

SUPERIOR MOTOR STARTING SOLUTIONS



S Y E M C 

www.syemco.com



THE **FUTURE** OF
MOTOR STARTING
SOLUTIONS ARE HERE

M A N U F A C T U R E R S O F

Auto Transformer Starters

Rotor Controller

MCC and Distribution Panels

Auto Transformer Starters
with Extra Torque Mode

Step-Less Slip-Ring
Motor Starters

Automatic Power Factor
Control Panels

WARRANTY AND SERVICE PROVIDED IN
COLLABORATION WITH SIEMENS LTD.

SIEMENS

ABOUT SYEMCO

SYEMCO® is into the design and manufacturing of high-end technically superior motor starting solutions.

The group has over **50 years of experience** in supplying specialized motor starting solutions with vast technical know-how in the electrical field. Our group has supplied over 60,000 products across the world to various reputed clients. The company has a state-of-the-art manufacturing and testing unit in Indore, M.P. The founder of SYEMCO® has a rich experience in the electric field of more than 60 years. We assure 100% customer Delight to ensure a life-long relationship with our clients. Overall group passes the right knowledge and manufacturing and testing facility to supply best-in-class



AUTO TRANSFORMER MOTOR STARTERS

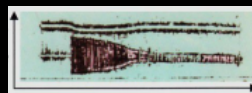
STARTING CHARACTERISTICS OF A SQUIRREL CAGE MOTOR BY VARIOUS METHODS



STAR DELTA



CONVENTIONAL ATS



SYEMCO MAKE ATS

We have applied **KORNDORFER closed transition technology advance** with primary- off logic to all our reduced voltage auto – transformer starters. Multiple motors can be handled with our panels, which are made as per the IEC/NEMA standards, incorporating enclosures for our air- cooled reduced voltage auto transformer starters. Our oil cooled reduced voltage auto transformer starters, are also made as per IEC/NEMA standards, have transformers based on the core type technology. These oil immersed reduced voltage auto transformer starter enclosures are made as per our specifications, under strict QA systems.

All our contactors and relays are sourced from ABB / Siemens / L&T / Schneider for easy interchangeability, in case spares are required.

The auto transformer starters can be supplied with RS-232/435/485 ports for online information and control of the running load. We supply a varied range of controls and mains voltage as per the customer's requirements.

The control wiring is done as per IEC/NEMA standards, and the load wiring is carried out with glass insulated and varnish coated solid copper wires, which can withstand high temperatures and voltage, should any fault happen. Appropriate fuses/ MCB are provided ensuring no damages to the control wiring in case of short circuit.

SIMPLE MATHS FOR POWER SAVINGS

Consider A 3-phase, 55kw (75hp), 415v Motor Running At 98A Load, With The Resistance Of The Cable Per Phase = 0.32Ω

STAR DELTA STARTER

PARAMETERS	FORMULA	CALCULATIONS	TOTAL
Phase Current	Line Current/1.732	98/1.732	56.6 Amp
Power Consumption In 1 Core Of Single Cable	I^2R	$(56.6A)^2 \times 0.3\Omega$	961.1 Watt
Power Consumption for 6 Core Of Single Cable	-	961x6	5766 watt
TOTAL POWER CONSUMPTION	-	-	5766 watt

SYEMCO MAKE ATS

PARAMETERS	FORMULA	CALCULATIONS	TOTAL
Line Current	-	-	98 AMP
Reduced Cable Resistance	-	0.3/2	0.15Ω
Power Consumption for single core duly paralleled	-	$(98)^2 \times 0.15\Omega$	1440.6 watt
Power Consumption for 3 cores	-	1440 x 3	4322 watt
TOTAL POWER CONSUMPTION	-	-	4322 watt



POWER SAVINGS!

NET POWER SAVING

5766 - 4322 = 1444
Watts = 1.4 KW

ASSUME THE COST OF

1 KW OF POWER
INR 6₹/-

SAVING FOR 20 HOURS/DAY AND 330 DAYS/YEAR

8.40 X 20 X 330
= 55,440/-

% POWER SAVING

1.4X100/55=2.63%

SAVING PER HOUR

1.4X6 = INR 8.40/-

The above calculations are based on assumptions and are to the best of our knowledge. They are for information purposes only. We do not undertake or guarantee any trade on behalf of the accuracy of the above figures.



