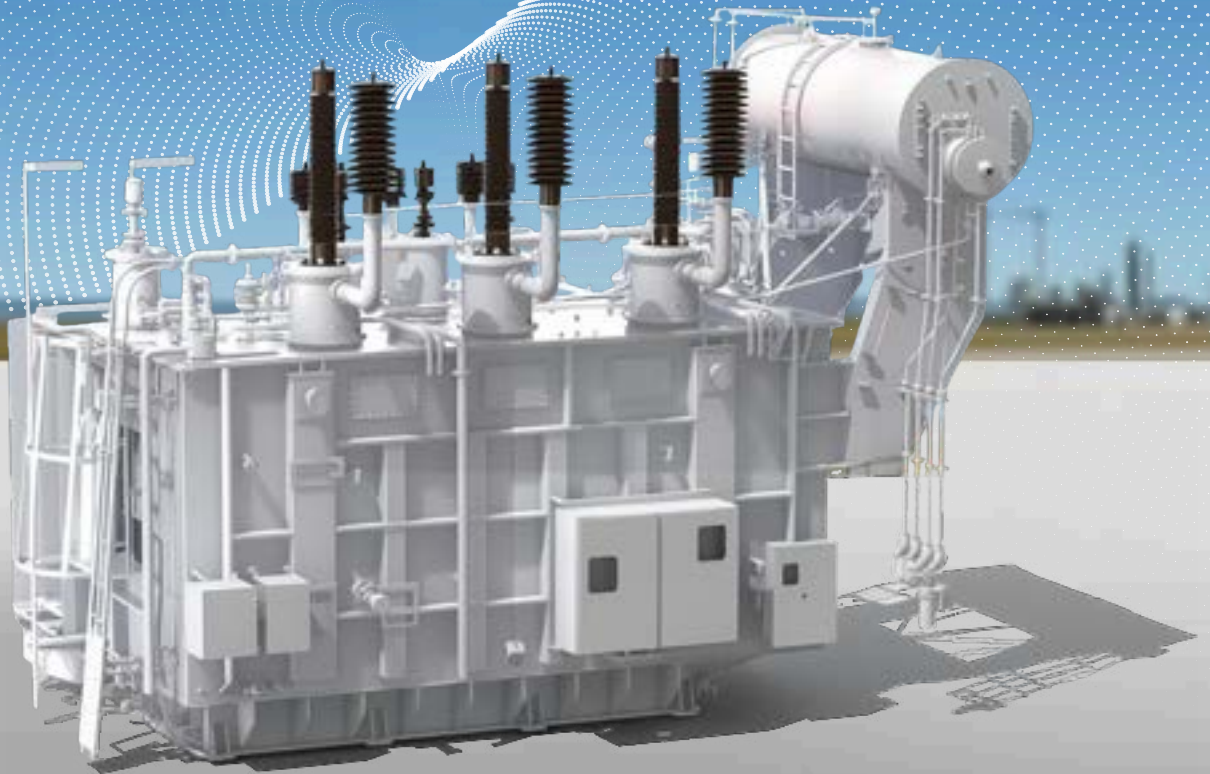


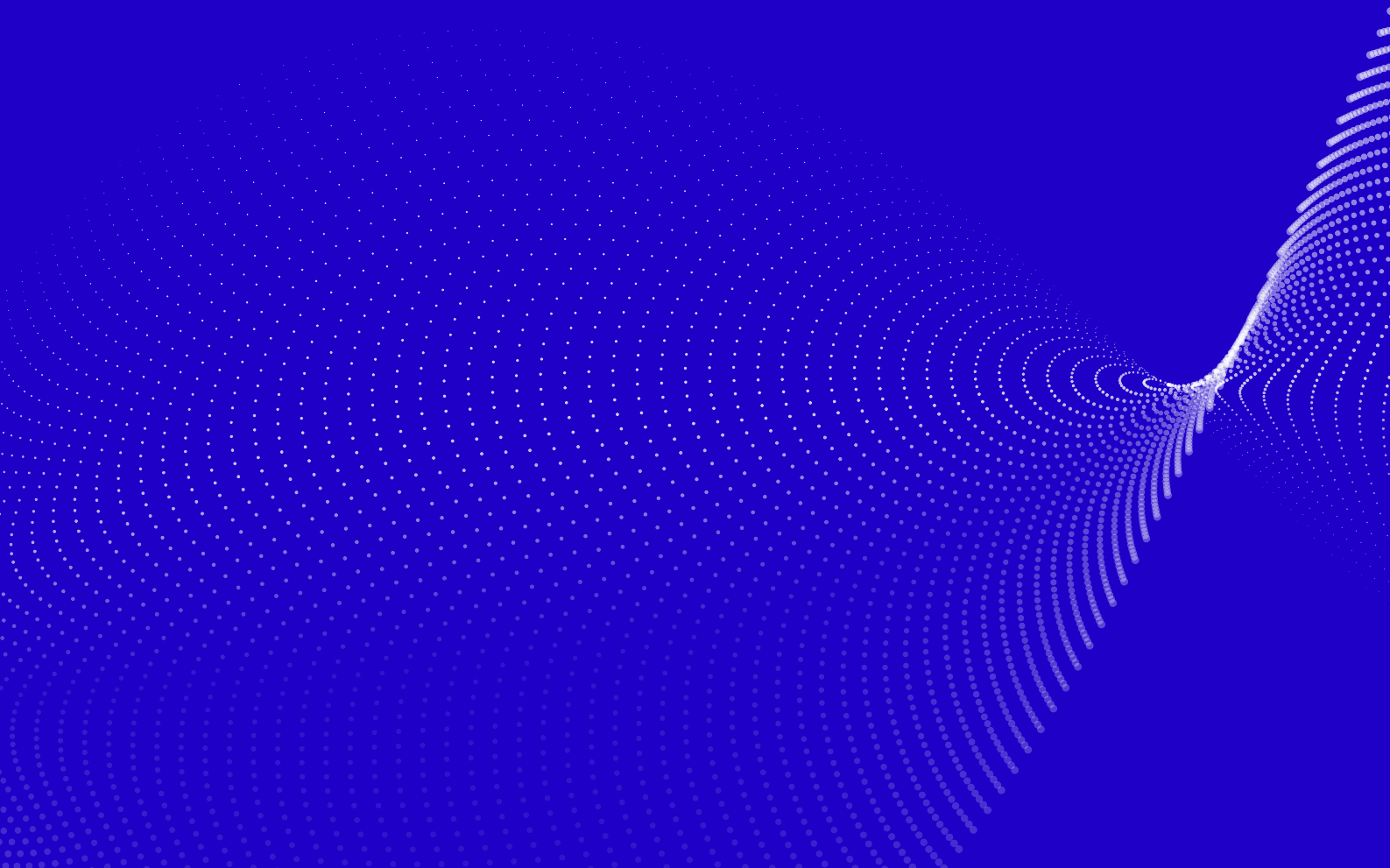
Special Transformer

Design, engineering and manufacturing of power grid equipments the world runs on.



Custom-engineered • Certified and on-site • 50% faster delivery than industry norms

Inverter Duty Transformers



Inverter Duty Transformers

Compact oil-filled units housed in tamper-resistant enclosures, optimized for Solar inverter duty.

AYR Pad-Mounted Inverter duty Transformers are ground-mounted electrical transformers enclosed in a tamper-proof, weather-resistant metal cabinet as per IEEE Std C57.12.34 /IEEE Std C57.12.28/29 ,tested in accordance with IEEE Std C57.12.90 & IEEE Std C57.12.00.

