

TCS Series of Manual CP Rectifier (O63 Model, Oil-Cooled)

ARMIN's 63 Step Manual Voltage Controlled Cathodic Protection TR Units (Oil-Cooled) are specially designed for safe and long term operation in environments such as desert and tropical locations.

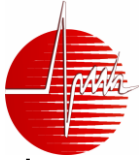
The transformer rectifier components are housed in steel enclosures divided into two main sections, namely oil tank and control cabinet.

The transformer rectifier is supplied complete with bolted type base frame and fixing bolts for plinth mounting. The outdoor control cabinets are normally provided with sunshade.



Standard Features of the 63 Step Manual Voltage Controlled Rectifiers

- ✚ Manual voltage control over the 63 steps of nominal rated voltage.
- ✚ Coarse, medium and fine adjustment by 3 X 4 step tap changer switches, rated to operate while system is energized, even on full load condition.
- ✚ Compact design and easy to use and installation.
- ✚ Minimum maintenance requirements and long operation time.
- ✚ Weather Proof construction and corrosion resistive coating along UV protected finish.
- ✚ AC input voltage, DC output voltage and current monitoring by moving coil analogical meters.
- ✚ Over voltage and current protection for both of AC and DC sides.
- ✚ Surge and lightning protection on both of AC and DC sides.
- ✚ Cooling by natural convection of transformer oil.
- ✚ Suitable for either single phase or three phase (3 wires or 4 wires) AC supply.
- ✚ Optional Built-in Timer Interrupter with Failure monitoring for Oil level & Temperature and AC input.
- ✚ Production under TUV NORD Product Conformity Assessment.



CTR Series of SCR Controlled CP Rectifier (OCV Model, Oil-Cooled)

ARMIN's SCR Controlled Cathodic Protection TR Units (Oil-Cooled) are specially designed for safe and long term operation in environments such as desert and tropical locations.

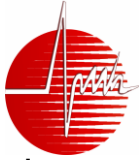
The transformer rectifier components are housed in steel enclosures divided into two main sections, namely oil tank and control cabinet.

The transformer rectifier is supplied complete with bolted type base frame and fixing bolts for plinth mounting. The outdoor control cabinets are normally provided with sunshade.



Features of the SCR Controlled Conventional Rectifiers

- ✚ Automatic constant voltage with current limitation and constant current with voltage limitation.
- ✚ Stepless control over the full range of nominal output ratings and Precision control with phase angle control of power SCR unit.
- ✚ Two units of external one turn potentiometer only for setting output voltage and output current.
- ✚ Intelligent anode current limiting preventing over current protection.
- ✚ Weather Proof construction and corrosion resistive coating along UV protected finish.
- ✚ Over voltage and current protection for both of AC and DC sides.
- ✚ Surge and lightning protection on both of AC and DC sides.
- ✚ Cooling by natural convection of transformer oil.
- ✚ Suitable for either single phase or three phase (3 wires or 4 wires) AC supply.
- ✚ Optional Built-in Timer Interrupter with Failure monitoring for Oil level & Temperature and AC input.
- ✚ Production under TUV NORD Product Conformity Assessment.



CTR Series of Multi Channel SCR Controlled CP Rectifier (ODC Model, Oil-Cooled)

ARMIN's SCR Controlled Multi Channel Cathodic Protection TR Units (Oil-Cooled) are specially designed for safe and long term operation where more than a single structure within different protective current would be subject of cathodic protection from a single multi channel CP station.

The transformer rectifier components are housed in steel enclosures divided into two main sections, namely oil tank and control cabinet.

The transformer rectifier is supplied complete with bolted type base frame and fixing bolts for plinth mounting. The outdoor control cabinets are normally provided with sunshade.



Features of the SCR Controlled Conventional Rectifiers

- ✚ Modular multi channel DC output structure built-in a single enclosure
- ✚ Automatic constant voltage with current limitation and constant current with voltage limitation for each output channel
- ✚ Stepless control over the full range of nominal output ratings.
- ✚ Precision control with phase angle control of power SCR unit.
- ✚ Two units of external one turn potentiometer only for setting output voltage and output current.
- ✚ Cooling by natural convection of Transformer oil.
- ✚ Intelligent anode current limiting preventing over current protection for each channel
- ✚ Suitable for either single phase or three phase (3 wires or 4 wires) AC supply.
- ✚ Optional Built-in Timer Interrupter with Failure monitoring for Oil level & Temperature and AC input.
- ✚ Production under TUV NORD Product Conformity Assessment.



CTR Series of SCR Controlled CP Rectifier (ACV Model, Air-Cooled)

ARMIN's SCR Controlled Cathodic Protection TR Units (Air-Cooled) are specially designed for safe and long term operation for indoor locations & Controlled environments.

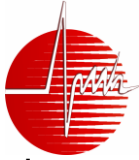
The transformer rectifier components are housed in steel enclosures divided into two main sections, namely Power Cabinet and Control Cabinet.

The Air cooled systems with natural convection reduces the maintenance requirements of the system to absolutely minimum, during the operational life time of the Cathodic Protection system.



