/850°C
Material:	Thermoplastic
IK degree at 20°C:	IK08
Halogen free:	Yes
Terminals:	Screw (16A-32A) Insulation perforating (16A mobile) Spring (32A mobile) Spring (16A-32A flush/surface mounting) Mantle (63A-125A)
Safe-in device:	16A
Snap-on device:	16A-32A
Nickel-plated pins:	16A-32A-63A-125A

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

■ 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	Resistant	Resistant	Not Resistant	Not Resistant	Not Resistant	Limited Resistance	Limited Resistance	Limited Resistance

For specific substances please contact our technical service.

■ WIRING AND INSTALLATION

Wiring capacity of the terminals (mm²)

Max. cable size accepted by the cable clamp:

Rated voltage	Rated current (A)	Plugs, connectors and appliance inlets		Socket outlets	
		Min	Max	Min	Max
Over 50V	16A	1	2,5	1,5	4
	32A	2,5	6	2,5	10
	63A	6	16	6	25
	125A	16	50	25	70

Rated current (A)	Outside Ø mm	
	Min	Max
16A	8	15
32A	11,5	21
63A	17	31
125A	26	48

■ APPLICATION EXAMPLES



OPTIMA Series



On the 16A and 32A "Snap-on" device with stainless steel spring to guarantee frequent opening/closing (possibility to inspect the terminals).



External cable stay with tulip clamping having IP66/IP67/IP69 cable gland functions (the device is used on both IP44/IP54 and IP66/IP67/IP69 products).



16A plugs and connectors with insulation perforating terminals which allow wiring without stripping the conductor.



Insulation piercing terminal made in highly elastic phosphor bronze.



Internal profile of the handle which avoids the accidental opening of the contact.



Socket/plug module with screw terminals (16A - 32A - 63A - 125A).

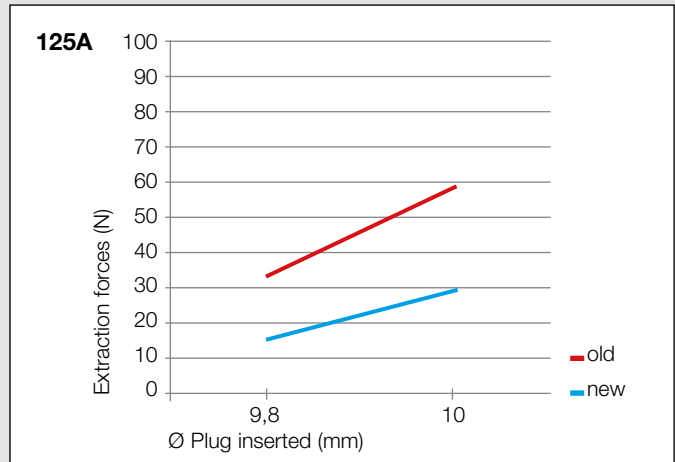
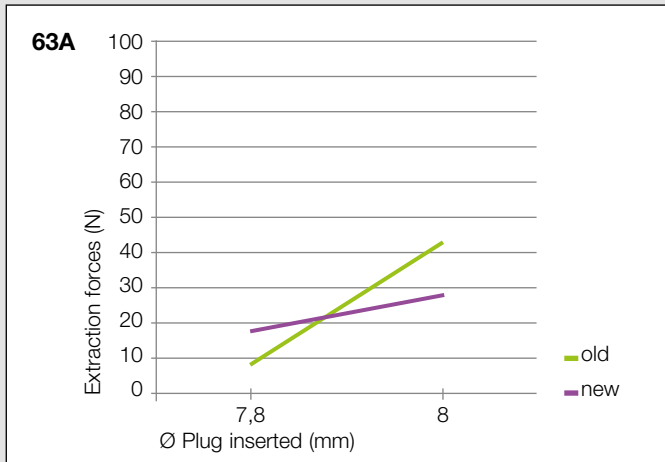


32A plugs and connectors with screwless spring terminal. Requires cable stripping, but not the tightening of the screws.



16-32A plugs, flush mounting sockets and surface mounting sockets with spring terminals.

■ EXTRACTION FORCES



The reduction in plug-socket insertion and extraction forces was obtained thanks to the study of a new compression spring of the socket contact. As illustrated in this graph, the reduction in the force was an average of 30% compared to the previous versions, in any event guaranteeing low contact resistance.

The materials of the pin and contact tube have different surface hardness so as to eliminate, during insertion and extraction operations, the layer of oxide that forms on the surface, thus improving contact smoothness and resistance while keeping them unchanged over time.



The axial incisions and the new compression spring of the socket contact with elasticity coefficient such as to keep insertion and extraction forces constant.



The nickel-plating of the socket contact combined with the special drawing and polishing process increase smoothness and ensure a higher number of contact points.



Thanks to their characteristic geometry, the new mantle terminals are suited to all types of conductors and terminals. They increase cable accessibility and contact surface, thus allowing higher tightening torques to benefit contact resistance and seal.



All gaskets are moulded directly on the cover and at the coupling point with the grip. Grip closing is by means of metric screws and metal inserts, making tightening easier and allowing for unlimited inspections and closings.



Contact holder in special technopolymer with fibreglass, featuring high heat resistance. Pilot contacts available as standard equipment on both plugs and sockets.



Entirely made with halogen-free materials, with excellent mechanical resistance to impacts, chemical substances and UV rays.

Increased safety “SAFE-IN”



■ THE “SAFE-IN” SAFETY DEVICE

The “SAFE-IN” safety device assembled on the 16A industrial sockets is the most innovative element of the new OPTIMA Series.

The “SAFE-IN” device works like the protection installed on household sockets, i.e., by means of an appropriate shutter, it closes the input of the socket contact tubes and prevents accidental and voluntary contact of live parts of the socket with slim objects, such as screwdrivers or wires.

This protection offers an additional safety guarantee, in addition to that already provided by the spring-loaded cover assembled on the mobile sockets.

■ SAFETY LEVEL OF THE OPTIMA SERIES SOCKETS

The OPTIMA Series sockets with the “SAFE-IN” safety device guarantee a higher level of safety in comparison with ordinary industrial sockets, especially in environments where there may be children present or people who have not been trained about electrical dangers (public areas, amusement parks, campgrounds, open markets, etc.).

Dangerous situations, such as the important examples illustrated in the figure to the side, can be resolved thanks to the new OPTIMA Series sockets equipped with the “SAFE-IN” safety device.



Connector tube protective shutter for greater safety against direct contacts. (The SAFE-IN safety device).

■ APPLICATION EXAMPLES



■ POTENTIALLY DANGEROUS SITUATIONS





PLUGS AND CONNECTORS FOR DEMANDING APPLICATIONS



OUTSTANDING HEAT AND FIRE RESISTANCE

The technopolymer used for OPTIMA-HD guarantees an excellent heat and fire resistance: Glow Wire 960°C according to EN 60695-2-1; 5VA according to UL94.

OUTSTANDING IMPACT RESISTANCE

This material guarantees an excellent mechanical resistance to impacts. 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 ATMOSPHERIC AGENTS

The structure and materials used also make OPTIMA-HD a product suited for the most extreme environmental conditions. The special silicon gasket and the IP66/IP67/IP69 degree guarantees an excellent seal against the entry of solid objects or liquids into the casings even after a long term installation, and an outstanding resistance against UV radiation.

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.

TECHNICAL CHARACTERISTICS

Rated current:	16A-32A-63A-125A
Rated voltage:	48÷440V~
Frequency:	50÷60Hz
Insulating voltage:	500/690V~
Protection degree:	IP66/IP67/IP69
Operating ambient temperature according to the reference standard:	-25°C +40°C
Max operating ambient temperature:	-40°C +60°C
Glow wire test:	960°C
Self extinguishing UL94:	5VA
Material:	High performance thermoplastic
IK degree:	IK10
Terminals:	Screw
Snap-on:	16A-32A
Nickel plated pins:	16A-32A-63A-125A

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	Resistant	Resistant	Not Resistant	Not Resistant	Not Resistant	Limited Resistance	Resistant	Limited Resistance

For specific substances please contact our technical service.

