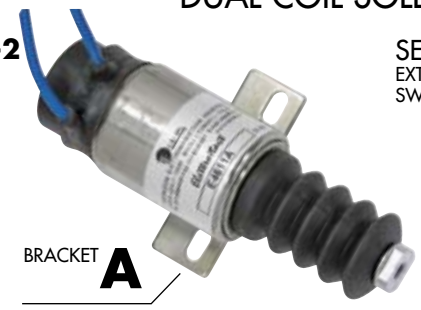
Elettrostart

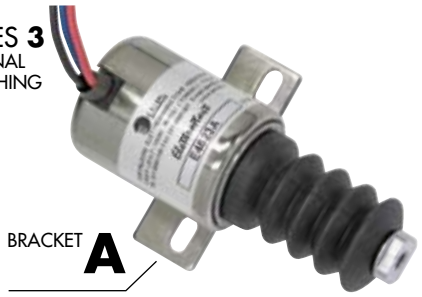
FAMILY E - ES 46

DUAL COIL SOLENOID FOR PULL ACTION OR PULL-PUSH ACTION

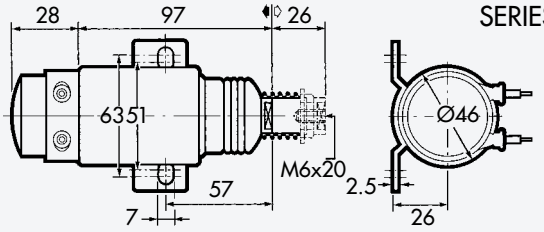
SERIES **1-2**
INTERNAL
SWITCHING



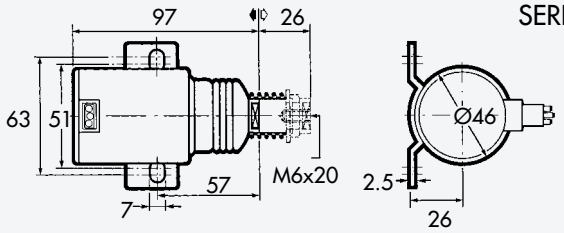
SERIES **3**
EXTERNAL
SWITCHING



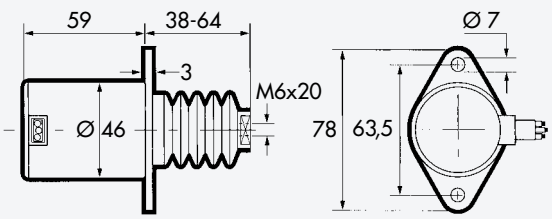
A SERIES **1-2**



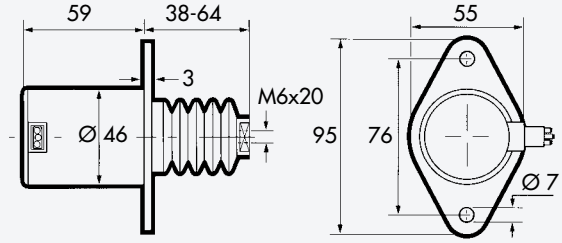
A SERIES **3**



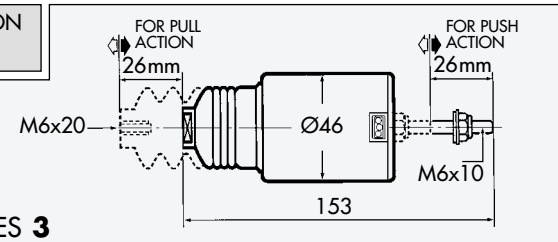
C



C2



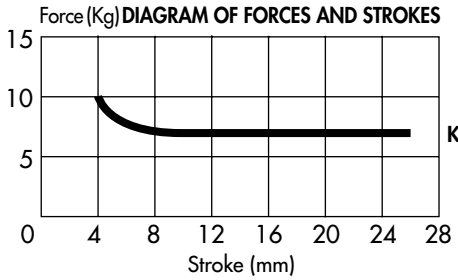
VERSION **ES**



SPECIFICATIONS

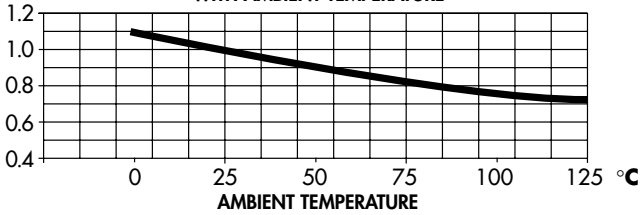
Rated voltage	*12 V DC*	*24 V DC*
Pull current	*40 A*	*23.5 A*
Hold current	*0.60 A*	*0.30 A*
Duty service	*Continuous (100%)*	
Stroke	*26 mm*	
Force at starting	*7 Kg*	
Windings insulation class	*H (180° C)*	
Ambient temperature	*-40° C ÷ 120° C*	
Weight	*0.81 Kg*	

DIAGRAM OF FORCES AND STROKES



1 Kg = 9.81 Newtons

FORCE VARIATION COEFFICIENT ACCORDING WITH AMBIENT TEMPERATURE



OPERATION

The solenoid has two windings:

1) An intermittent-service pulling winding involved in the initial phase for approximately 150 ms, with the function of moving the plunger.
2) A continuous-service holding winding, with the function of maintaining the plunger in position.
   For a proper operation of the solenoid, it is indispensable for the plunger to reach end of travel and to obtain the perfect adherence to the bottom.

AVAILABLE OPTIONS

The desired model has to be defined choosing one option in every column, building in this way the solenoid code.