Design

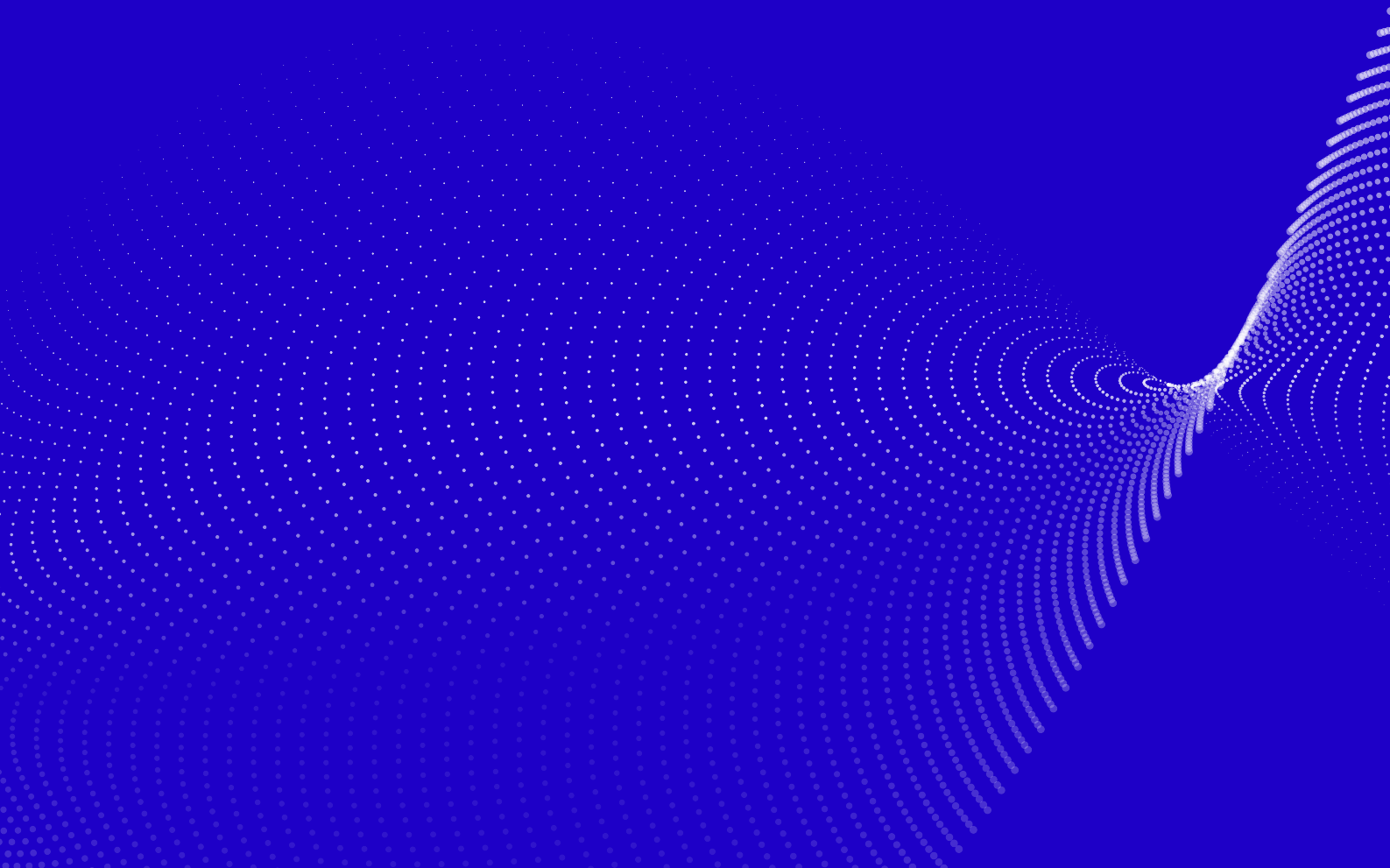
HV Bushing Config	<ul style="list-style-type: none">• Dead front or live front• Loop feed or radial feed
Fluid Options	<ul style="list-style-type: none">• Type II Mineral Oil• Natural ester: Envirotemp™ FR3™ / Bio TRANSOL• Synthetic ester oil.
Standard Gauge/ Accessory Package	<ul style="list-style-type: none">• Pressure relief valve• Pressure vacuum gauge• Liquid-level indicating device• 1-in NPT upper plug (or cap) for filling and pressure testing (low-voltage compartment.)• 1-in NPT drain valve with built-in sampling device (low-voltage compartment.)• De-energized tap changer• Liquid temperature indicating device• Grounding provisions• Electrostatic shield between LV & HV.• Electrostatic shield between LV to Core for 5-limb construction.
Switch Options	<p>Underinsulating liquid loadbreak switches (200 A, 300 A, or 600 A. min 10 kA rms symmetrical for a minimum of 0.17 s) as per Annex A of IEEE Std C57.12.34</p> <ul style="list-style-type: none">• 3-Two position inline switch• Loadbreak four-position (STRIGHT / V / T- BLADE)• Loadbreak Two-position

