

MV Motor-Starting Reactor & Autotransformer

For Starting of Induction Motors

Introduction

Economical and low-maintenance, the newly designed Motor-Starting Reactor or Motor-Starting Autotransformer (Compensator) is moisture-resistant and self-extinguishing. It is suited for the starting of induction motors for various types of equipment such as central air systems and pumps in public constructions, factories, and commercial buildings, etc. This medium-voltage dry-type motor starter can furthermore be made according to customers' specific requirements.

Features

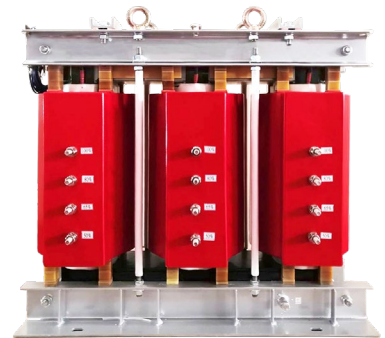
- Class F insulation (Class H available).
- Temperature sensor included.
- High mechanical strength.
- Low-loss and low-noise performance.
- Low-maintenance and cost-effective.
- Easy to set up and operate.
- Great reliability and long service life.



Motor-Starting Reactor

Specifications

- Standard: IEC 62271-106
- Rated Voltage: 3.6, 7.2 or 12 kV
- Frequency: 50 or 60 Hz
- Test Voltage (1 min.): 10 kV (3.6 kV model), 20 kV (7.2 kV model), or 28 kV (12 kV model)
- Rated Starting Time: 60, 90, 120, or 180 sec. (or per customer request)
- Taps: 50%, 65%, 80%, or per customer requests.



Motor-Starting Autotransformer

About *Rated Starting Time*:

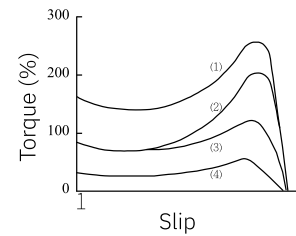
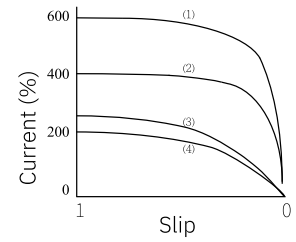
- The duration of each cycle of consecutive startup attempts must not exceed the *Rated Starting Time*. (Rated Starting Time \geq Duration of Each Startup Attempt x Number of Consecutive Startup Attempts.)
- Between each cycle of consecutive startup attempts, there must be at least 3 hours of cooling time.
- For motors with 50 HP or above, consecutive startup attempts are limited to 2 times.
- For motors under 50 HP, consecutive startup attempts are limited to 3 times.
- For startups on a tap which is less than 80% (not including 80%), the *Rated Starting Time* may be increased by 50% (approx.)

Starting Current & Starting Torque

Starting Method \ Tapping	50%		65%		80%	
	Reactor	$I's = 0.5xI_s$ $T's = 0.25xT_s$	Reactor	$I's = 0.65xI_s$ $T's = 0.42xT_s$	Autotransformer (Compensator)	$I's = 0.8xI_s$ $T's = 0.64xT_s$
Autotransformer (Compensator)	$I's = 0.25xI_s$		$I's = 0.42xI_s$		$I's = 0.64xI_s$	

Notes:

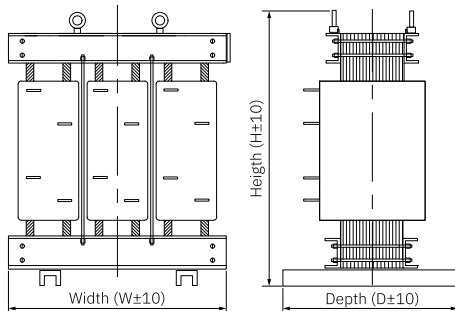
- I_s & T_s denote the Starting Current & Starting Torque when the motor is started on full voltage (without using a Motor Starting Reactor or Autotransformer).
- $I's$ and $T's$ denote the Starting Current & Starting Torque when using a Motor Starting Reactor or Autotransformer.



- (1) Starting on full voltage
- (2) With Reactor (using the 65% Tap)
- (3) With Autotransformer (using the 65% Tap)
- (4) Y - Δ

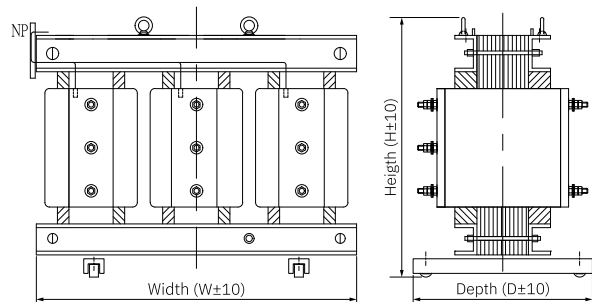
(Graphs and values for reference only.)

Drawings



Motor-Starting Reactor

Power (HP / kW)	Dimensions (mm)			Approx. Weight (kg)
	Width (W)	Depth (D)	Height (H)	
500 / 370	560	430	500	485
1000 / 740	900	500	730	510
1500 / 1110	900	500	890	760
2000 / 1490	1050	600	930	910
2500 / 1860	1100	600	1110	1360
3000 / 2230	1200	600	1245	1540



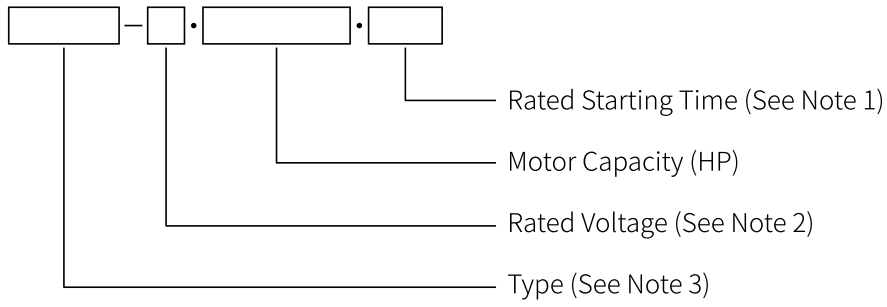
Motor-Starting Autotransformer

Power (HP / kW)	Dimensions (mm)			Approx. Weight (kg)
	Width (W)	Depth (D)	Height (H)	
500 / 370	800	500	580	365
1000 / 740	1100	550	810	790
1500 / 1110	1200	660	850	930
2000 / 1490	1350	600	880	1250
2500 / 1860	1350	660	950	1390
3000 / 2230	1450	700	1110	1890

Notes:

- The above drawings are for reference only. Actual dimensions will be given to customers for approval prior to manufacture.
- Temperature sensors can be installed upon request.
- Other specifications are available upon request.

Model Number Explanation



Notes:

1. Rated Starting Time: 6 = 60 seconds; 9 = 90s.; 12 = 120s; 18 = 180s
2. Rated Voltage: T = 3.6 kV; S = 7.2 kV; E = 12 kV
3. Type: SRT = Reactor; SCT = Autotransformer (Compensator)

Medium-Voltage Electrical Reactors from CIC



MV Detuned Reactors



MV Air Core Reactors



Motor-Starting Reactors ready for shipment