Dimensional drawings: [ScameOnLine](http://www.scame.com)
www.scame.com

OPTIMA-BASE-TOP-COMBI Series

INDUSTRIAL SURFACE MOUNTING SOCKET OUTLETS AND APPLIANCE INLET



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.

QUALITY MARKS



VERSIONS

	BASE version
	TOP version
	COMBI version
	TOP version 63A-125A socket outlet
	TOP version 16A-32A-63A-125A appliance inlet

TECHNICAL CHARACTERISTICS

Rated current:	16A-32A-63A-125A
Rated voltage:	100÷690V~
Frequency:	d.c - 50÷500Hz
Insulating voltage:	500/690V~
Protection degree:	Base: IP44 Top: IP44 - IP66/IP67/IP69 COMBI: IP44/IP54 closed cover
Operating ambient temperature according to the reference standard:	-25°C +40°C
Max operating ambient temperature:	60°C
Glow Wire test:	650°C (housing) 850°C (contact carrier)
Material:	Thermoplastic
IK degree at 20°C:	IK08
Halogen free:	Yes
Terminals:	Screw (16A-32A) Spring (16A-32A) Mantle (63A-125A)
Safe-in device:	16A
Fuses:	Max 10A - 5x20mm H: high power cutoff (1500A) T: delayed action

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	Resistant	Resistant	Not Resistant	Not Resistant	Not Resistant	Limited Resistance	Limited Resistance	Limited Resistance

For specific substances please contact our technical service.

Dimensional drawings: [ScameOnLine](http://www.scame.com)
www.scame.com



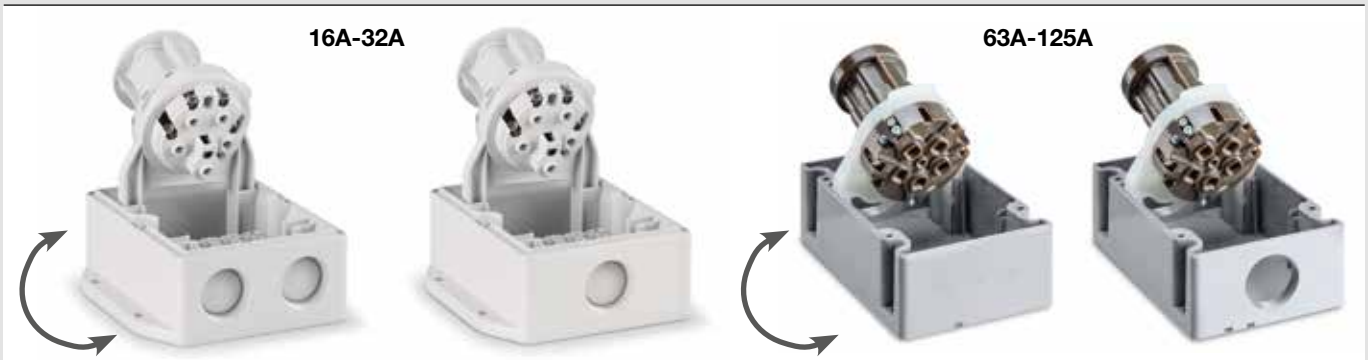
Fastening to exterior wall.



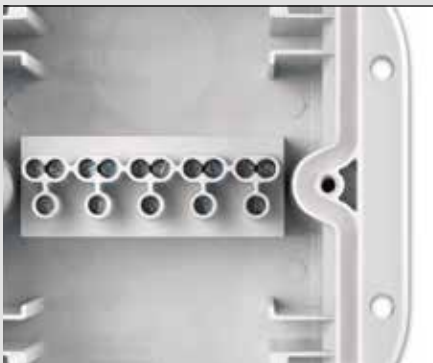
TOP version: blind threaded knockout hole inlets, for quick fastening of the cable entry device. IP44 versions supplied with cable sleeve.



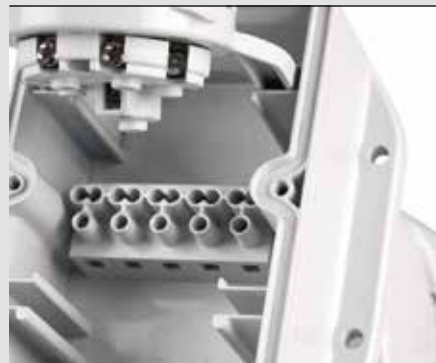
16-32A Surface mounting sockets with spring terminals.



TOP version: reversible base and removable socket for easy wiring and cable entry flexibility.



TOP IP66/IP67/IP69 version: integrated, one-piece gasket, fastening screws outside the gasket.



TOP version: loop in - loop out terminal board accessory.



TOP version: versions with SAFE-IN (16A) safety device available.



COMBI version: combined versions, industrial and household socket.



BASE version: simplified wiring. Socket fixed to the base, open terminals orientated in the same direction and easily accessible.

OPTIMA-REVERSE Series

PLUGS WITH PHASE INVERTER



VERSIONS

	Plugs
	Flush mounting appliance inlets
	Surface mounting appliance inlet

PHASE INVERTER



Fixed and movable plugs which rapidly invert two phases in order to return to the correct direction of rotation of three-phase motors for movable and fixed applications.

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.

QUALITY MARKS



TECHNICAL CHARACTERISTICS

Rated current:	16A-32A
Rated voltage:	346÷415V~
Frequency:	50÷60Hz
Insulating voltage:	690V~
Protection degree:	IP44/IP54 - IP66/IP67/IP69
Operating ambient temperature according to the reference standard:	-25°C +40°C
Max operating ambient temperature:	60°C
Glow wire test:	650°C (housing) 850°C (contact carrier)
Material:	Thermoplastic
IK degree at 20°C:	IK08
Halogen free:	Yes
Terminals:	Screw
Snap-on device:	16A-32A
Polarity:	3P+E / 3P+N+E
Connectable cables:	Flexible class 5 or 6

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	Resistant	Resistant	Not Resistant	Not Resistant	Not Resistant	Limited Resistance	Limited Resistance	Limited Resistance

For specific substances please contact our technical service.

Dimensional drawings: [ScameOnLine](http://www.scame.com)
www.scame.com

■ WIRING AND INSTALLATION

Wiring capacity of the terminals (mm²)

Rated voltage	Rated current (A)	Plugs Appliance inlets	
		Min	Max
Over 50V	16A	1	2,5
	32A	2,5	6

Max. cable size accepted by the cable clamp:

Rated current (A)	Outside Ø mm	
	Min	Max
16A	8	15
32A	11,5	21

■ OPERATING PRINCIPLE OF THE PHASE INVERTER



The phases are inverted by simply pushing and turning the phase pin support with a screwdriver.

OPTIMA-TOP Series

■ SURFACE MOUNTING SWITCHED SOCKETS O/I



■ 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.

EN 60309-4

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

■ VERSIONS



TOP version O/I

■ DOUBLE ENTRIES M25 OR M32 (TOP/BOTTOM) WITH REVERSIBLE BASE



■ TECHNICAL CHARACTERISTICS

Rated current:	16A-32A
Rated voltage:	100÷690V~
Frequency:	d.c - 50÷500Hz
Insulating voltage:	500/690V~
Protection degree:	IP44/IP54-IP66/IP67/IP69
Operating ambient temperature according to the reference standard:	-25°C +40°C
Max operating ambient temperature:	60°C
Glow Wire test:	650°C housing 850°C contact carrier
Material:	Thermoplastic
IK degree at 20°C:	IK08
Halogen free:	Yes
Terminals:	Screw (16A-32A)
Safe-in device:	16A (on request)

■ 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	Resistant	Resistant	Not Resistant	Not Resistant	Not Resistant	Limited Resistance	Limited Resistance	Limited Resistance

For specific substances please contact our technical service.

