

PY series sockets are equipped with an interlocked disconnect switch with the plug positioned beneath. The rotary movement together with the closing/opening operations which occur inside a special explosion-proof chamber ensure any explosion in the presence of gas is contained. The electric circuit is connected only after the SPY series plug has been correctly inserted into its seat, and ensures it can only be removed once the electrical circuit has been disconnected. The range includes two pole sockets + earth (PE); three pole sockets + earth (PE) and three pole sockets + neutral + earth (PE), with a current capacities of 16A and reduced overall dimensions, up to a maximum of 32A. Voltages range from 20V to a maximum of 690VAC, with a maximum frequency of 500Hz. These sockets can be used in any environment with a potentially explosive atmosphere, and are manufactured so they cannot be used with industrial type plugs.

Cortem Group applies a tamper-evident holographic security label to its products, complete with a unique authentication numeric code, to combat the illegal sale of imitations and counterfeits, as well as guarantee the authenticity of its products. Failure to observe international standards creates serious risks for the environment and, above all, for the personnel working with the systems on a daily basis.



Sectors of application:



refineries



petrochemical

plants



Onshore facilities











Fuel storage facilities



100% produced by Cortem

CERTIFICATION DATA

Group II Category 2GD Classification: zone 21 - zone 22 (Dust) Installation: EN 60079.14 zone 1 - zone 2 (Gas) C€ 0722 (II 2 GD Ex d IIC T6 Gb; Ex tb IIIC T76°C Db Marking: **Certificate: ATEX** CESI 14 ATEX 017X **IEC Ex** CES 11.0011X For all IEC Ex and INMETRO certification data, download the certificate from **INMETRO** DNV 16.0098X CENELEC EN 60079-0: 2012, EN 60079-0/A11: 2013, EN 60079-1: 2014, EN60079-31: 2014 and European Directive 2014/34/EU. Standards: IEC 60079-0: 2011, IEC 60079-1: 2014, IEC 60079-31: 2013 RoHS Directive 2002/95/EC. 76°C (T6) Temperature class: -20°C +50°C Ambient temp.:





MECHANICAL FEATURES

Socket body: Low copper content aluminium alloy, complete with wall fastening lugs and threaded socket closure cap

attached to body with a safety chain

Lid: Screw fastened, aluminium alloy with low copper content. Used to access socket and make electrical

connection

Plug: Low copper content aluminium alloy, complete with colour coded plastic lock rings to identify the mains power

supply voltage

Pins: Nickel-plated brass

Gaskets: Acid, hydrocarbon and high temperature resistant silicon positioned between the body and the lid

Certificate label: Adhesive affixed to external surface

Screws: Stainless steel

Earth screw: M5 external and internal **Coating:** Polyester RAL 7035 (Light grey)

Threaded entry points: One upper and one lower \emptyset 1" or 3/4"

Corrosion Resistance

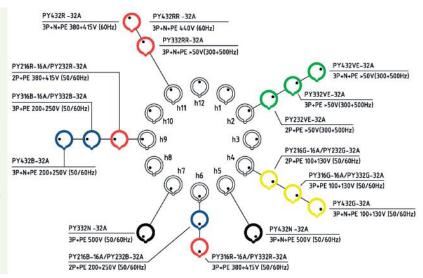
The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot-humid cycles) and EN60068-2-11 (salt fog test)

Safety system:

The sockets have an interlocked disconnect switch with plug. The rotary movement together with the closing/opening operations which occur inside a special explosion-proof chamber ensure any explosion in the presence of gas is contained. The electrical circuit is connected only after the SPY series plug has been correctly inserted into its seat, and ensures it can only be removed once the electrical circuit has been disconnected.

These sockets are unique in that they can be equipped with SPY series plugs which can also be used with industrial solder type sockets. This feature is unique to the Cortem Group, and is designed to allow the user to keep a limited stock of spare parts compared to competitor sockets which do not have this specification. In fact, the position of the phase and earth pins, together with the coloured lock rings which comply with the colour code required by IEC/EN 60309-2 for industrial sockets and plugs, identify them according to the power supply voltage and current used.

For a better understanding, we have included the earth pin (PE) positioning drawing and relative colours, in compliance with IEC/EN 60309-2, for voltages greater than 50V.



