PYN, SPYN

Sockets and plugs

- Group IIC
- Zone 1, 2, 21, 22
- Aluminium alloy
- Ergonomic
- Plugs can be used with industrial sockets
- Suitable for use in extreme temperatures

-60°C

Sockets and plugs designed for low temperatures

Series PYN... SPYN... Sockets and plugs from 16 A to 125 A

The PYN, SPYN series of sockets and plugs consists of 16 A and 32 A models and 63 A and 125 A models designed with 'Ex db eb, Ex tb' and 'Ex eb, Ex tb' protection and tested for operation at low temperatures down to -60°C.
The 16A and 32A 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 the electrical circuit is only connected after the SPYN series plug has been correctly inserted into its seat and can only be removed once the electrical circuit has been disconnected. The 63A and 125A models are equipped with an automatic circuit breaker as they are designed to withstand high electric loads.
The range includes two pole sockets + earth (PE); three pole sockets + earth (PE) and three pole sockets + neutral + earth (PE), with current capacities of 16A and reduced overall dimensions, up to a maximum of 125A. Voltages range from 50V to a maximum of 690VAC, with a maximum frequency of 50/60Hz. All plug models can also be used in normal industrial sockets conforming to standard IEC/EN 60309-2, whereas all socket models are manufactured so that 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 who work with the systems on a daily basis.

Sectors of application:

Petroleum refineries | Chemical and petrochemical plants | Onshore facilities | Offshore facilities | Petroleum loading/unloading pontoons | Low temperatures | Fuel storage facilities | 100% produced by Cortem

CERTIFICATE DATA

Classification:	Group II	Category 2GD		
Installation: EN 60079.14	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)		
Marking:	CE 0722 Ex II 2 GD Ex db eb IIC T... Gb; Ex tb IIIC T...°C Db			Socket
	CE 0722 Ex II 2 GD Ex eb IIC T... Gb; Ex tb IIIC T...°C Db			Plug
Certificate:	ATEX IMQ 20 ATEX 049X			
	IEC Ex IMQ 21.0003X	For all IEC Ex certificate data, download the certificate from www.cortemgroup.com		
Standards:	CENELEC EN 60079-0: 2018, EN 60079-1: 2014, EN 60079-7: 2017, EN 60079-31: 2014 and European Directive 2014/34/EU. IEC 60079-0: 2017, IEC 60079-1: 2014, IEC 60079-7: 2017, IEC 60079-31: 2022 RoHS Directive 2002/95/EC.			
Models:	16 A	32 A		
Temperature class:	T85°C (T6)	T100°C (T4)		
Temp. Temperature:	-60°C +60°C	-60°C +60°C		
Models:	63 A	125 A		
Temperature class:	T85°C (T6)	T140°C (T3)	T134°C (T4)	
Temp. Temperature:	-60°C +60°C	-60°C +55°C	-60°C +49°C	
Degree of protection:	IP66			