Dimensional drawings: [ScameOnLine](http://www.scame.com)
www.scame.com

■ TECHNICAL DATA SWITCH DISCONNECTORS

				OPTIMA TOP 0/I	
				16A	32A
Rated insulation voltage	Ui	VAC		690	690
Rated impulse withstand voltage	Uimp	kV		4	4
Thermal current	Ith/Ithe	A		30	40
Rated operational current - Ie	AC21A Resistive loads, including moderate overloads	500V	A	-	-
		690V	A	30	32
	AC22A Mixed resistive and inductive loads, including moderate overloads	415V	A	-	-
		500V	A	-	-
		690V	A	20	32
	AC23A Switching of motor loads or other highly inductive loads (3 phase / 3 pole)	415V	A	20	32
		500V	A	-	-
		690V	A	16	25
	AC3 Squirrel-cage motor: starting, switching off motor during running (3 phase / 3 pole)	415V	A	-	28.5
		500V	A	12	20
Flexible wire		mm ²		1.5-10	1.5-10
Rigid wire		mm ²		1.5-16	1.5-16

OPTIMA-COMBI Series

■ SURFACE MOUNTING SWITCHED SOCKETS O/I AND L/O/R



■ 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.

EN 60309-4

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

■ VERSIONS



COMBI version O/I



COMBI version L/O/R reverse

■ CABLE INLETS M32 (THREADED). QUICK ENTRY THREADED CABLE SLEEVE M32 IP55



■ TECHNICAL CHARACTERISTICS

Rated current:	16A-32A
Rated voltage:	100÷690V~
Frequency:	d.c - 50÷500Hz
Insulating voltage:	500/690V~
Protection degree:	IP44/IP54
Operating ambient temperature according to the reference standard:	-25°C +40°C
Max operating ambient temperature:	60°C
Glow Wire test:	650°C (housing) 850°C (switch and contact carrier)
Material:	Thermoplastic
IK degree at 20°C:	IK08
Terminals:	Screw (16A-32A)
Fuses:	Max 10A - 5x20mm H: high power cutoff (1500A) T: delayed action

■ 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	Resistant	Resistant	Not Resistant	Not Resistant	Not Resistant	Limited Resistance	Limited Resistance	Limited Resistance

For specific substances please contact our technical service.

Dimensional drawings: [ScameOnLine](http://www.scame.com)
www.scame.com

■ TECHNICAL DATA SWITCH DISCONNECTORS

			OPTIMA COMBI O/I		OPTIMA COMBI L/O/R		
			16A	32A	16A	32A	
Rated insulation voltage	Ui	VAC	690	690	500	500	
Rated impulse withstand voltage	Uimp	kV	4	4	6	6	
Thermal current	Ith/Ithe	A	30	40	40	40	
Rated operational current - Ie	AC21A Resistive loads, including moderate overloads	500V	A	-	-	30	32
		690V	A	30	32	-	-
	AC22A Mixed resistive and inductive loads, including moderate overloads	415V	A	-	-	30	32
		500V	A	-	-	30	32
		690V	A	20	32	-	-
	AC23A Switching of motor loads or other highly inductive loads (3 phase / 3 pole)	415V	A	20	32	20	32
		500V	A	-	-	20	32
		690V	A	16	25	-	-
	AC3 Squirrel-cage motor: starting, switching off motor during running (3 phase / 3 pole)	415V	A	-	28.5	11	11
		500V	A	12	20	14	14
Flexible wire		mm ²	1.5-10	1.5-10	4-16	4-16	
Rigid wire		mm ²	1.5-16	1.5-16	4-16	4-16	

EUREKA Series

INDUSTRIAL PLUGS AND SOCKETS



VERSIONS



Plugs and connectors
90° angled



Panel mounting socket outlets
90° angled outlet

NO. OF CYCLES

Rated current (A)	Under load	Without load
16A	5.000	-
32A	1.000	1.000

REFERENCE STANDARDS

EN 60309-1

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

EN 60309-2

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

QUALITY MARKS



TECHNICAL CHARACTERISTICS

Rated current:	16A-32A
Rated voltage:	100÷690V~
Frequency:	c.c. - 50÷500Hz
Insulating voltage:	500/690V~
Protection degree:	IP44-IP66/IP67
Operating ambient temperature according to the reference standard:	-25°C +40°C
Max. operating ambient temperature:	60°C
Glow Wire test:	650°C/850°C
Material:	Thermoplastic
IK degree at 20°C:	IK07 (plugs and connectors 90° angled) IK09 (panel mounting socket outlets 90° angled outlet)

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	Not Resistant	Not Resistant	Not Resistant	Limited Resistance	Limited Resistance	Resistant

For specific substances please contact our technical service.

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

■ WIRING AND INSTALLATION

Wiring capacity of the terminals

Cross-section of connectable conductors (mm²)

Rated voltage	Rated current (A)	Plugs and connectors		Socket outlets	
		Min	Max	Min	Max
>50V	16A	1,5	2,5	1,5	4
	32A	2,5	6	2,5	10

Max. cable size accepted by the cable clamp

Rated current (A)	Outside Ø mm	
	Min	Max
16A	8	15
32A	11,5	21

■ APPLICATION EXAMPLES



IEC309 Series <50V

INDUSTRIAL PLUGS AND SOCKETS



VERSIONS



Plugs and connectors



Flush mounting socket outlets



Surface mounting socket outlets

REFERENCE STANDARDS

EN 60309-1

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

EN 60309-2

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

QUALITY MARKS



TECHNICAL CHARACTERISTICS

Rated current:	16A-32A
Rated voltage:	<50V~
Frequency:	c.c. - 50÷500Hz
Insulating voltage:	500/690V~
Protection degree:	IP44-IP66/IP67
Operating ambient temperature according to the reference standard:	-25°C +40°C
Max. operating ambient temperature:	60°C
Glow Wire test:	650°C/850°C
Material:	Thermoplastic
IK degree at 20°C:	IK08 - IK10

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	Limited Resistance	Not Resistant	Resistant	Resistant	Resistant

For specific substances please contact our technical service.

Dimensional drawings: [ScameOnLine](http://ScameOnLine.com)
www.scame.com

■ WIRING AND INSTALLATION

Wiring capacity of the terminals

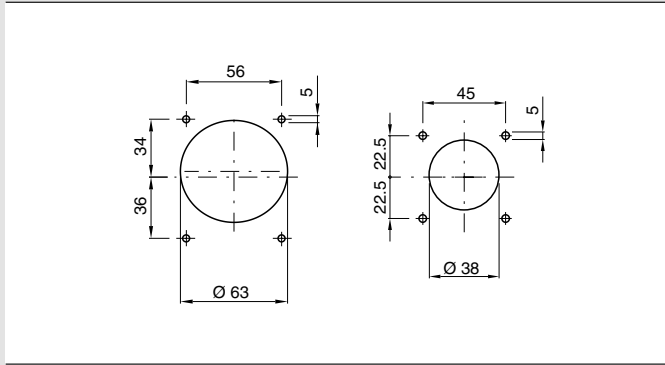
Cross-section of connectable conductors (mm²)

Rated voltage	Rated current (A)	Plugs and connectors		Socket outlets	
		Min	Max	Min	Max
>50V	16A	4	10	4	10
	32A	4	10	4	10

Max. cable size accepted by the cable clamp

Rated current (A)	Outside Ø mm	
	Min	Max
16A	8	15
32A	11,5	21

■ FIXING



(Dimensions in mm)

SCAME sockets for voltage < 50V can be surface mounted or panel mounted on panel boards, or where the surface is set up with the following perforation.

■ APPLICATION EXAMPLES









OPTIMA-SEVEN Series

INDUSTRIAL PLUGS AND SOCKETS



VERSIONS

	Plugs
	Connectors
	Flush mounting appliance inlets
	Flush mounting socket outlets
	Surface mounting socket outlets
	Surface mounting appliance inlets

REFERENCE STANDARDS

EN 60309-1

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

QUALITY MARKS



TECHNICAL CHARACTERISTICS

Rated current:	16A-32A
Rated voltage:	100÷690V~
Frequency:	50÷500Hz
Insulating voltage:	500/690V~
Protection degree:	IP44 - IP66/IP67
Operating ambient temperature according to the reference standard:	-25°C +40°C
Max operating ambient temperature:	60°C
Glow Wire test:	650°C/850°C
Material:	Engineering plastic
IK degree at 20°C:	IK08
Halogen free:	Yes
Snap-on device:	16A-32A
Nickel-plated pins:	16A-32A

APPLICATION

- Star delta connections
- Tapped winding connections
- Monitoring
- Controlling and actuation
- Electrical interlocks

■ 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	Resistant	Resistant	Not Resistant	Not Resistant	Not Resistant	Limited Resistance	Limited Resistance	Limited Resistance

For specific substances please contact our technical service.