ELECTRICAL FEATURES

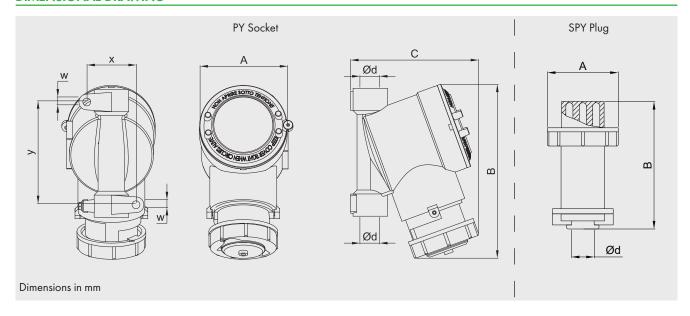
Rated voltage: Rated frequency: Rated current: Max. 690 Vac Max. 500 Hz 16A and 32A

Cable entry: no. 2 on the socket and no. 1 on the plug

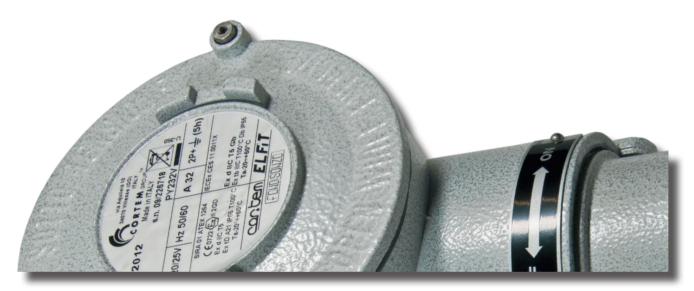
Max. cable cross-section: for $16A: 4 \text{ mm}^2$

for 32A: 6 mm^2

DIMENSIONAL DRAWING



MODEL		DIMENSIONS (mm)						WEIGHT
MODEL	A	В	С	у	х	w	Ø d	(Kg)
PY16	Ø 90	165	135	104	50	8	3/4″ IS07/1	1.7
PY32	Ø 120	240	175	140	80	8	1" IS07/1	2.1
SPY16	Ø 66	116	-	-	-	-	3/4″ IS07/1	0.3
SPY32	Ø 92	145	-	-	-	-	1" IS07/1	0.6



CODE SELECTION TABLE

RATED CURRENT	NUMBER OF POLES	FREQUENCY Hz	RATED VOLTAGE Vac	ARRANGEMENT	WEIGHT (Kg)	SOCKET CODE	PLUG CODE
	2P + 👤	50 / 60	200 / 250	•	1.70	PY216B	SPY216B
	2P + 👤	50 / 60	100 / 130	(+ ₄) 4h	1.70	PY216G	SPY216G
	2P + 👤	50 / 60	20 / 25	5 Sh	1.70	PY216V	SPY216V
	2P + 👤	50 / 60	380 / 415	(1) 9h	1.70	PY216R	SPY216R
16 A	2P + 👤	50 / 60	40 / 50	12	1.70	PY216BI	SPY216BI
	3P + 👤	50 / 60	200 / 250	•	1.70	PY316B	SPY316B
	3P + 👤	50 / 60	100 / 130	4 h	1.70	PY316G	SPY316G
	3P + 👤	50 / 60	20 / 25	Sh Sh	1.70	PY316V	SPY316V
	3P + 👤	50 / 60	380 / 415	•••	1.70	PY316R	SPY316R
	2P + 👤	50 / 60	200 / 250	•	2.10	PY232B	SPY232B
	2P + 👤	50 / 60	40 / 50	123	2.10	PY232BI	SPY232BI
00.4	2P + 👤	50 / 60	100 / 130	(+) 4h	2.10	PY232G	SPY232G
32 A	2P + _	50 / 60	380 / 415	(a)	2.10	PY232R	SPY232R
	2P + _	50 / 60	20 / 25	Sh Sh	2.10	PY232V	SPY232V
	2P + 上	50 / 60	50	27	2.10	PY232VE	SPY232VE