PYN..., SPYN... 16 A

SPYN...,PYN... 32 A

PYN... 63 A, 125 A

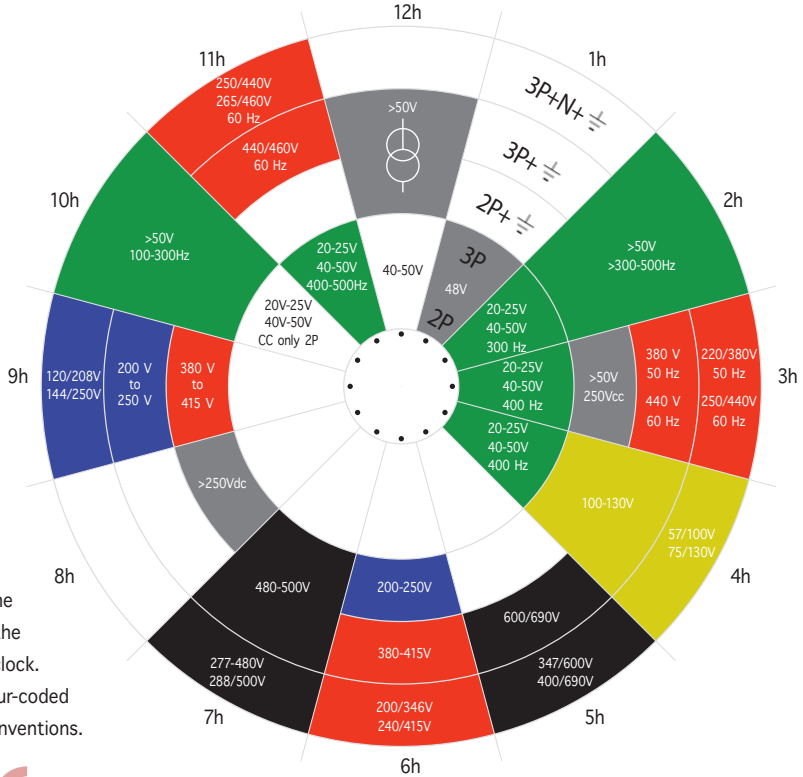
SPYN... 63 A e 125 A

MECHANICAL FEATURES

Socket body:	Low copper content aluminium alloy, complete with wall fastening lugs and plastic bayonet socket closure cap, with identifying colour and 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
Gasket:	Acid, hydrocarbon and high temperature resistant silicone positioned between the body and the lid
Certificate label:	Adhesive affixed to external surface
Screws, bolts and nuts:	Stainless steel
Coating:	Polyester RAL 7035 (Light grey)
Resistenza alla corrosione:	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)

The **SPYN series** plugs can also be used with industrial solder type sockets. This possibility is also designed to allow the user to keep a limited stock of spare parts. 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.



PIN POSITION

The hour position h is determined with the socket viewed from the front, observing the position of the earth contact in relation to the main reference point always positioned at 6 o'clock.

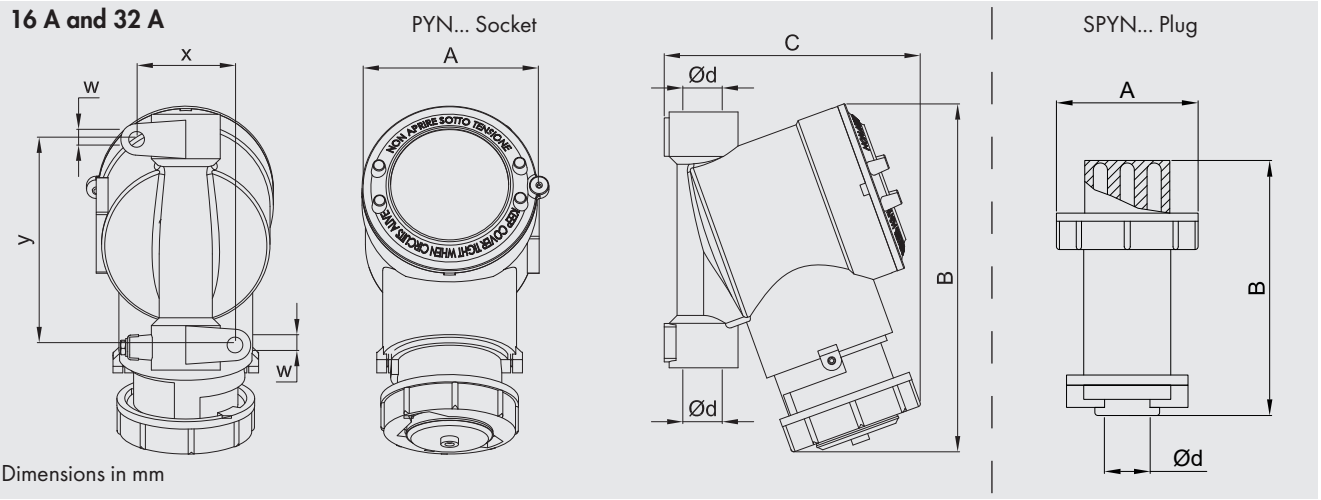
The different rated voltages are also given different colour-coded conventions.