■ WIRING AND INSTALLATION

Wiring capacity of the terminals (mm²)

Rated voltage	Rated current (A)	Plugs and connectors		Socket outlets	
		Min	Max	Min	Max
Over 50V	16A	1	2,5	1,5	4
	32A	2,5	6	2,5	10

Max. cable size accepted by the cable clamp

Rated current (A)	Outside Ø mm	
	Min	Max
16A	8	16
32A	11,5	22

■ APPLICATION EXAMPLES



XENIA Series

INDUSTRIAL PLUGS AND SOCKETS



REFERENCE STANDARDS

EN 60309-1

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

EN 60309-2

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

QUALITY MARKS



VERSIONS

	Plugs
	Connectors
	Surface mounting socket outlets

TECHNICAL CHARACTERISTICS

Rated current:	16A-32A
Rated voltage:	110-130V 200-250V 380-415V
Frequency:	50/60Hz
Insulation voltage:	500V
Protection degree:	IP44
Operating ambient temperature according to the reference standard:	-25°C +40°C
Glow wire test:	850°C contacts carrier 650°C handle
IK degree:	IK08
Material:	Thermoplastic
Assembly:	Monobloc body

BEHAVIOUR WITH CHEMICAL AND ATMOSPHERIC AGENTS

Saline solution	Acids		Bases		Solvents				Mineral oil	UV rays
	Concentrated	Diluted	Concentrated	Diluted	Hexane	Benzol	Acetone	Alcohol		
Resistant	Not Resistance	Limited Resistance	Limited Resistance	Resistant	Resistant	Resistant	Resistant	Resistant	Resistant	Resistant

For specific substances please contact our technical service.

Dimensional drawings: [ScameOnLine](http://ScameOnLine.com)
www.scame.com

■ WIRING AND INSTALLATION

Wiring capacity of the terminals

Cross-section of connectable conductors (mm²)

Rated voltage	Rated current (A)	Plugs and connectors		Socket outlets	
		Min	Max	Min	Max
>50V	16A	1,5	2,5	1,5	4
	32A	2,5	6	2,5	10

Max. cable size accepted by the cable clamp

Rated current (A)	Outside Ø mm	
	Min	Max
16A	8	15
32A	11,5	21

■ APPLICATION EXAMPLES



Index by product number

CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE	CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE	CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE	CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
213			213.3230F	10/40	4	213.6335	6/24	5	218.12537	1/8	6
213.1630	10/50	4	213.3231	10/40	4	213.6336	6/24	5	218.12537.K	1/8	6
213.1630.TR	10/50	4	213.3232	10/40	4	213.63361	6/24	5	218.12537.KX	1/8	30
213.1630P	10/50	4	213.3233	10/40	4	213.63362	6/24	5	218.125372	1/8	6
213.1630P.TR	10/50	4	213.3233.K	10/40	4	213.63364	6/24	5	218.125374	1/8	6
213.1631	10/50	4	213.32332	10/40	4	213.63365	6/24	5	218.125375	1/8	6
213.1632	10/50	4	213.32333	10/40	4	213.63366	6/24	5	218.125376	1/8	6
213.1633	10/50	4	213.32334	10/40	4	213.63367	6/24	5	218.125377	1/8	6
213.1633.K	10/50	4	213.32336	10/40	4	213.6337	6/24	5	218.12538	1/8	6
213.1633.TR	10/50	4	213.32338	10/40	4	213.63372	6/24	5	218.1630	10/40	6
213.16332	10/50	4	213.3233F	10/40	4	213.63374	6/24	5	218.1630.TR	10/40	6
213.16333	10/50	4	213.3233F.K	10/40	4	213.63375	6/24	5	218.1630P	10/40	7
213.16334	10/50	4	213.3234	10/40	4	213.63376	6/24	5	218.1630P.TR	10/40	7
213.16336	10/50	4	213.3234F	10/40	4	213.63377	6/24	5	218.1631	10/40	6
213.16338	10/50	4	213.3235	10/40	4	213.6338	6/24	5	218.1632	10/40	6
213.1633P	10/50	4	213.3235.K	10/40	4	214			218.1633	10/40	6
213.1633P.K	10/50	4	213.3236	10/40	4	214.1630	50	5	218.1633.K	10/40	6
213.1633P.TR	10/50	4	213.3236.K	10/40	4	214.1633	50	5	218.1633.KX	10/40	30
213.1634	10/50	4	213.32361	10/40	4	214.1636	40	5	218.1633.TR	10/40	6
213.1634P	10/50	4	213.32362	10/40	4	214.1637	30	5	218.16332	10/40	6
213.1635	10/50	4	213.32364	10/40	4	214.1637	30	5	218.16333	10/40	6
213.1635.K	10/50	4	213.32365	10/40	4	214.3230	25	5	218.16334	10/40	6
213.1636	10/50	4	213.32366	10/40	4	214.3233	25	5	218.16336	10/40	6
213.1636.K	10/50	4	213.32367	10/40	4	214.3236	25	5	218.16338	10/40	6
213.16361	10/50	4	213.3236F	10/40	4	214.3237	20	5	218.1633P	10/40	7
213.16362	10/50	4	213.3236F.K	10/40	4	218			218.1633P.K	10/40	7
213.16364	10/50	4	213.3236RV	10/40	29	218.12530	1/8	6	218.1633P.TR	10/40	7
213.16365	10/50	4	213.3237	10/40	4	218.12531	1/8	6	218.1634	10/40	6
213.16366	10/50	4	213.3237-7	10	38	218.12532	1/8	6	218.1634P	10/40	7
213.16367	10/50	4	213.3237.K	10/40	4	218.12533	1/8	6	218.1635	10/40	6
213.16367P	10/50	4	213.32372	10/40	4	218.12533.K	1/8	6	218.1635.KX	10/40	30
213.1636P	10/50	4	213.32374	10/40	4	218.12533.KX	1/8	30	218.1636	10/40	6
213.1636P.K	10/50	4	213.32375	10/40	4	218.125332	1/8	6	218.1636.K	10/40	6
213.1636P.TR	10/50	4	213.32376	10/40	4	218.125333	1/8	6	218.1636.KX	10/40	30
213.1636RV	10/50	29	213.32377	10/40	4	218.125334	1/8	6	218.16361	10/40	6
213.1637	10/50	4	213.3237F	10/40	4	218.125336	1/8	6	218.16362	10/40	6
213.1637-7	10	38	213.3237F.K	10/40	4	218.125338	1/8	6	218.16364	10/40	6
213.1637.K	10/50	4	213.3237RV	10/40	29	218.12534	1/8	6	218.16365	10/40	6
213.16372	10/50	4	213.3238	10/40	4	218.12535	1/8	6	218.16366	10/40	6
213.16374	10/50	4	213.3238F	10/40	4	218.12535.KX	1/8	30	218.16367	10/40	6
213.16375	10/50	4	213.6330	6/24	5	218.12536	1/8	6	218.1636P	10/40	7
213.16376	10/50	4	213.6331	6/24	5	218.12536.K	1/8	6	218.1636P.K	10/40	7
213.16377	10/50	4	213.6332	6/24	5	218.12536.KX	1/8	30	218.1636RV	10/40	29
213.1637P	10/50	4	213.6333	6/24	5	218.125361	1/8	6	218.1637	10/40	6
213.1637P.K	10/50	4	213.63332	6/24	5	218.125362	1/8	6	218.1637-7	10	38
213.1637P.TR	10/50	4	213.63333	6/24	5	218.125364	1/8	6	218.1637.K	10/40	6
213.1637RV	10/50	29	213.63334	6/24	5	218.125365	1/8	6	218.1637.KX	10/40	30
213.1638	10/50	4	213.63336	6/24	5	218.125365.KX	1/8	30	218.16372	10/40	6
213.1638P	10/50	4	213.63338	6/24	5	218.125366	1/8	6	218.16374	10/40	6
213.3230	10/40	4	213.6334	6/24	5	218.125367	1/8	6	218.16375	10/40	6

CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
218.16376	10/40	6
218.16377	10/40	6
218.1637P	10/40	7
218.1637P.K	10/40	7
218.1637RV	10/40	29
218.1638	10/40	6
218.1638P	10/40	7
218.3230	10/40	6
218.3230F	10/40	7
218.3231	10/40	6
218.3232	10/40	6
218.3233	10/40	6
218.3233.K	10/40	6
218.3233.KX	10/40	30
218.32332	10/40	6
218.32333	10/40	6
218.32334	10/40	6
218.32336	10/40	6
218.32338	10/40	6
218.3233F	10/40	7
218.3233F.K	10/40	7
218.3234	10/40	6
218.3234F	10/40	7
218.3235	10/40	6
218.3235.KX	10/40	30
218.3236	10/40	6
218.3236.K	10/40	6
218.3236.KX	10/40	30
218.32361	10/40	6
218.32362	10/40	6
218.32364	10/40	6
218.32364.KX	1/12	30
218.32364F	10/40	7
218.32365	10/40	6
218.32366	10/40	6
218.32367	10/40	6
218.3236F	10/40	7
218.3236F.K	10/40	7
218.3236RV	10/40	29
218.3237	10/40	6
218.3237-7	10	38
218.3237.K	10/40	6
218.3237.KX	10/40	30
218.32372	10/40	6
218.32374	10/40	6
218.32375	10/40	6
218.32376	10/40	6
218.32377	10/40	6
218.3237F	10/40	7
218.3237F.K	10/40	7

CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
218.3237RV	10/40	29
218.3238	10/40	6
218.3238F	10/40	7
218.6330	6/24	6
218.6331	6/24	6
218.6332	6/24	6
218.6333	6/24	6
218.6333.K	6/24	6
218.6333.KX	6/24	30
218.63332	6/24	6
218.63333	6/24	6
218.63334	6/24	6
218.63336	6/24	6
218.63338	6/24	6
218.6334	6/24	6
218.6335	6/24	6
218.6335.KX	6/24	30
218.6336	6/24	6
218.6336.K	6/24	6
218.6336.KX	6/24	30
218.63361	6/24	6
218.63362	6/24	6
218.63364	6/24	6
218.63365	6/24	6
218.63365.KX	6/24	30
218.63366	6/24	6
218.63367	6/24	6
218.6337	6/24	6
218.6337.K	6/24	6
218.6337.KX	6/24	30
218.63372	6/24	6
218.63374	6/24	6
218.63375	6/24	6
218.63376	6/24	6
218.63377	6/24	6
218.6338	6/24	6
221		
221.1630	10/100	5
221.1633	10/100	5
221.1636	10/100	5
221.1637	10/100	5
221.3230	10/60	5
221.3233	10/60	5
221.3236	10/60	5
221.3237	10/50	5
226		
226.1630	10/100	7
226.1633	10/100	7
226.1636	10/100	7

CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
226.16367	10/100	7
226.1637	10/50	7
226.3230	10/40	7
226.3233	10/40	7
226.3236	10/40	7
226.32364	10/40	7
226.3237	10/40	7
230		
230.1600	10/100	32
230.1601	10/100	32
230.16010	10/100	32
230.16012	10/100	32
230.16014	10/100	32
230.16015	10/100	32
230.1602	10/100	32
230.1603	10/100	32
230.16030	10/100	32
230.16032	10/100	32
230.16034	10/100	32
230.16035	10/100	32
230.1604	10/100	32
230.3200	10/100	32
230.3201	10/100	32
230.32010	10/100	32
230.32012	10/100	32
230.32014	10/100	32
230.32015	10/100	32
230.3202	10/100	32
230.3203	10/100	32
230.32030	10/100	32
230.32032	10/100	32
230.32034	10/100	32
230.32035	10/100	32
230.3204	10/100	32
235		
235.1600	10/100	32
235.1601	10/100	32
235.16010	10/100	32
235.16012	10/100	32
235.16014	10/100	32
235.16015	10/100	32
235.1602	10/100	32
235.1603	10/100	32
235.16030	10/100	32
235.16032	10/100	32
235.16034	10/100	32
235.16035	10/100	32
235.1604	10/100	32
235.3200	10/100	32

CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
235.3201	10/100	32
235.32010	10/100	32
235.32012	10/100	32
235.32014	10/100	32
235.32015	10/100	32
235.3202	10/100	32
235.3203	10/100	32
235.32030	10/100	32
235.32032	10/100	32
235.32034	10/100	32
235.32035	10/100	32
235.3204	10/100	32
240		
240.1690	10	10
240.1691	10	10
240.1692	10	10
240.1693	10	10
240.1694	10	10
240.1695	10	10
240.1696	10	10
240.16964	10	10
240.16965	10	10
240.1696RV	10	29
240.1697	10	10
240.16974	10	10
240.16975	10	10
240.1697-7	10	38
240.1697RV	10	29
240.1698	10	10
240.3290	10	10
240.3291	10	10
240.3292	10	10
240.3293	10	10
240.3294	10	10
240.3295	10	10
240.3296	10	10
240.32964	10	10
240.32965	10	10
240.3296RV	10	29
240.3297	10	10
240.32974	10	10
240.32975	10	10
240.3297-7	10	38
240.3297RV	10	29
240.3298	10	10
240.6390T	4	10
240.6391T	4	10
240.6392T	4	10
240.63932T	4	10
240.63933T	4	10

CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
245.3296	10	11
245.32961	10	11
245.32962	10	11
245.32964	10	11
245.32965	10	11
245.32966	10	11
245.32967	10	11
245.3296RV	10	29
245.3297	10	11
245.32972	10	11
245.32974	10	11
245.32975	10	11
245.32976	10	11
245.32977	10	11
245.3297-7	5	38
245.3297RV	10	29
245.3298	10	11
245.6390T	4	11
245.6391T	4	11
245.6392T	4	11
245.6393T	4	11
245.63932T	4	11
245.63933T	4	11
245.63934T	4	11
245.63936T	4	11
245.63938T	4	11
245.6394T	4	11
245.6395T	4	11
245.6396T	4	11
245.63961T	4	11
245.63962T	4	11
245.63964T	4	11
245.63965T	4	11
245.63966T	4	11
245.63967T	4	11
245.6397T	4	11
245.63972T	4	11
245.63974T	4	11
245.63975T	4	11
245.63976T	4	11
245.63977T	4	11
245.6398T	4	11
247		
247.1690	10/100	9
247.1691	10/60	9
247.1692	10/50	9
247.1693	10/100	9
247.16932	10/100	9
247.16933	10/100	9
247.16934	10/100	9

CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
247.16936	10/100	9
247.16938	10/100	9
247.1694	10/60	9
247.1695	10/50	9
247.1696	10/60	9
247.16961	10/60	9
247.16962	10/60	9
247.16964	10/60	9
247.16965	10/60	9
247.16966	10/60	9
247.16967	10/60	9
247.1697	10/50	9
247.16972	10/50	9
247.16974	10/50	9
247.16975	10/50	9
247.16976	10/50	9
247.16977	10/50	9
247.1698	10/100	9
247.3290	10/40	9
247.3291	10/40	9
247.3292	10/40	9
247.3293	10/40	9
247.32932	10/40	9
247.32933	10/40	9
247.32934	10/40	9
247.32936	10/40	9
247.32938	10/40	9
247.3294	10/40	9
247.3295	10/40	9
247.3296	10/40	9
247.32961	10/40	9
247.32962	10/40	9
247.32964	10/40	9
247.32965	10/40	9
247.32966	10/40	9
247.32967	10/40	9
247.3297	10/40	9
247.32972	10/40	9
247.32974	10/40	9
247.32975	10/40	9
247.32976	10/40	9
247.32977	10/40	9
247.3298	10/40	9
248		
248.12590	10	9
248.12591	10	9
248.12592	10	9
248.12593	10	9
248.125932	10	9
248.125933	10	9

CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
248.125934	10	9
248.125936	10	9
248.125938	10	9
248.12594	10	9
248.12595	10	9
248.12596	10	9
248.125961	10	9
248.125962	10	9
248.125964	10	9
248.125965	10	9
248.125966	10	9
248.125967	10	9
248.12597	10	9
248.12597.K	10	9
248.125972	10	9
248.125974	10	9
248.125975	10	9
248.125976	10	9
248.125977	10	9
248.12598	10	9
248.1690	10/50	9
248.1691	10/50	9
248.1692	10/50	9
248.1693	10/50	9
248.1693.K	10/50	9
248.16932	10/50	9
248.16933	10/50	9
248.16934	10/50	9
248.16936	10/50	9
248.16938	10/50	9
248.1694	10/50	9
248.1695	10/50	9
248.1696	10/50	9
248.1696.K	10/50	9
248.16961	10/50	9
248.16962	10/50	9
248.16964	10/50	9
248.16965	10/50	9
248.16966	10/50	9
248.16967	10/50	9
248.1696RV	10/50	29
248.1697	10/50	9
248.1697-7	10	38
248.1697.K	10/50	9
248.16972	10/50	9
248.16974	10/50	9
248.16975	10/50	9
248.16976	10/50	9
248.16977	10/50	9
248.1697RV	10/50	29

CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
248.1698	10/50	9
248.3290	10/50	9
248.3291	10/50	9
248.3292	10/40	9
248.3293	10/50	9
248.3293.K	10/50	9
248.32932	10/50	9
248.32933	10/50	9
248.32934	10/50	9
248.32936	10/50	9
248.32938	10/50	9
248.3294	10/50	9
248.3295	10/40	9
248.3296	10/50	9
248.3296.K	10/50	9
248.32961	10/50	9
248.32962	10/50	9
248.32964	10/50	9
248.32965	10/50	9
248.32966	10/50	9
248.32967	10/50	9
248.3296RV	10/50	29
248.3297	10/40	9
248.3297-7	10	38
248.3297.K	10/40	9
248.32972	10/40	9
248.32974	10/40	9
248.32975	10/40	9
248.32976	10/40	9
248.32977	10/40	9
248.3297RV	10/40	29
248.3298	10/50	9
248.6390	10	9
248.6391	10	9
248.6392	10	9
248.6393	10	9
248.63932	10	9
248.63933	10	9
248.63934	10	9
248.63936	10	9
248.63938	10	9
248.6394	10	9
248.6395	10	9
248.6396	10	9
248.63961	10	9
248.63962	10	9
248.63964	10	9
248.63965	10	9
248.63966	10	9
248.63967	10	9

Index by product number

CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE	CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE	CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE	CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
248.6397	10	9	313.16474	10/50	12	313.6340	6/24	13	318.12546.K	1/8	14
248.6397.K	10	9	313.16475	10/50	12	313.6341	6/24	13	318.12546.KX	1/8	30
248.63972	10	9	313.16476	10/50	12	313.6342	6/24	13	318.125461	1/8	14
248.63974	10	9	313.16477	10/50	12	313.6343	6/24	13	318.125462	1/8	14
248.63975	10	9	313.1647H	10/50	12	313.63432	6/24	13	318.125464	1/8	14
248.63976	10	9	313.1647H.K	10/50	12	313.63433	6/24	13	318.125465	1/8	14
248.63977	10	9	313.1647P	10/50	13	313.63434	6/24	13	318.125466	1/8	14
248.6398	10	9	313.1647P.K	10/50	13	313.63436	6/24	13	318.125467	1/8	14
313			313.1648	10/50	12	313.63438	6/24	13	318.12547	1/8	14
313.1640	10/50	12	313.1648H	10/50	12	313.6344	6/24	13	318.12547.K	1/8	14
313.1640.TR	10/50	12	313.1648P	10/50	13	313.6345	6/24	13	318.12547.KX	1/8	30
313.1640H	10/50	12	313.3240	10/40	12	313.6346	6/24	13	318.125472	1/8	14
313.1640P	10/50	13	313.3240F	10/40	13	313.63461	6/24	13	318.125474	1/8	14
313.1640P.TR	10/50	13	313.3241	10/40	12	313.63462	6/24	13	318.125475	1/8	14
313.1641	10/50	12	313.3242	10/40	12	313.63464	6/24	13	318.125476	1/8	14
313.1642	10/50	12	313.3243	10/40	12	313.63465	6/24	13	318.125477	1/8	14
313.1643	10/50	12	313.3243.K	10/40	12	313.63466	6/24	13	318.12548	1/8	14
313.1643.K	10/50	12	313.32432	10/40	12	313.63467	6/24	13	318.1640	10/40	14
313.1643.TR	10/50	12	313.32433	10/40	12	313.6347	6/24	13	318.1640.TR	10/40	14
313.16432	10/50	12	313.32434	10/40	12	313.63472	6/24	13	318.1640H	10/40	15
313.16433	10/50	12	313.32436	10/40	12	313.63474	6/24	13	318.1640P	10/40	15
313.16434	10/50	12	313.32438	10/40	12	313.63475	6/24	13	318.1640P.TR	10/40	15
313.16436	10/50	12	313.3243F	10/40	13	313.63476	6/24	13	318.1641	10/40	14
313.16438	10/50	12	313.3243F.K	10/40	13	313.63477	6/24	13	318.1642	10/40	14
313.1643H	10/50	12	313.3244	10/40	12	313.6348	6/24	13	318.1643	10/40	14
313.1643H.K	10/50	12	313.3244F	10/40	13	314			318.1643.K	10/40	14
313.1643P	10/50	13	313.3245	10/40	12	314.1640	40	13	318.1643.KX	10/40	30
313.1643P.K	10/50	13	313.3245.K	10/40	12	314.1643	40	13	318.1643.TR	10/40	14
313.1643P.TR	10/50	13	313.3246	10/40	12	314.1646	30	13	318.16432	10/40	14
313.1644	10/50	12	313.3246.K	10/40	12	314.1647	25	13	318.16433	10/40	14
313.1644H	10/50	12	313.32461	10/40	12	314.3240	20	13	318.16434	10/40	14
313.1644P	10/50	13	313.32462	10/40	12	314.3243	20	13	318.16436	10/40	14
313.1645	10/50	12	313.32464	10/40	12	314.3246	20	13	318.16438	10/40	14
313.1645.K	10/50	12	313.32465	10/40	12	314.3247	15	13	318.1643H	10/40	15
313.1646	10/50	12	313.32466	10/40	12	318			318.1643H.K	10/40	15
313.1646.K	10/50	12	313.32467	10/40	12	318.12540	1/8	14	318.1643P	10/40	15
313.16461	10/50	12	313.3246F	10/40	13	318.12541	1/8	14	318.1643P.K	10/40	15
313.16462	10/50	12	313.3246F.K	10/40	13	318.12542	1/8	14	318.1643P.TR	10/40	15
313.16464	10/50	12	313.3247	10/40	12	318.12543	1/8	14	318.1644	10/40	14
313.16465	10/50	12	313.3247-7	10	39	318.12543	1/8	14	318.1644H	10/40	15
313.16466	10/50	12	313.3247.K	10/40	12	318.12543.K	1/8	14	318.1644P	10/40	15
313.16467	10/50	12	313.32472	10/40	12	318.12543.KX	1/8	30	318.1645	10/40	14
313.1646H	10/50	12	313.32474	10/40	12	318.125432	1/8	14	318.1646	10/40	14
313.1646H.K	10/50	12	313.32475	10/40	12	318.125433	1/8	14	318.1646.K	10/40	14
313.1646P	10/50	13	313.32476	10/40	12	318.125434	1/8	14	318.1646.KX	10/40	30
313.1646P.K	10/50	13	313.32477	10/40	12	318.125436	1/8	14	318.16461	10/40	14
313.1647	10/50	12	313.3247F	10/40	13	318.125438	1/8	14	318.16462	10/40	14
313.1647-7	10	39	313.3247F.K	10/40	13	318.12544	1/8	14	318.16464	10/40	14
313.1647.K	10/50	12	313.3248	10/40	12	318.12545	1/8	14	318.16465	10/40	14
313.16472	10/50	12	313.3248F	10/40	13	318.12546	1/8	14	318.16466	10/40	14

CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
318.16467	10/40	14
318.1646H	10/40	15
318.1646H.K	10/40	15
318.1646P	10/40	15
318.1646P.K	10/40	15
318.1647	10/40	14
318.1647-7	10	39
318.1647.K	10/40	14
318.1647.KX	10/40	30
318.16472	10/40	14
318.16474	10/40	14
318.16475	10/40	14
318.16476	10/40	14
318.16477	10/40	14
318.1647H	10/40	15
318.1647H.K	10/40	15
318.1647P	10/40	15
318.1647P.K	10/40	15
318.1648	10/40	14
318.1648H	10/40	15
318.1648P	10/40	15
318.3240	10/40	14
318.3240F	10/40	15
318.3241	10/40	14
318.3242	10/40	14
318.3243	10/40	14
318.3243.K	10/40	14
318.3243.KX	10/40	30
318.32432	10/40	14
318.32433	10/40	14
318.32434	10/40	14
318.32436	10/40	14
318.32438	10/40	14
318.3243F	10/40	15
318.3243FK	10/40	15
318.3244	10/40	14
318.3244F	10/40	15
318.3245	10/40	14
318.3246	10/40	14
318.3246.K	10/40	14
318.3246.KX	10/40	30
318.32461	10/40	14
318.32462	10/40	14
318.32464	10/40	14
318.32464.KX	12	30
318.32464F	10/40	15
318.32465	10/40	14
318.32466	10/40	14
318.32467	10/40	14
318.3246F	10/40	15

CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
318.3246FK	10/40	15
318.3247	10/40	14
318.3247-7	10	39
318.3247.K	10/40	14
318.3247.KX	10/40	30
318.32472	10/40	14
318.32474	10/40	14
318.32475	10/40	14
318.32476	10/40	14
318.32477	10/40	14
318.3247F	10/40	15
318.3247FK	10/40	15
318.3248	10/40	14
318.3248F	10/40	15
318.6340	6/24	14
318.6341	6/24	14
318.6342	6/24	14
318.6343	6/24	14
318.6343.K	6/24	14
318.6343.KX	6/24	30
318.63432	6/24	14
318.63433	6/24	14
318.63434	6/24	14
318.63436	6/24	14
318.63438	6/24	14
318.6344	6/24	14
318.6345	6/24	14
318.6346	6/24	14
318.6346.K	6/24	14
318.6346.KX	6/24	30
318.63461	6/24	14
318.63462	6/24	14
318.63464	6/24	14
318.63465	6/24	14
318.63466	6/24	14
318.63467	6/24	14
318.6347	6/24	14
318.6347.K	6/24	14
318.6347.KX	6/24	30
318.63472	6/24	14
318.63474	6/24	14
318.63475	6/24	14
318.63476	6/24	14
318.63477	6/24	14
318.6348	6/24	14
321		
321.1640	10/100	13
321.1643	10/100	13
321.1646	10/100	13
321.1647	10/100	13

CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
321.3240	10/50	13
321.3243	10/50	13
321.3246	10/50	13
321.3247	10/50	13
326		
326.1640	10/100	15
326.1643	10/100	15
326.1646	10/100	15
326.1647	10/50	15
326.3240	10/40	15
326.3243	10/40	15
326.3246	10/40	15
326.32464	10/40	15
326.3247	10/40	15
330		
330.1605	10/100	33
330.1606	10/100	33
330.16060	10/100	33
330.16062	10/100	33
330.16064	10/100	33
330.16065	10/100	33
330.1607	10/100	33
330.1608	10/100	33
330.16080	10/100	33
330.16082	10/100	33
330.16084	10/100	33
330.16085	10/100	33
330.1609	10/100	33
330.3205	10/100	33
330.3206	10/100	33
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330.32064	10/100	33
330.32065	10/100	33
330.3207	10/100	33
330.3208	10/100	33
330.32080	10/100	33
330.32082	10/100	33
330.32084	10/100	33
330.32085	10/100	33
330.3209	10/100	33
335		
335.1605	10/100	33
335.1606	10/100	33
335.16060	10/100	33
335.16062	10/100	33
335.16064	10/100	33
335.16065	10/100	33

CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
335.1607	10/100	33
335.1608	10/100	33
335.16080	10/100	33
335.16082	10/100	33
335.16084	10/100	33
335.16085	10/100	33
335.1609	10/100	33
335.3205	10/50	33
335.3206	10/50	33
335.32060	10/50	33
335.32062	10/50	33
335.32064	10/50	33
335.32065	10/50	33
335.3207	10/50	33
335.3208	10/50	33
335.32080	10/50	33
335.32082	10/50	33
335.32084	10/50	33
335.32085	10/50	33
335.3209	10/50	33
413		
413.1660	10/100	16
413.1660F	10/100	16
413.1660H	10/100	16
413.1661	10/100	16
413.1662	10/100	16
413.1663	10/100	16
413.1663.K	10/100	16
413.16632	10/100	16
413.16633	10/100	16
413.16634	10/100	16
413.16636	10/100	16
413.16638	10/100	16
413.1663F	10/100	16
413.1663FK	10/100	16
413.1663H	10/100	16
413.1663H.K	10/100	16
413.1664	10/100	16
413.1664F	10/100	16
413.1664H	10/100	16
413.1665	10/100	16
413.1666	10/100	16
413.1666.K	10/100	16
413.16661	10/100	16
413.16662	10/100	16
413.16664	10/100	16
413.16665	10/100	16
413.16666	10/100	16
413.16667	10/100	16
413.1666F	10/100	16

CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
418.6364	6/30	19
418.6365	6/30	19
418.6366	6/30	19
418.63661	6/30	19
418.63662	6/30	19
418.63664	6/30	19
418.63665	6/30	19
418.63666	6/30	19
418.63667	6/30	19
418.6367	6/30	19
418.6367.K	6/30	19
418.63672	6/30	19
418.63674	6/30	19
418.63675	6/30	19
418.63676	6/30	19
418.63677	6/30	19
418.6368	6/30	19

423

423.1660	10/100	17
423.1660/R	10/100	17
423.1660/RR	10/100	17
423.1661	10/100	17
423.1661/R	10/100	17
423.1662	10/100	17
423.1663	10/100	17
423.1663/R	10/100	17
423.1663/RR	10/100	17
423.16632	10/100	17
423.16633	10/100	17
423.16634	10/100	17
423.16636	10/100	17
423.16638	10/100	17
423.1664	10/100	17
423.1664/R	10/100	17
423.1665	10/100	17
423.1666	10/100	17
423.1666/R	10/100	17
423.16661	10/100	17
423.16662	10/100	17
423.16664	10/100	17
423.16665	10/100	17
423.16666	10/100	17
423.16667	10/100	17
423.1667	10/100	17
423.16672	10/100	17
423.16674	10/100	17
423.16675	10/100	17
423.16676	10/100	17
423.16677	10/100	17
423.1668	10/100	17

CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
423.1668/R	10/100	17
423.1668/RR	10/100	17
423.3260	10/50	17
423.3261	10/50	17
423.3262	10/50	17
423.3263	10/50	17
423.32632	10/50	17
423.32633	10/50	17
423.32634	10/50	17
423.32636	10/50	17
423.32638	10/50	17
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423.3266	10/50	17
423.32661	10/50	17
423.32662	10/50	17
423.32664	10/50	17
423.32665	10/50	17
423.32666	10/50	17
423.32667	10/50	17
423.3267	10/50	17
423.32672	10/50	17
423.32674	10/50	17
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423.63664	6/30	17
423.63665	6/30	17
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423.63672	6/30	17
423.63674	6/30	17
423.63675	6/30	17
423.63676	6/30	17

CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
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423.63677	6/30	17

428

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428.1663/RR	10/100	19
428.16632	10/100	19
428.16633	10/100	19
428.16634	10/100	19
428.16636	10/100	19
428.16638	10/100	19
428.1664	10/100	19
428.1664/R	10/100	19
428.1665	10/100	19
428.1666	10/100	19
428.1666/R	10/100	19
428.16661	10/100	19
428.16662	10/100	19
428.16664	10/100	19

CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
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428.16674	10/100	19
428.16675	10/100	19
428.16676	10/100	19
428.16677	10/100	19
428.1668	10/100	19
428.1668/R	10/100	19
428.1668/RR	10/100	19
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428.63664	6/30	19
428.63665	6/30	19
428.63666	6/30	19
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428.63677	6/30	19
428.6368	6/30	19

CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
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457.32672	10/40	19
457.32674	10/40	19
457.32675	10/40	19
457.32676	10/40	19
457.32677	10/40	19
457.3268	10/40	19

512

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512.3257-7	10	39
512.3258	10/40	22

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513.1651T	10/40	20
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CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
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513.1653-1FNS	6	27
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513.16534T	10/40	20
513.16536T	10/40	20
513.16538T	10/40	20
513.1653T	10/40	20
513.1653TF	10/40	20
513.1653TH	10/40	20
513.1653TS	1/6	26
513.1654T	10/40	20
513.1654TF	10/40	20
513.1654TH	10/40	20
513.1655T	10/40	20
513.1656	10/40	21
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513.1656-1DNS	1/6	27
513.1656-1FNR	1/6	28
513.1656-1FNS	1/6	27
513.1656-2AFS	1/6	27
513.1656-2DNR	8	28
513.1656-2DNS	1/6	27
513.1656-2FNR	1/6	28
513.1656-2FNS	1/6	27
513.1656-2KNS	1/6	27
513.1656-AF	10	25
513.1656-BN	10	24
513.1656-CF	10	25
513.1656-DN	10	25
513.1656-FN	10	25
513.1656-KN	10	25
513.1656-LN	10	25
513.1656-PN	10	24
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513.16562T	10/40	20
513.16564T	10/40	20

CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
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513.16566T	10/40	20
513.16567T	10/40	20
513.1656T	10/40	20
513.1656TF	10/40	20
513.1656TH	10/40	20
513.1656TS	1/6	26
513.1657	10/40	20
513.1657-1DNR	8	28
513.1657-1DNS	1/6	27
513.1657-1FNR	1/6	28
513.1657-1FNS	1/6	27
513.1657-2AFS	1/6	27
513.1657-2DNR	8	28
513.1657-2DNS	1/6	27
513.1657-2FNR	1/6	28
513.1657-2FNS	1/6	27
513.1657-2KNS	1/6	27
513.1657-AF	10	25
513.1657-BN	10	24
513.1657-CF	10	25
513.1657-DN	10	25
513.1657-FN	10	25
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513.1657-LN	10	25
513.1657-PN	10	24
513.1657-S5N	10	25
513.1657-SN	10	25
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513.16574T	10/40	20
513.16575T	10/40	20
513.16576T	10/40	20
513.16577T	10/40	20
513.1657T	10/40	20
513.1657TF	10/40	20
513.1657TH	10/40	20
513.1657TS	1/6	26
513.1658T	10/40	20
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513.1658TH	10/40	20
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513.3252T	10	20
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513.3253-1DFS	1/6	27
513.3253-1FFS	1/6	27
513.3253-2AFS	1/6	27
513.3253-2DFS	1/6	27

CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
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513.3253-CF	10	25
513.3253-DF	10	25
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513.3256-1FFR	1/6	28
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522.3253	10/40	22
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522.3256	10/40	22
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522.3258	10/40	22

527

527.1650	10/50	23
527.1651	10/50	23
527.1652	10/50	23
527.1653	10/50	23
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527.1655	10/50	23
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527.1657	10/50	23
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527.3251	10/40	23

CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
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527.3256	10/40	23
527.3257	10/40	23
527.3258	10/40	23

530

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530.016112	10/50	36
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530.016115	10/50	36
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530.016132	10/50	36

530.016134	10/50	36
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530.032110	10/50	36
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530.032115	10/50	36
530.03212	10/50	36

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530.32110	10/50	37

CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
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530.32132	10/50	37

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530.32135	10/50	37
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535.016130	10/50	36

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CATALOGUE NUMBER	PACKAGE/ BULK PACK.	PAGE
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535.32115	10/50	37

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535.3213	10/50	37
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570

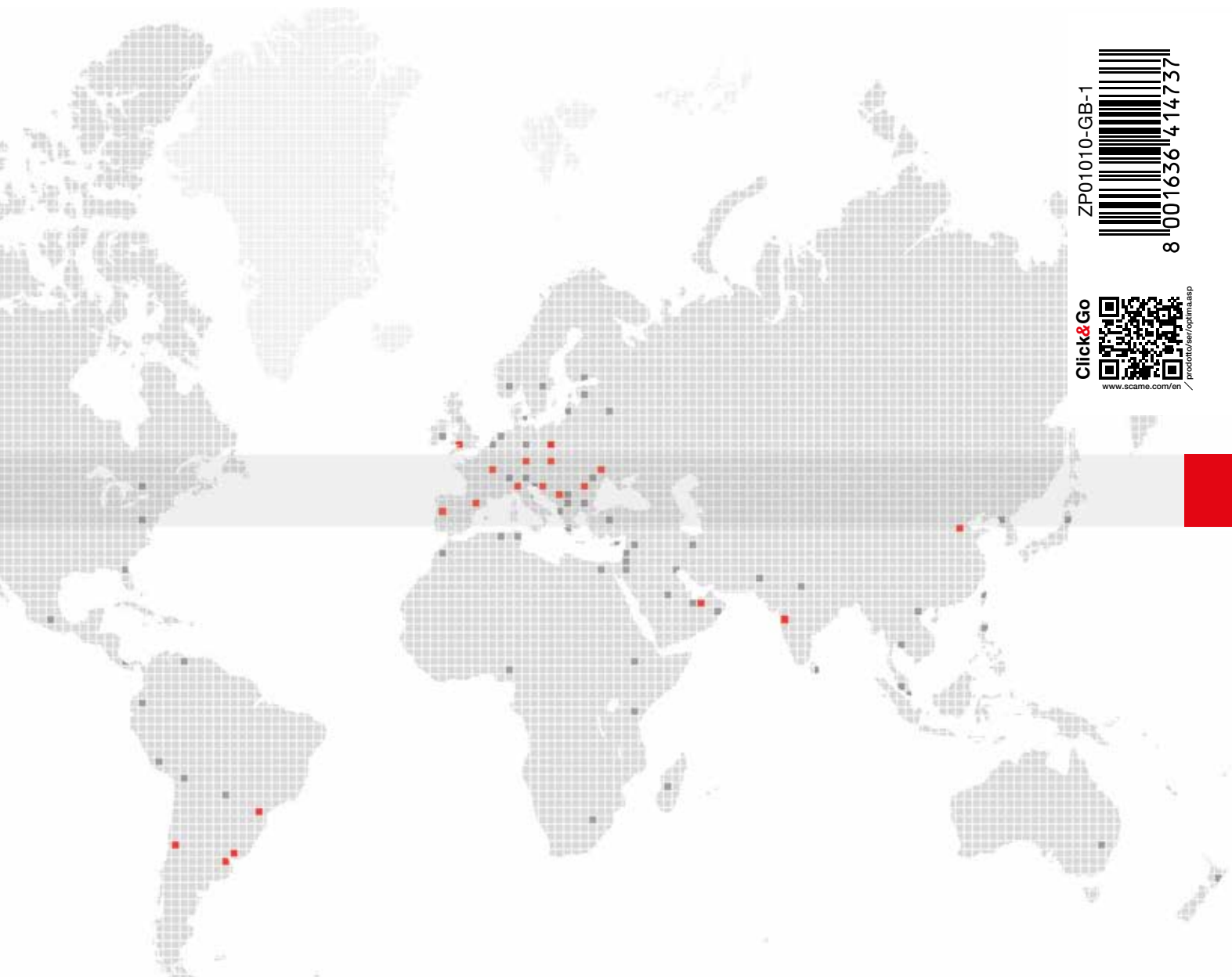
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570.90164	10/100	31
570.90165	10/100	31
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570.M0163	6	31

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654.0394	10	31

805

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SCAME PARRE S.p.A.
 VIA COSTA ERTA, 15
 24020 PARRE (BG) ITALY
 TEL. +39 035 705000
 FAX +39 035 703122