Features of the SCR Controlled Indoor Rectifiers

- ✚ Automatic constant voltage with current limitation and constant current with voltage limitation.
- ✚ Stepless control over the full range of nominal voltage and current output ratings and Precision control with phase angle control of power SCR unit.
- ✚ Two units of external one turn potentiometer only for setting output voltage and output current.
- ✚ Intelligent anode current limiting preventing over current protection.
- ✚ Indoor construction and epoxy polyester powder coating finish.
- ✚ Over voltage and current protection for both of AC and DC sides.
- ✚ Surge and lightning protection on both of AC and DC sides.
- ✚ Cooling by natural convection of Air.
- ✚ Suitable for either single phase or three phase (3 wires or 4 wires) AC supply.
- ✚ Optional Built-in Timer Interrupter with Failure monitoring for Over Temperature and AC input.
- ✚ Production under TUV NORD Product Conformity Assessment.



VTR Series of Manual Controlled CP Rectifier (AMV Model, Air-Cooled)

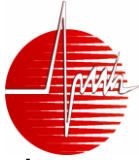
ARMIN's Co. Variac Controlled Manual Cathodic Protection TR Units are specially designed for safe and long term operation in environments such as deserts, tropical and coastal locations.

The Air-Cooled Variac Controlled Transformer rectifier components installed on a rigid chase are housed in steel cabinet and caring out the following specifications.



Features of the Variac Controlled Rectifiers

- ✚ Stepless control over the full range of nominal voltage output rating by primary installed variable auto-transformer (Variac) and Precision control with phase angle control of power SCR unit.
- ✚ Compact design and easy to use and installation.
- ✚ Minimum maintenance requirements and long operation time.
- ✚ Weather Proof construction and corrosion resistive coating along UV protected finish.
- ✚ AC input voltage, DC output voltage and current monitoring by moving coil analogical meters.
- ✚ Over voltage and current protection for both of AC and DC sides.
- ✚ Surge and lightning protection on both of AC and DC sides.
- ✚ Cooling by natural convention of Air.
- ✚ Suitable for either single phase or three phase (3 wires or 4 wires) AC supply.
- ✚ Optional Built-in Timer Interrupter with Failure monitoring for Over Temperature and AC input.
- ✚ Production under TUV NORD Product Conformity Assessment.



RRU Series of Automatic CP Rectifier (ATRO Model, Oil-Cooled)

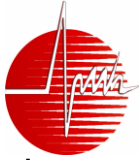
Digital technology ensures superb reliability and provides flexibility to meet the requirements of today's different fields of industry in the most efficient and cost effective manner.

Embedding of intelligent control systems based on the digital and micro-processor technology enables the functions of Impressed Current Cathodic Protection systems to be monitored and controlled remotely across of the SCADA (Supervisory Control and Data Acquisition) systems. ARMIN Industries Co. has the pleasure of producing these kinds of intelligent and smart rectifiers in case of both standard and custom design in the various capacities.



Features of the SCADA Based Rectifiers

- ✚ Automatic operation (Referring Actual Potential of Cathode) with manual over-ride (Constant Current or Constant Voltage) facilities.
- ✚ Fully adjustable settings with operator interface and remote SCADA system over full ranges of reference electrode potential or output voltages and currents.
- ✚ Direct RTU connectivity via 4-20 mA signal converters.
- ✚ Internal diagnostics and Intelligent Anode current limiting preventing over current protection.
- ✚ Weather Proof construction and corrosion resistive coating along UV protected finish.
- ✚ Over voltage and current protection for both of AC and DC sides.
- ✚ Surge and lightning protection on both of AC and DC sides.
- ✚ Cooling by natural convection of transformer oil.
- ✚ Suitable for either single phase or three phase (3 wires or 4 wires) AC supply.
- ✚ Optional Built-in Timer Interrupter with Failure monitoring for Oil level & Temperature and AC input.
- ✚ Production under TUV NORD Product Conformity Assessment.



RRU Series of Automatic Rectifier (ATRA Model, Air-Cooled)

Digital technology ensures superb reliability and provides flexibility to meet the requirements of today's different fields of industry in the most efficient and cost effective manner.

Embedding of intelligent control systems based on the digital and micro-processor technology enables the functions of Impressed Current Cathodic Protection systems to be monitored and controlled remotely across of the SCADA (Supervisory Control and Data Acquisition) systems. ARMIN Industries Co. has the pleasure of producing these kinds of intelligent and smart rectifiers in case of both standard and custom design in the various capacities.



Features of the SCADA Based Rectifiers

- ✚ Automatic operation (Referring Actual Potential of Cathode) with manual over-ride (Constant Current or Constant Voltage) facilities.
- ✚ Fully adjustable settings with operator interface and remote SCADA system over full ranges of reference electrode potential or output voltages and currents.
- ✚ Direct RTU connectivity via 4-20 mA signal converters.
- ✚ Internal diagnostics and Intelligent Anode current limiting preventing over current protection.
- ✚ Weather Proof construction and corrosion resistive coating along UV protected finish.
- ✚ Over voltage and current protection for both of AC and DC sides.
- ✚ Surge and lightning protection on both of AC and DC sides.
- ✚ Cooling by natural convection of Air.
- ✚ Suitable for either single phase or three phase (3 wires or 4 wires) AC supply.
- ✚ Optional Built-in Timer Interrupter with Failure monitoring for Over Temperature and AC input.
- ✚ Production under TUV NORD Product Conformity Assessment.