ELECTRICAL FEATURES

Rated voltage: Max. 690 V
Rated frequency: Max. 50/60 Hz
Rated current: 16 A, 32 A, 63 A and 125 A
Cable entry: no. 2 on the socket and no. 1 on the plug
Max. cable cross-section: for 16A: 4 mm² for 63 A: 10 - 16 mm²
for 32A: 6 mm² for 125 A: 35 - 50 mm²

DIMENSIONAL DRAWING

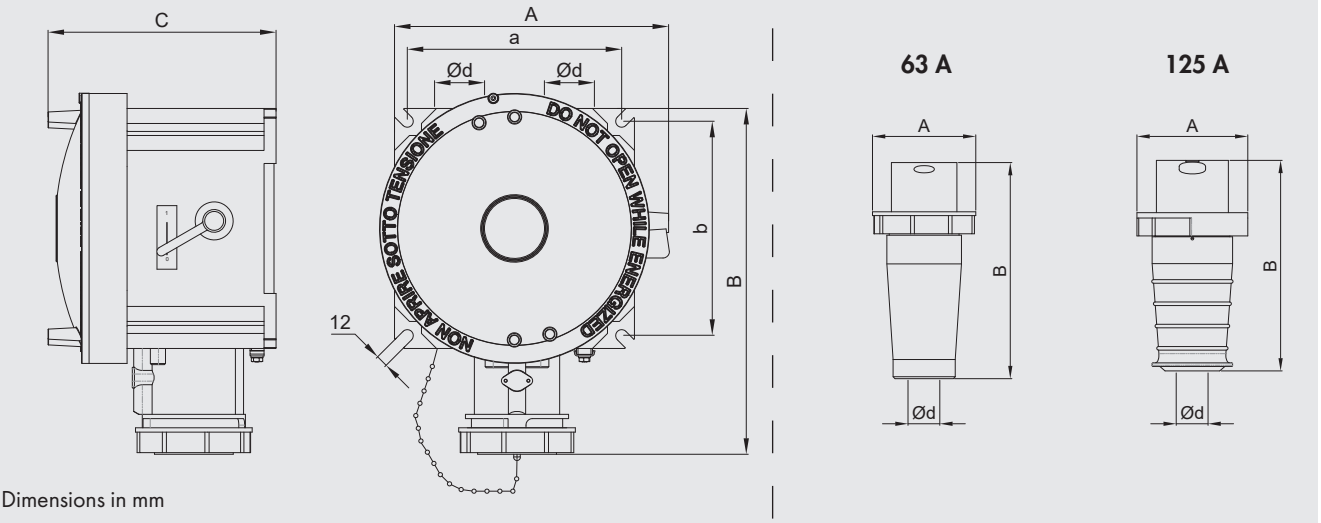
16 A and 32 A



Dimensions in mm

MODEL	DIMENSIONS (mm)							WEIGHT (kg)
	A	B	C	y	x	w	Ø d	
PYN..16..	Ø 90	165	135	104	50	8	3/4" NPT	1.7
PYN..32..	Ø 120	240	175	140	80	8	1" NPT	2.1
SPYN..16..	Ø 66	116	-	-	-	-	3/4" NPT	0.3
SPYN..32..	Ø 92	145	-	-	-	-	1" NPT	0.6

63 A and 125 A



Dimensions in mm

MODEL	DIMENSIONS (mm)						WEIGHT (kg)
	A	B	C	a	b	Ø d	
PYN..63..	280	337	210	213	213	1 1/2" NPT	11
PYN..125..	280	345	210	213	213	1 1/2" NPT	11,4
SPYN..63..	108	226	-	-	-	ISO M32x1,5	1,2
SPYN..125..	124	235	-	-	-	ISO M40x1,5	1,5