WE WORK ON THE THEORY OF COMSENERING

COMMON SENSE ENGINEERING



AUTO TRANSFORMER STARTERS

WITH EXTRA TORQUE MODE

With the help of Inching Provision with Extra Torque, 'Jam' conditions are easily overcome during the start of the machine.

The starters is designed as such it does not affect the motor winding when extra torque mode is used as well as there is no observance of mechanical stresses.

MD is in control because of superior design and working principle of the starters.

For Working Principle, Scan



100 TPH



200 TPH

APPLICATIONS OF SYEMCO MAKE AUTO TRANSFORMER BASED STARTERS

PUMSETS

Centrifugal, Vertical Turbine, Multistage, Sewage, Submersible, Reciprocating.

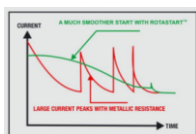
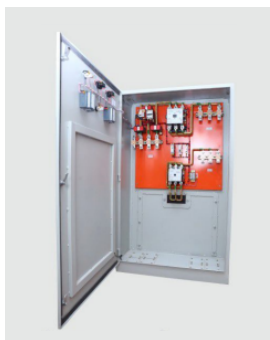
INERTIA LOADS

Centrifugal Blowers, I.D. Fans, F.D. Fans, Pulverizes, Dall Mills, Cement Grinding Mills, Fly Wheel Loads, Rolling Mills, Stone Crushers, Etc.

FRICTIONAL LOADS

Expanders, Oil Expellers, Extruders, Dall Mills Rolls, Rubber Mixing Mills, Ammonia Compressors, Air Compressors, Cookers, Toasters, Hammer Mills, Disintegrators, Flour Mills, Cotton Ginning Press, Sigma Machines, Flakers Etc.

STEP-LESS SLIP-RING MOTOR STARTERS



FOR WORKING PRINCIPLE, SCAN



ROTASTAR™ is a specifically designed system for starting slip-ring induction motor, which consists of control and protection system with inducer for rotor circuit. The inducer is physically much smaller than the equivalent resistance, requires only one shorting contactor because of which the size, and complexity and cost of the overall system gets considerably reduced. All the components are enclosed in a single dust and vermin proof enclosure.



Naturally automatic step-less operation



Intrinsically load sensitive starting



Constant torque, constant current acceleration



Suitable for online plugging



Provides load sensitive starting and smooth time current characteristic.



System has advantage of size, simplicity and no maintenance



Required Impedance can be achieved by adjustment of Tapping of the Inducer.



AUTOMATIC POWER FACTOR CONTROL PANELS

SYEMCO® MAKE POWER FACTOR CONTROL PANELS (APFC PANELS)

SYEMCO® manufacture's high end Power saving products. The brand name of SYEMCO had started the product "Automatic Power Factor Control Panels" about a decade ago & are now pioneer in achieving power factor to unity.

In view of constantly raising power tariff and penalties imposed by the state electricity boards/ utility companies, it is imperative for any HT and LT industry of consumer to install a power factor control panel for curtailment of power factor penalty, reducing maximum demand and also to save energy/ power.



TECHNICAL FEATURES

- Microprocessor Based automatic controller with power display
- All major components are of standard makes like, Siemens L&T, Epcos , Neptune etc.
- All the components are carefully integrated for reliable performance and longer life.
- Used small correction steps to maintain accurate settings.
- Contactors (with MCBs or MCCBs as backup protection) are used to switch on capacitors with spiral conductor design to minimize switching surges.
- Cooling facility in capacitor chambers
- In built Time Delay for switching on of a capacitor bank to avoid impulse signal operation.
- All Capacitor feeders have Auto/ Manual Mode facility with Fuse/ MCB Protection and Isolation
- Very Low Watt Losses, Capacitors are used

PRODUCT RANGE

20 KVAR to 2000 KVAR

MANUAL MODE

Power factor controllers are designed to operate manually by selecting manual mode

REDUCTION IN

MAXIMUM DEMAND

ENERGY SAVING

UPTO 7%

PAYBACK PERIOD OF

8 TO 15 MONTHS

MCC & DISTRIBUTION PANELS

SYEMCO® offers highly functional range of panels to our clients fabricated from superior components to provide durability & safety.

For long life panels are duly powder coated to prevent corrosion SYEMCO® make panels are duly tested by professionals for reliable and correct performance.