Versions	Voltages	Circuits	Brackets	Optional Springs	Electrical connections
E46 pull action	**1** = 12 V DC	**1** = Series 1	**A**	**M1**	Standard Cables
ES46 pull-push action (only series 3)	**2** = 24 V DC	**2** = Series 2	**C**	**M2**	
		3 = Series 3	**C2**	**M3**	

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COSTRUZIONI ELETTROMAGNETICHE INDUSTRIALI

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e-mail: ceisrl@tin.it www.cei-italy.it

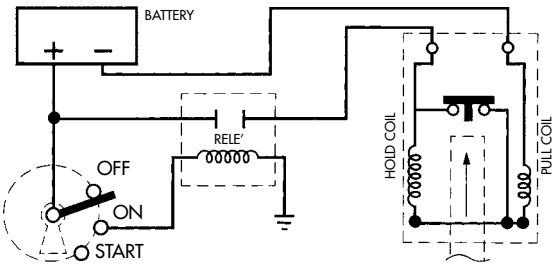
Elettrostart

FAMILY E - ES 46

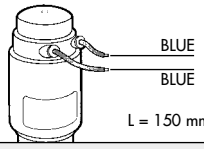
DUAL COIL SOLENOID FOR PULL ACTION OR PULL-PUSH ACTION

ELECTRIC CIRCUITS FOR DIESEL ENGINES

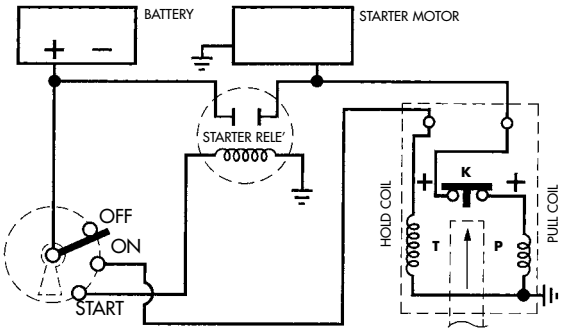
SERIES 1 — WITH INTERNAL SWITCH



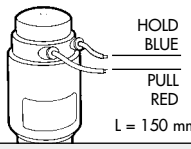
DIRECT ELECTRIC CIRCUIT
The solenoid connection is not conditioned by the polarity (+ and –)
In the version with cables these are blue.

ELECTRICAL CONNECTIONS	BY CABLES		
	 BLUE / BLUE / L = 150 mm		

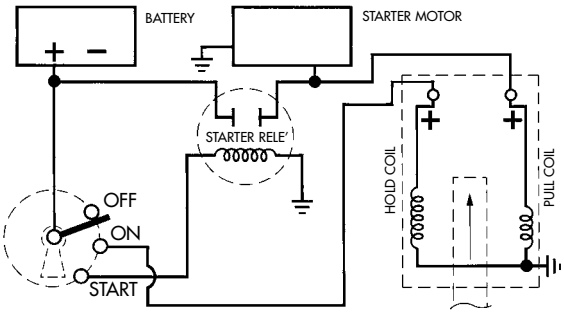
SERIES 2 — WITH INTERNAL SWITCH



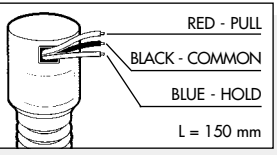
ELECTRIC CIRCUIT COMBINED WITH STARTER MOTOR
The solenoid connection feeding the pull coil P and the hold coil T is marked with the indication PULL (red cable) and HOLD (blue cable). The body is connected to ground. The pull coil P is fed in parallel with the starter motor: the red cable connected to the positive of the starter motor and the blue cable connected to the positive of the key switch. The auxiliary switch K ensures disconnection of the coil P and prevents the possible damaging return of parasitic currents.

ELECTRICAL CONNECTIONS	BY CABLES		
	 HOLD BLUE / PULL RED / L = 150 mm		

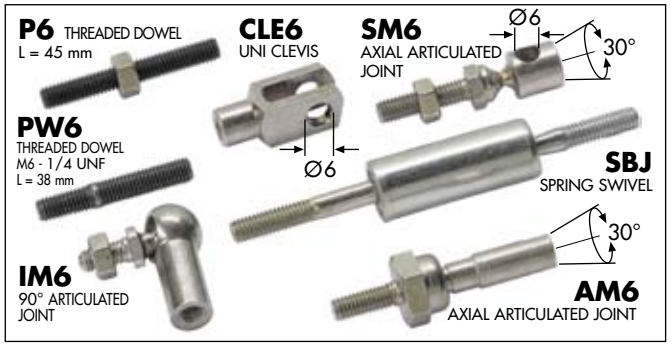
SERIES 3 — WITHOUT INTERNAL SWITCH



The connection of the solenoid is the same as for the Series 2 circuit and is distinguished by PULL and HOLD.
In the version with cables, these are respectively red and blue.
- Designed for coupling with starter motor.
- Designed for external switch (Code CEI IE04 - timed static electronic switch ideal for dusty or saline environments and in applications with repeated accelerations).

ELECTRICAL CONNECTIONS	BY CABLES		
	 RED - PULL / BLACK - COMMON / BLUE - HOLD / L = 150 mm		

ACCESSORIES WITH M6 THREAD



OPTIONAL SPRINGS

INTERNAL SPRING 5M1		INTERNAL SPRING 5M2		INTERNAL SPRING 5M3	
WIRE DIAMETER SPRING 1		WIRE DIAMETER SPRING 1.25		WIRE DIAMETER SPRING 1.45	
					
Kg 0.700	Kg 1.5	Kg 1.100	Kg 2.5	Kg 3.800	Kg 6.0

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