CODE SELECTION TABLE

RATED CURRENT	NUMBER OF POLES	FREQUENCY Hz	RATED VOLTAGE Vac	ARRANGEMENT	WEIGHT (kg)	SOCKET CODE	PLUG CODE
16 A	2P + ⏚	50 / 60	20 / 25	 5h	1.70	**PYN216V**	**SPYN216V**
	2P + ⏚	50 / 60	100 / 130	 4h	1.70	**PYN216G**	**SPYN216G**
	2P + ⏚	50 / 60	200 / 250	 6h	1.70	**PYN216B**	**SPYN216B**
	2P + ⏚	50 / 60	>50 to 250Vdc	 3h	1.70	**PYN216GR**	**SPYN216GR**
	2P + ⏚	50 / 60	380 / 415	 9h	1.70	**PYN216R**	**SPYN216R**
	2P + ⏚	50 / 60	480 / 500	 7h	1.70	**PYN216N**	**SPYN216N**
	3P + ⏚	50 / 60	20 / 25	 5h	1.70	**PYN316V**	**SPYN316V**
	3P + ⏚	50 / 60	200 / 250	 9h	1.70	**PYN316B**	**SPYN316B**
	3P + ⏚	50 / 60	100 / 130	 4h	1.70	**PYN316G**	**SPYN316G**
	3P + ⏚	50 / 60	380 / 415	 6h	1.70	**PYN316R**	**SPYN316R**
32 A	2P + ⏚	50 / 60	200 / 250	 6h	2.10	**PYN232B**	**SPYN232B**
	2P + ⏚	50 / 60	100 / 130	 4h	2.10	**PYN232G**	**SPYN232G**
	2P + ⏚	50 / 60	380 / 415	 9h	2.10	**PYN232R**	**SPYN232R**

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
32 A	2P + ⏚	50 / 60	20 / 25	 5h	2.10	PYN232V	SPYN232V
	3P + ⏚	50 / 60	200 / 250	 9h	2.10	PYN332B	SPYN332B
	3P + ⏚	50 / 60	100 / 130	 4h	2.10	PYN332G	SPYN332G
	3P + ⏚	50 / 60	500	 7h	2.10	PYN332N	SPYN332N
	3P + ⏚	50 / 60	380 / 415	 6h	2.10	PYN332R	SPYN332R
	3P + ⏚	50 / 60	440	 11h	2.10	PYN332RR	SPYN332RR
	3P + ⏚	50 / 60	20 / 25	 5h	2.10	PYN332V	SPYN332V
	3P + N + ⏚	50 / 60	200 / 250	 9h	2.10	PYN432B	SPYN432B
	3P + N + ⏚	50 / 60	100 / 130	 4h	2.10	PYN432G	SPYN432G
	3P + N + ⏚	50 / 60	500	 7h	2.10	PYN432N	SPYN432N
	3P + N + ⏚	50 / 60	380 / 415	 6h	2.10	PYN432R	SPYN432R
	3P + N + ⏚	50 / 60	440	 11h	2.10	PYN432RR	SPYN432RR

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

CODE SELECTION TABLE

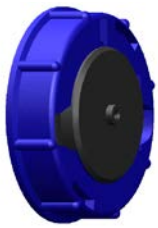
RATED CURRENT	NUMBER OF POLES	FREQUENCY Hz	RATED VOLTAGE Vac	ARRANGEMENT	WEIGHT (kg)	SOCKET CODE	PLUG CODE
63 A	2P + ⏚	50 / 60	200 / 250	 6h	2.10	**PYN263B**	**SPYN263B**
	2P + ⏚	50 / 60	380 / 415	 9h	2.10	**PYN263R**	**SPYN263R**
	3P + ⏚	50 / 60	200 / 250	 9h	2.10	**PYN363B**	**SPYN363B**
	3P + ⏚	50 / 60	500	 7h	2.10	**PYN363N**	**SPYN363N**
	3P + ⏚	50 / 60	690	 5h	2.10	**PYN363NN**	**SPYN363NN**
	3P + ⏚	50 / 60	380 / 415	 6h	2.10	**PYN363R**	**SPYN363R**
	3P + ⏚	50 / 60	440	 11h	2.10	**PYN363RR**	**SPYN363RR**
	3P + N + ⏚	50 / 60	200 / 250	 9h	2.10	**PYN463B**	**SPYN463B**
	3P + N + ⏚	50 / 60	500	 7h	2.10	**PYN463N**	**SPYN463N**
	3P + N + ⏚	50 / 60	690	 5h	2.10	**PYN463NN**	**SPYN463NN**
	3P + N + ⏚	50 / 60	380 / 415	 6h	2.10	**PYN463R**	**SPYN463R**
	3P + N + ⏚	50 / 60	440	 11h	2.10	**PYN463RR**	**SPYN463RR**