Features comply with CEI EN 60309-1/60309-2



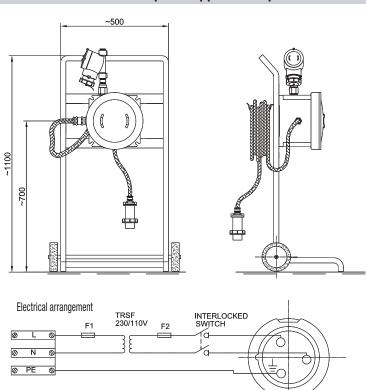
CODE SELECTION TABLE

RATED CURRENT	NUMBER OF POLES	FREQUENCY Hz	RATED VOLTAGE Vac	ARRANGEMENT	WEIGHT (Kg)	SOCKET CODE	PLUG CODE
	3P + ᆜ	50 / 60	200 / 250	*	2.10	PY332B	SPY332B
	3P + ᆜ	50 / 60	100 / 130	4 h	2.10	PY332G	SPY332G
	3P + 👤	50 / 60	500	₽ 7h	2.10	PY332N	SPY332N
	3P + 👤	50 / 60	380 / 415	⊕	2.10	PY332R	SPY332R
	3P + 👤	50 / 60	440	111	2.10	PY332RR	SPY332RR
	3P + 👤	50 / 60	20 / 25	Sh Sh	2.10	PY332V	SPY332V
32 A	3P + 上	50 / 60	50	2m	2.10	PY332VE	SPY332VE
	3P + N + 👤	50 / 60	200 / 250	•	2.10	PY432B	SPY432B
	3P + N + 👤	50 / 60	100 / 130	4h	2.10	PY432G	SPY432G
	3P + N + 👤	50 / 60	500	7h	2.10	PY432N	SPY432N
	3P + N + 👤	50 / 60	380 / 415	(m)	2.10	PY432R	SPY432R
	3P + N + 👤	50 / 60	440	11h	2.10	PY432RR	SPY432RR
	3P + N + 👤	50 / 60	50	25	2.10	PY432VE	SPY432VE

Features comply with CEI EN 60309-1/60309-2

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	LEGEND	
	Cable gland	3/4" ISO 7/1 or 1" ISO 7/1	Material: nickel-plated brass std. cable range 11 to 20	NAV2B NAV3B	RCAMIO RECAMIO	
	Сар	3/4" ISO 7/1 or 1" ISO 7/1	Material: nickel-plated brass	PLG2B PLG3B	RECAMBIO RECAMBIO	
W-12-10-10		PY216	2P+T 16A 690V	A2-10E/S		
		PY232	2P+T 32A 690V	A2-32E/A		
	Rotary disconnect switch	PY316	3P+T 16A 690V	A3-10E/S	RICAMBIO	
		PY332	3P+T 32A 690V	A3-32E/A		
a 6		PY432	3P+N+T 32A 690V	A4-32E/A		
		SPY216		M16-523/		
	Coloured ring with bayonet connection	SPY316	The rated voltage or	M16-751/		
		SPY232 SPY332	frequency of each plug is identified by its colour	M32-523/		
		SPY432		M-766/		
		PY216		M-0384/		
	Coloured cap with bayonet connection	PY316	The rated voltage or	M-0574/	BICAMBIC	
	and safety chain to	PY232 PY332	frequency of each plug is identified by its colour	M-0385/		
	3 124	PY432		M-0564/		

Special application - portable socket and plug



Portable socket comprised of:

- CCA-03E housing with internal frame and pre-installed 230/110V terminals and transformer
- PY-216G socket, 110V, 1P+N+T
- SPY-216B plug, 230V, 1P+N+T complete with 30 m of 3G2.5 cable
- SPY-216G plug, 110V, 1P+N+T
- easy to use, powder coated steel trolley



FSQC series sockets are manufactured in two phase + earth (PE) and three phase + earth (PE) versions. They are therefore suitable for single phase or three phase loads. They have an automatic circuit breaker with both thermal (overload) protection and magnetic (short circuit) protection with a typical "C" curve for electrical loads and a fixed factory default trip current threshold.

The range includes two pole sockets + earth (PE), three pole sockets + earth (PE), with a current capacities from 10A up to a maximum of 63A, maximum voltage of 690VAC and frequency of 50/60Hz.

Cortem has chosen to adopt industrial type switches for these sockets, as well, and they can be equipped with 63A FP series plugs.

These sockets can be used in any environment with a potentially explosive atmosphere, and are manufactured so they cannot be used with industrial type plugs.