APPLICATIONS OF SYEMCO MAKE MCC, DISTRIBUTION AND APFC PANELS

All types of manufacturing Units Like: Solvent Plants, Oil Mills, Ginning & Pressing Factories, Chemical Industries, Food Industries, Rice Mills, Paper Mills, Fertilizer Plants, Daal Mills, Steel Industries, Cement Mills, Spinning Mills, Cold Storages, Stone Crushers etc.



Cinema Halls



Hospitals



Office Buildings



Hotels & Restaurants

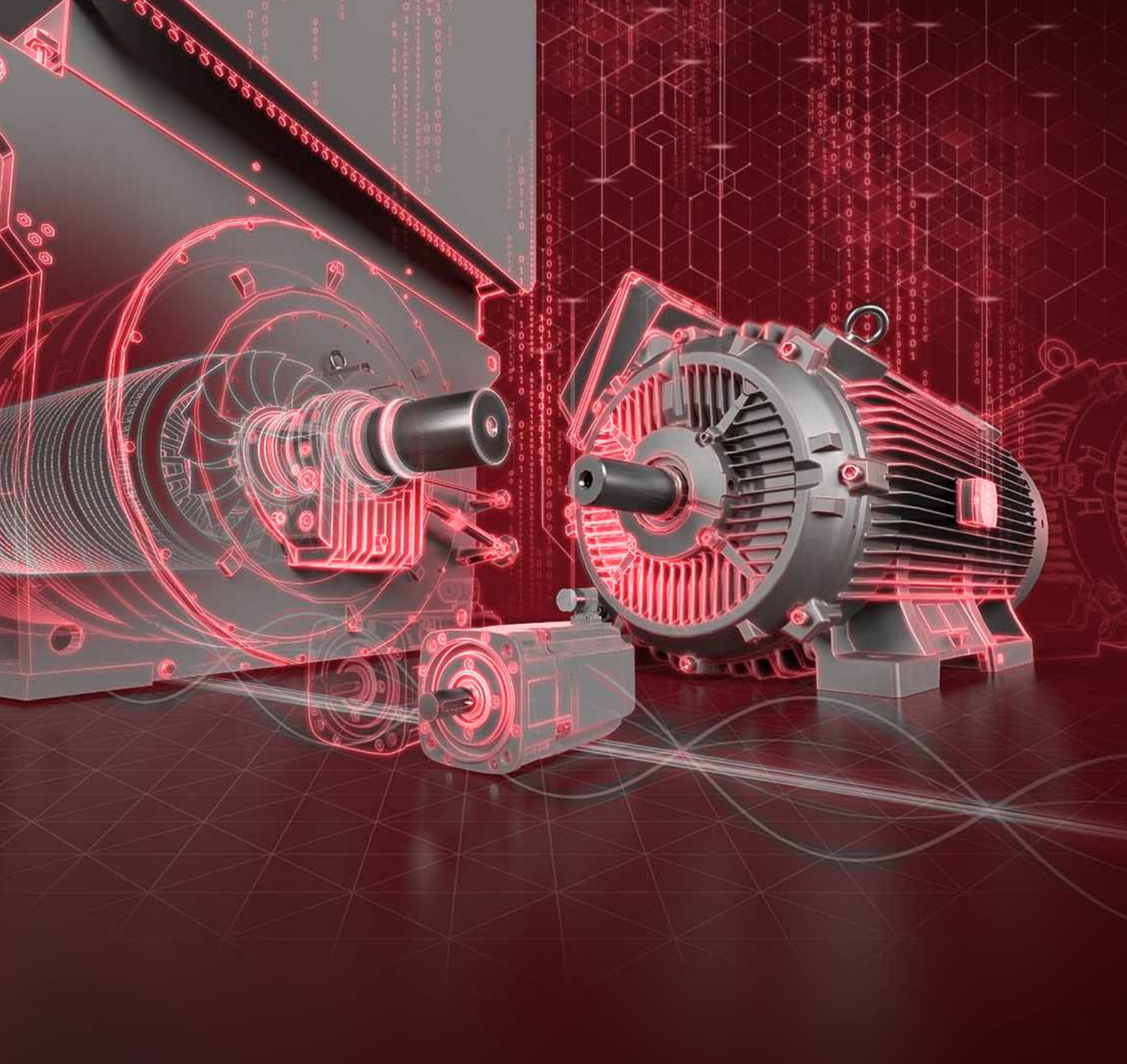


IT Companies



Shopping Malls





Syemco Impex / Syemco Switchgears P. Limited
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