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

CODE SELECTION TABLE

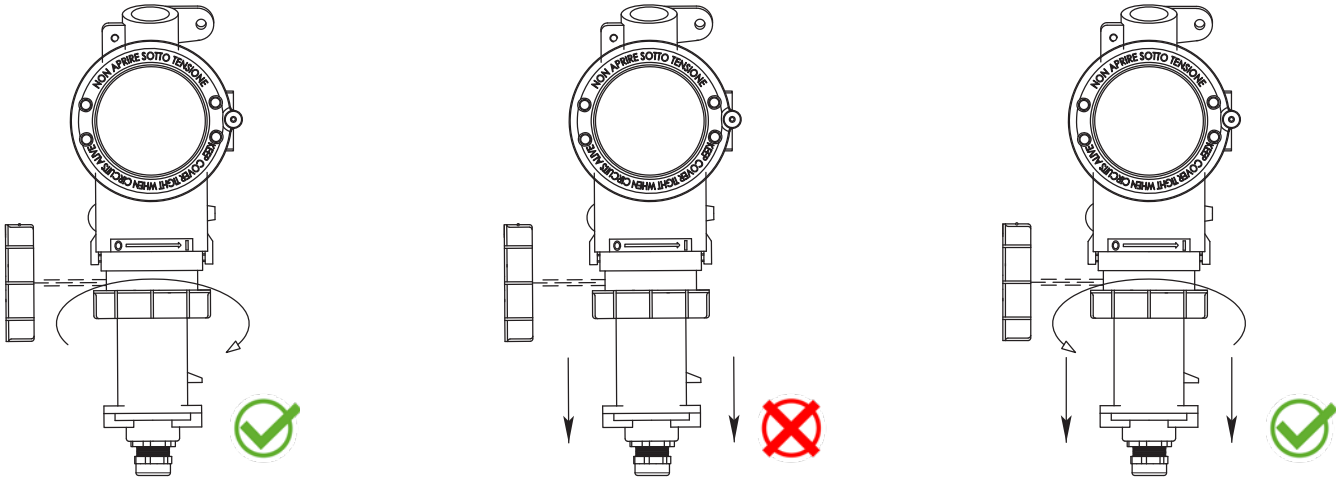
RATED CURRENT	NUMBER OF POLES	FREQUENCY Hz	RATED VOLTAGE Vac	ARRANGEMENT	WEIGHT (kg)	SOCKET CODE	PLUG CODE
125 A	2P + ⏚	50 / 60	200 / 250	 6h	2.10	**PYN2125B**	**SPYN2125B**
	2P + ⏚	50 / 60	380 / 415	 9h	2.10	**PYN2125R**	**SPYN2125R**
	3P + ⏚	50 / 60	200 / 250	 9h	2.10	**PYN3125B**	**SPYN3125B**
	3P + ⏚	50 / 60	500	 7h	2.10	**PYN3125N**	**SPYN3125N**
	3P + ⏚	50 / 60	690	 5h	2.10	**PYN3125NN**	**SPYN3125NN**
	3P + ⏚	50 / 60	380 / 415	 6h	2.10	**PYN3125R**	**SPYN3125R**
	3P + ⏚	50 / 60	440	 11h	2.10	**PYN3125RR**	**SPYN3125RR**
	3P + N + ⏚	50 / 60	200 / 250	 9h	2.10	**PYN4125B**	**SPYN4125B**
	3P + N + ⏚	50 / 60	500	 7h	2.10	**PYN4125N**	**SPYN4125N**
	3P + N + ⏚	50 / 60	690	 5h	2.10	**PYN4125NN**	**SPYN4125NN**
	3P + N + ⏚	50 / 60	380 / 415	 6h	2.10	**PYN4125R**	**SPYN4125R**
	3P + N + ⏚	50 / 60	440	 11h	2.10	**PYN4125RR**	**SPYN4125RR**