Cortem Group applies a tamper-evident holographic security label to its products, complete with a unique authentication numeric code, to combat the illegal sale of imitations and counterfeits, as well as guarantee the authenticity of its products. Failure to observe international standards creates serious risks for the environment and, above all, for the personnel working with the systems on a daily basis.



Sectors of application:

















Petr

Petroleum refineries

Chemical and petrochemical plants

Onshore facilities

Offshore facilities

Petroleum Low loading/unloading temperatures pontoons

Low Fuel storage peratures facilities

e 100% produced by Cortem

CERTIFICATION DATA

Classification:	Group II	Category 2	2GD
Installation: EN 60079.14	zone 1 - zone 2 (Gas)	zone 21 - zone	22 (Dust)
Marking:	C € 0722 €	T6 Gb; Ex tb IIIC T	185°C Db 1P65
Certificate:	ATEX CESI 04 ATEX 04	<u>13</u>	
	IEC Ex <u>CES 11.0012X</u>		For all IEC Ex and INMETRO certification data,
	INMETRO AVAILABLE		download the certificate from www.cortemgroup.com
Standards:	CENELEC EN 60079-0: 2012, Directive 2014/34/EU. IEC 60079-0: 2010, IEC 6007 RoHS Directive 2002/95/EC.		7, EN60079-31: 2009 and European 079-31: 2008
Temperature class:	85°C (T6)		
Ambient temp.:	¾ -20°C +40°C ↓	With internal 100A rated cu	rrent switch
	¾ -20°C +55°C ∅	With internal 125A rated cu	rrent switch
Degree of protection:		IP65	





MECHANICAL FEATURES

Socket body: Low copper content aluminium alloy, complete with wall fastening lugs and threaded socket closure cap

attached to body with a safety chain

Lid: Screw fastened, aluminium alloy with low copper content. Used to access socket and make electrical

connection

Plug: Low copper content aluminium alloy, complete with plastic lock rings

Pins: Nickel-plated brass

Gaskets: Acid, hydrocarbon and high temperature resistant silicon positioned between the body and the lid

Certificate label: Adhesive affixed to external surface

Screws: Stainless steel

Earth screw: M6 external, M5 internal **Coating:** Polyester RAL 7035 (Light grey)

Threaded entry points:One upper and one lower Ø 1" (FSQC-2...)
One upper and one lower Ø 1 1/2" (FSQC-3...)

Corrosion Resistance

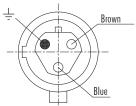
The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot-humid cycles) and EN60068-2-11 (salt fog test)

Safety system:

The sockets have an interlocked disconnect switch with plug. The rotary movement together with the closing/opening operations which occur inside a special explosion-proof chamber ensure any explosion in the presence of gas is contained. The electrical circuit is connected only after the SPY series plug has been correctly inserted into its seat, and ensures it can only be removed once the electrical circuit has been disconnected.

Internal layout of power and switching modules, in main markings (front view of FSQC socket)

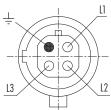
Marking 2P+T 220V-250V



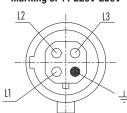




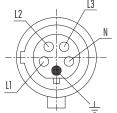
Marking 3P+T 380V-415V



Marking 3P+T 220V-250V



Marking 3P+N+T 220V-250V





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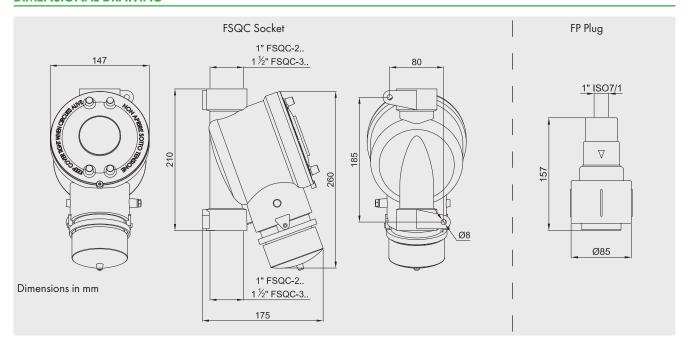
ELECTRICAL FEATURES

Rated voltage: Max. 415 V
Rated frequency: Max. 50/60 Hz
Rated current: From 10 A to 63 A

