

Single-Phase Series Parallel

Features

USAGE:

Electric switch with reduced tension that activates several parts of each phase winding of the motor and later in parallel for the normal operation.

For boot time in series-parallel is necessary that the motor is able to turn on again with two tensions, the lowest of them equal to the line tension and the other one twice bigger. This kind of connection requires nine motor terminals and the most common terminal voltage is 220/440V, which means that at boot time the motor is started in the series configuration and changes to the parallel configuration when it reaches its nominal speed.

In this kind of start the current peak is reduced to $\frac{1}{4}$ of that one with direct starting. In this kind of connection the motor's start power is also reduced to $\frac{1}{4}$ and the machinery must start practically in empty.

They are used to reduce the starting current of single-phase motors. The motor starting will happen in two steps: when the gauntlet is actuated to the position STARTING the motor windings are connected in series. After having acquired enough rotation the gauntlet is actuated to the position SERVICE in which the motor windings are connected in parallel and the motor works in normal operation. For reasons of safety the gauntlet is not locked in the STARTING position.

APPLICATION:

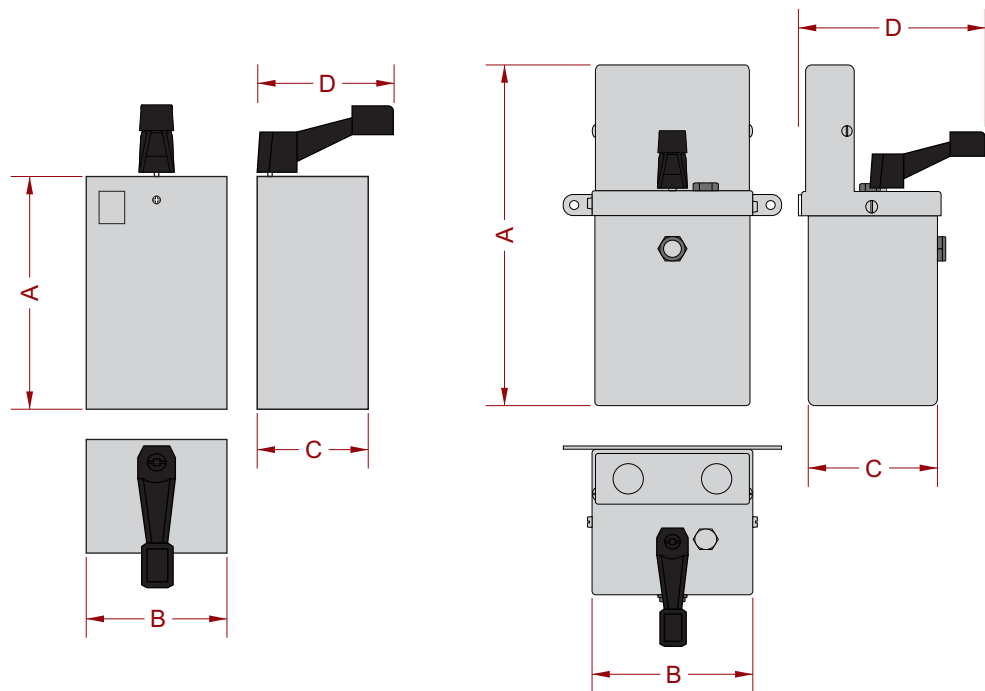
Press brakes, eccentric presses, guillotine presses, construction industry machinery, agricultural machinery, all kinds of machine tools and others.



Technical Specifications

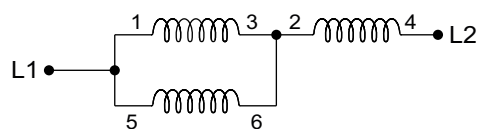
SINGLE-PHASE SERIES-PARALLEL OF OVERLAP										
REF.	TYPE	CV / HP			AMP	DIMENSIONS (mm)				
		220V	380V	440V		A	B	C	D	E
110	MSP	5	-	-	25	215	99	78	100	0
115	MSP	7,5	-	-	35	215	99	78	100	0
120	MSP	10	-	-	45	235	102	83	103	0
125	MSP	12,5	-	-	55	275	135	110	141	0
130	MSP	15	-	-	65	275	135	110	141	0

SINGLE-PHASE SERIES-PARALLEL OIL										
REF.	TYPE	CV / HP			AMP	DIMENSIONS (mm)				
		220V	380V	440V		A	B	C	D	E
1055	MSPO	5	-	-	25	250	142	135	166	0
1060	MSPO	7,5	-	-	35	250	142	135	166	0
1065	MSPO	10	-	-	45	270	142	135	166	0
1070	MSPO	12,5	-	-	55	353	171	150	175	0
1075	MSPO	15	-	-	65	353	171	150	175	0

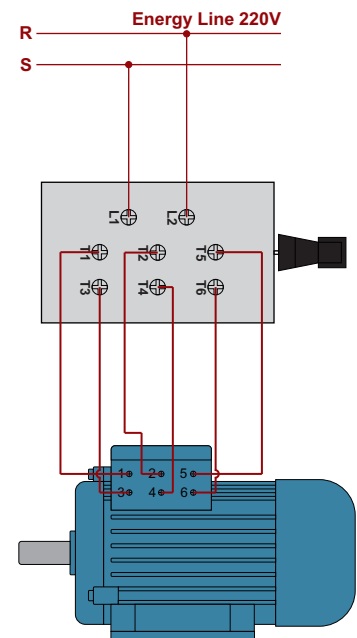
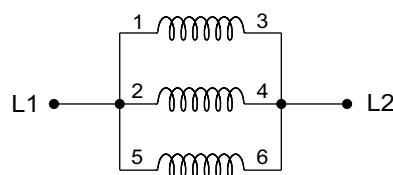


Connection Procedure

Series Starting – 220V



Parallel Working – 110V



- To perform the reversal of the rotation direction is necessary to invert the motor 5 wire for motor 6 wire.
- The single-phase motors don't offer direct reversion.