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

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	LEGEND
	Cable gland	1 1/2" ISO 7/1 ISO M32 ISO M40	Material: nickel-plated brass	**NAV5SB** **NAV32IB** **NAV40IB**	
	Cap	1 1/2" ISO 7/1 ISO M32 ISOM40	Material: nickel-plated brass	**PLG5B** **PLG3I** **PLG4I**	
	Coloured ring with bayonet connection	SPYN216...	The rated voltage or frequency of each plug is identified by its colour	**M16-523/1/...**	
		SPYN316...		**M16-751/1/...**	
		SPYN232... SPYN332...		**M32-523/1/...**	
		SPYN432...		**M-766/1/...**	
		SPYN263... SPYN363... SPYN463...		**M-1014/...**	
		SPYN2125... SPYN3125... SPYN4125...		**M-1036/...**	
	Coloured cap with bayonet connection and safety chain to prevent losing cap	PYN216...	The rated voltage or frequency of each plug is identified by its colour	**M-0384/1/...**	
		PYN316...		**M-0574/1/...**	
		PYN232... PYN332...		**M-0385/1/...**	
		PYN432...		**M-0564/1/...**	
		PYN263... PYN363... PYN463...		**M-0681/...**	
		PYN2125... PYN3125... PYN4125...		**M-0682/...**	

SAFETY SYSTEM

The **16 A** and **32 A** sockets are equipped with an internal disconnect switch which, by turning the attached plug, closes/opens the contacts inside a special explosion-proof chamber, thus containing any explosions in the presence of gas. The electrical circuit is only connected after the SPYN series plug has been correctly inserted into its seat and it can only be removed once the electrical circuit has been disconnected.



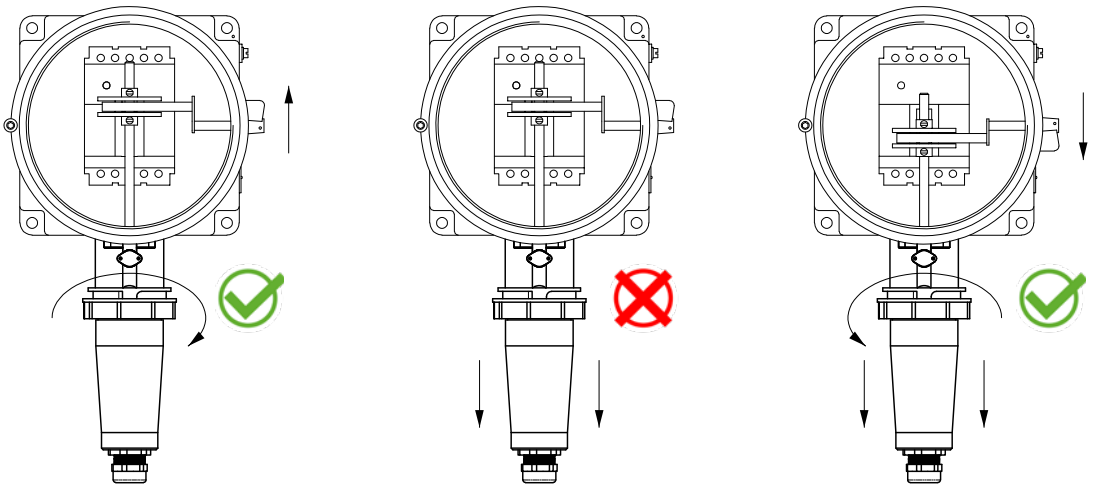
The plug cannot be removed from the socket if it has not first been turned anticlockwise to disconnect the internal electrical circuit.

The **63 A** and **125 A** sockets are equipped with a circuit breaker. Activating the switch via the external control handle triggers the closing/opening operations inside a special explosion-proof chamber, thus containing any explosions in the presence of gas. The electrical circuit is only connected after the SPYN series plug has been correctly inserted into its seat and it can only be removed once the electrical circuit has been disconnected.

Internal circuit breaker in "ON" position.

Internal circuit breaker in "ON" position.

Internal circuit breaker in "OFF" position.



The plug will not come out of the socket if the switch is in "ON" position (with the control handle facing upwards).