Cable entry: no. 2 on the socket and no. 1 on the plug

Max. cable cross-section: Max. 10 mm²

DIMENSIONAL DRAWING



CODE SELECTION TABLE

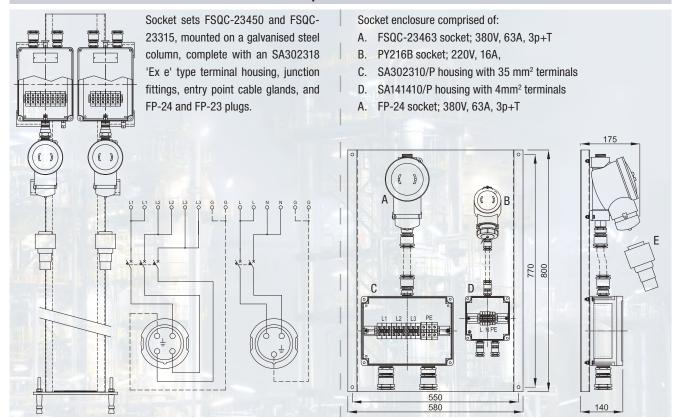
		SOCKETS		
NUMBER OF POLES	MAX. CAPACITY (A)	ENTRY POINTS	WEIGHT (Kg)	SOCKET CODE
2P +	10 A	2 x 1"	3.15	FSQC-23310
2P + 	15 A	2 x 1"	3.15	FSQC-23315
2P + 	20 A	2 x 1"	3.15	FSQC-23320
2P + \(\frac{1}{-}\)	30 A	2 x 1"	3.15	FSQC-23330
2P +	40 A	2 x 1"	3.15	FSQC-23340
2P +	50 A	2 x 1"	3.15	FSQC-23350
2P + 🖶	63 A	2 x 1"	3.15	FSQC-23363
3P +	10 A	2 x 1"	3.37	FSQC-23410
3P +	15 A	2 x 1"	3.37	FSQC-23415
3P + 🖶	20 A	2 x 1"	3.37	FSQC-23420
3P + 🖶	30 A	2 x 1"	3.37	FSQC-23430
3P +	40 A	2 x 1"	3.37	FSQC-23440
3P +	50 A	2 x 1"	3.37	FSQC-23450
3P + <u></u>	63 A	2 x 1"	3.37	FSQC-23463

CODE SELECTION TABLE

	SOCKETS					
NUMBER OF POLES	MAX. CAPACITY (A)	ENTRY POINTS	WEIGHT (Kg)	SOCKET CODE		
2P +	10 A	2 x 1 1/2"	3.05	FSQC-33310		
2P +	15 A	2 x 1 1/2"	3.05	FSQC-33315		
2P + 丄	20 A	2 x 1 1/2"	3.05	FSQC-33320		
2P +	30 A	2 x 1 1/2"	3.05	FSQC-33330		
2P + 丄	40 A	2 x 1 1/2"	3.05	FSQC-33340		
2P +	50 A	2 x 1 1/2"	3.05	FSQC-33350		
2P + 丄	63 A	2 x 1 1/2"	3.05	FSQC-33363		
3P + 👤	10 A	2 x 1 1/2"	3.27	FSQC-33410		
3P +	15 A	2 x 1 1/2"	3.27	FSQC-33415		
3P + Ϊ	20 A	2 x 1 1/2"	3.27	FSQC-33420		
3P + 👤	30 A	2 x 1 1/2"	3.27	FSQC-33430		
3P + 🚣	40 A	2 x 1 1/2"	3.27	FSQC-33440		
3P + =	50 A	2 x 1 1/2"	3.27	FSQC-33450		
3P + =	63 A	2 x 1 1/2"	3.27	FSQC-33463		

PLUGS						
NUMBER OF POLES	MAX. CAPACITY (A)	ENTRY POINT	FOR SOCKET TYPE	WEIGHT (Kg)	PLUG CODE	
2P + \(\frac{1}{-}\)	63 A	1 x 1"	FSQC (2P+T)	0.82	FP-23	
3P + \(\frac{1}{-}\)	63 A	1 x 1"	FSQC (3P+T)	0.83	FP-24	

Example installations



EPC, EPRC, AP Series Sockets and plugs from 63 A to 125 A

EPC and EPRC sockets are particularly suitable for powering utility currents above 32A (up to a maximum of 125A), such as filter press systems for the reclamation and regeneration of oil from large power transformers, large welding machines, electro-pneumatic compressors, generators and a whole series of large mobile utilities required for the maintenance and or updating process elements.

EPC and EPCR series sockets, precisely because they must be suitable for significantly large electric loads, are equipped with an automatic circuit breaker with both thermal (overload) protection and magnetic (short circuit) protection with a typical "C" curve for electrical loads and a fixed factory default trip current threshold.

The range includes three pole sockets + earth (PE) and three pole sockets + Neutral + earth (PE), with a current capacities of 63A and 125A, with a maximum voltage of 500VAC. They can be equipped with 125A AP series plugs.

Cortem Group applies a tamper-evident holographic security label to its products, complete with a unique authentication numeric code, to combat the illegal sale of imitations and counterfeits, as well as guarantee the authenticity of its products. Failure to observe international standards creates serious risks for the environment and, above all, for the personnel working with the systems on a daily basis.



Sectors of application:

















Petroleum refineries

Chemical and petrochemical plants

facilities

Offshore facilities

Petroleum loading/ unloading pontoons

Low temperatures

Fuel storage facilities

100% produced by Cortem

CERTIFICATION DATA

Classification:	Group II	Category 2GD
Installation: EN 60079.14	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)
Marking:	C € 0722 €	T6 Gb; Ex tb IIIC T85°C Db IP66
Certificate:	ATEX CESI 03 ATEX 19	98
	IEC Ex IECEx CES 16.00	For all IEC Ex certification data download the certificate from www.cortemgroup.com
Standards:	Directive 2014/34/EU.	, EN 60079-1: 2007, EN60079-31: 2009 and European 79-1: 2007, IEC 60079-31: 2008
Temperature class:	85°C (T6)	
Ambient temp.:	-20°C +40°C	With internal 100A rated current switch
	-20°C +55°C	With internal 125A rated current switch
Degree of protection:		IP66

EPC Series EPRC, AP Sockets and plugs from 63 A to 125 A





MECHANICAL FEATURES

Socket body: Low copper content aluminium alloy, complete with wall fastening lugs and threaded socket closure cap

attached to body with a safety chain

Lid: Screw fastened, aluminium alloy with low copper content for opening socket and making electrical connection

Plug: Low copper content aluminium alloy, complete with plastic lock rings

Pins: Nickel-plated brass

Gaskets: Acid, hydrocarbon and high temperature resistant positioned between the body and the lid

Certificate label: Metal, affixed externally

Screws: Stainless steel

Earth screw: M6 external and internal
Coating: Polyester RAL 7035 (Light grey)

Threaded entry points: Two upper and two lower \emptyset 1 1/2" (EPC)

Two upper Ø 1 1/2" (EPRC..)

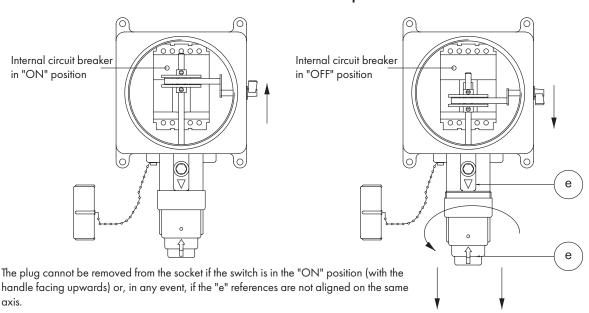
Corrosion Resistance:

The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot-humid cycles) and EN60068-2-11 (salt fog test)

Safety system:

The external control lever and mechanically interlocked safety system prevents the electrical circuit from closing if the plug has not been correctly inserted in its explosion-proof housing, and prevents extraction if the automatic circuit breaker has not be opened previously. These sockets can be used in any environment with a potentially explosive atmosphere, and are manufactured so they cannot be used with industrial type plugs.

Circuit breaker operation



EPC Series EPRC, AP Sockets and plugs from 63 A to 125 A

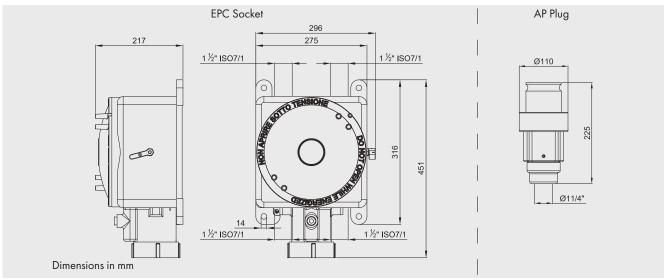
ELECTRICAL FEATURES

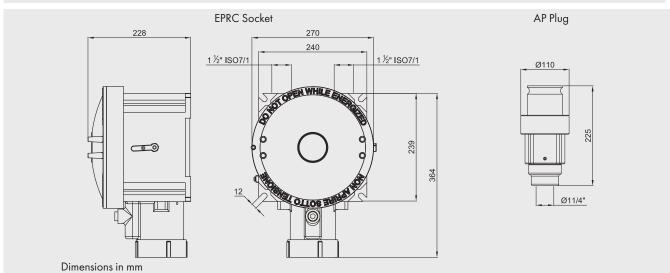
Rated voltage: Max. 690 V
Rated frequency: Max. 50/60 Hz
Rated current: From 63 A to max. 125 A
Cable entry: Socket EPC 4 holes Ø 1 1/2"
Socket EPRC 2 holes Ø 1 1/2"

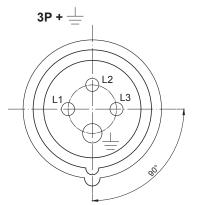
Plug AP 1 hole Ø 1 1/4"

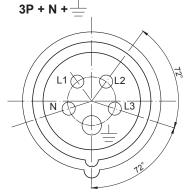
Max. cable cross-section: Max. 50 mm²

DIMENSIONAL DRAWING









Position of internal equipment for the execution of EPC... sockets

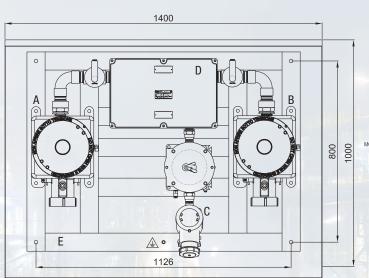
Front view of EPC... sockets

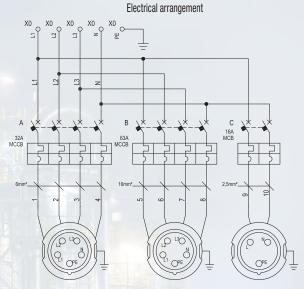
CODE SELECTION TABLE

	SOCKETS					
NUMBER OF POLES	MAX. CAPACITY (A)	CASING TYPE	WEIGHT (Kg)	SOCKET CODE		
3P + 上	63 A	GUB-03	14	EPC1-1Q63B		
3P + N + 👤	63 A	GUB-03	14	EPC1-1P63B		
3P + 👤	125 A	GUB-03	14	EPC1-1Q125B		
3P + N + 👤	125 A	GUB-03	14	EPC1-1P125B		
3P +	63 A	CCA-03E	14	EPRC1-1Q63B		
3P + N + 👤	63 A	CCA-03E	14	EPRC1-1P63B		
3P + 🖶	125 A	CCA-03E	14	EPRC1-1Q125B		
3P + N + 👤	125 A	CCA-03E	14	EPRC1-1P125B		

PLUGS					
NUMBER OF POLES	PLUG CODE				
3P +	125 A	2	AP-4125		
3P + N +	125 A	2	AP-5125		

Socket combination unit



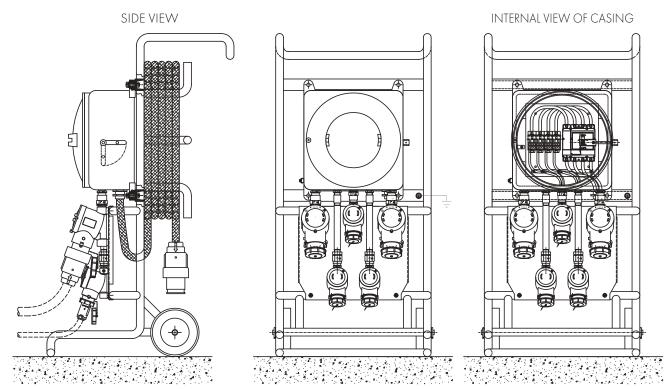


Socket enclosure comprised of:

- A. EPC1-1P32B socket, 3p+N+T, 400V, with MCCB 32A 18kA
- A. EPC1-1P63B socket, 3p+N+T, 400V, with MCCB 63A 18kA
- C. CCA-02C housing with MCB 16A, 2P, 'C' curve for 18kA
- B. PY216B socket, 2p+T, 230V 16A 18KA
- D. SAG473018 Cortem aluminium housing
- E. Galvanized steel "U" profile support frame, 80x45



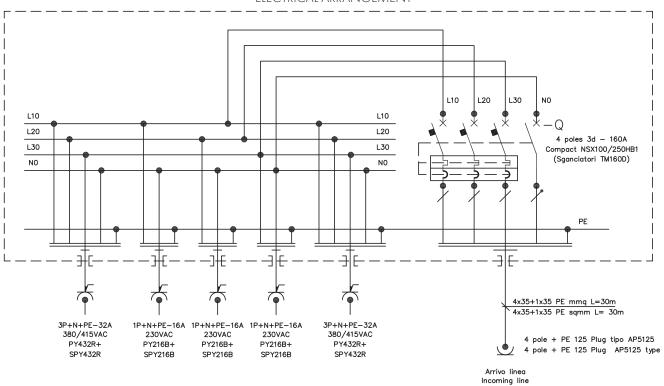
TROLLEY MOUNTED SOCKET UNIT ASSEMBLY



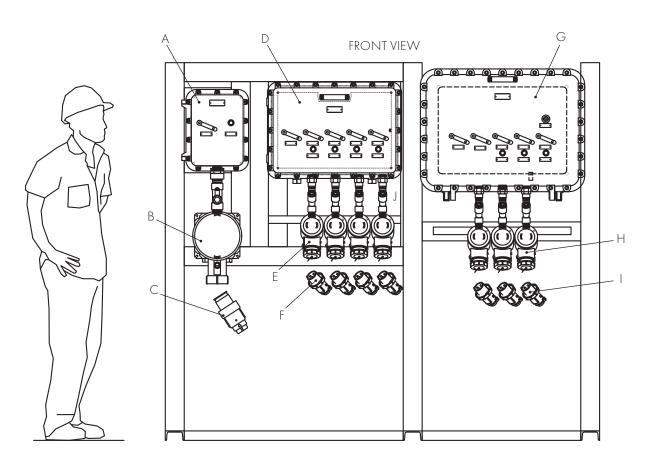
Unit comprised of:

- Three PY216B sockets, 2p+T, 16A, 230Vac and three SPY216B plugs.
- Two PY432R sockets, 3p+N+T, 32A, 380/415Vac and two SPY432R plugs.
- GUB-04 housing, complete with circuit breaker.
- Cable suitable for extremely high mechanical stresses, and is resistant to both oils and chemicals, 4x35 + 1x35PE mm², L=30m.
- One AP5125 plug, 4p+T (400/230Vac supply line).
- Steel trolley with rubber wheels, RAL3020 powder coated.

ELECTRICAL ARRANGEMENT



ELECTRICAL DISTRIBUTION PANEL WITH INTERLOCKED SOCKETS



LAYOUT 3D

Socket enclosure comprised of:

- A. An EJB-4B aluminium housing with a boxed automatic switch and control lever, relay protection, reset button, fuse and toroidal transformer.
- B. An EPRC1-1Q100B with 3p+T, 100A, 600V, with an interlocked automatic switch.
- C. One AP-4125 plug, 3p+T, max. 125A.
- D. An EJB-55 aluminium housing with a boxed automatic switches and control handles, relay protection, reset buttons, fuses and toroidal transformers.
- E. Four PY232B sockets, 2p+T, 32A, 200/250V with interlocked switch.
- F. Four SPY232B plugs, 2p+T, 32A.
- G. An EJB-6 housing with a 1000VA 120/24V 60Hz transformer, boxed automatic switch and control lever, relay protection, reset button, fuse, toroidal transformer, and green signalling light.
- H. Two PY232G sockets, 2p+T, 32A, 110/130V with interlocked switch; one PY232V socket, 2p+T, 32A, 20/25V with interlocked switch.
- Two SPY232G plugs, 2p+T, 32A, 110/130V; one SPY232V plug, 2P+T, 32A, 20/25V.
- J. Galvanized steel "U" profile support frame, 100x50.Lock and junction fittings.