Fusing Options	<p>As per Annex A of IEEE Std C57.12.34</p> <ul style="list-style-type: none"> • Full-Range, Current-Limiting Fuse • Bayonet-Type or Cartridge Expulsion Weak Link Fuse • Bayonet Expulsion-Type Weak Link Fuse in Series With Isolation Link • Bayonet Expulsion-Type Weak Link Fuse in Series <p>With Partial Range Under Insulating Liquid Current-Limiting Fuse</p>
Fluid Options	<ul style="list-style-type: none"> • Type II Mineral Oil • Natural ester: Envirotemp™ FR3™ / Bio TRANSOL • Synthetic ester oil.
Construction	<ul style="list-style-type: none"> • 5 or 3-legged core • Round/oval wound copper or aluminum windings • Carbon reinforced or stainless steel tank • Steel divider between HV and LV cabinets • Penta-head captive bolt
Optional Design Features & Accessories	<ul style="list-style-type: none"> • Gauges w/ Contacts & RS 485 modbus communication • External drain and sample valve • K-Factor Design • Step-up/down (bidirectional) Design • Surge-Arresters • IR window • Oil moisture measurement • Dissolved Gas Analyser (DGA) with 2/3/5 or 9 gas options. • PD sensors (1/3 channel) • Dual-voltage (series multiple) switch • Delta-wye switch • Hot-spot thermal sensor—Winding temperature indicator • Hot-spot thermal sensor—Resistor temperature detector • Accessory weather-resistant boxes • Current transformer with RS-485 modbus communication • LV Voltage measurement with RS-485 modbus communication 17. 30" Depth compartment

Available Rating

Sizes (kVA)	<ul style="list-style-type: none">• Upto 10 MVA
Frequency	<ul style="list-style-type: none">• 60 Hz
Cooling Class	<ul style="list-style-type: none">• ONAN,ONAF,KNAN,KNAF
Temp Rise	<ul style="list-style-type: none">• 55°C, 65°C, 55/65°C, 75°C (With Natural/synthetic ester) if required.
Voltages	<ul style="list-style-type: none">• MV from 2,400 Δ to 34,500 Δ Volts• LV from 208Y/120 to 13,800 Δ Volts• Grd Y or Δ or Y configurations

Furnace Transformers



Furnace Transformers

High current Transformers for all type applications like Induction , Rectifier , Laddle Refining & Arc Furnaces

Design

HV Bushing Config	<ul style="list-style-type: none"> • Porcelain Bushing
Fluid Options	<ul style="list-style-type: none"> • Type II Mineral Oil • Natural ester: Envirottemp™ FR3™ / Bio TRANSOL • Synthetic ester oil.
Standard Gauge/ Accessory Package	<ul style="list-style-type: none"> • Pressure relief valve • Pressure vacuum gauge • Liquid-level indicating device • 1-in NPT upper plug (or cap) for filling and pressure testing (low-voltage compartment.) • 1-in NPT drain valve with built-in sampling device (low-voltage compartment.) • De-energized tap changer • Liquid temperature indicating device • Grounding provisions • Electrostatic shield between LV & HV.
Switch Options	<ul style="list-style-type: none"> • On Load Tap Changer • De-energized Tap Changer
Fusing Options	<ul style="list-style-type: none"> • Not Applicable
Construction	<ul style="list-style-type: none"> • 3 Legged Core • Round Copper Windings
Optional Design Features & Accessories	<ul style="list-style-type: none"> • Gauges w/ Contacts & RS 485 modbus communication • External drain and sample valve • K-Factor Design • Step-up/down (bidirectional) Design • Surge-Arresters • IR window

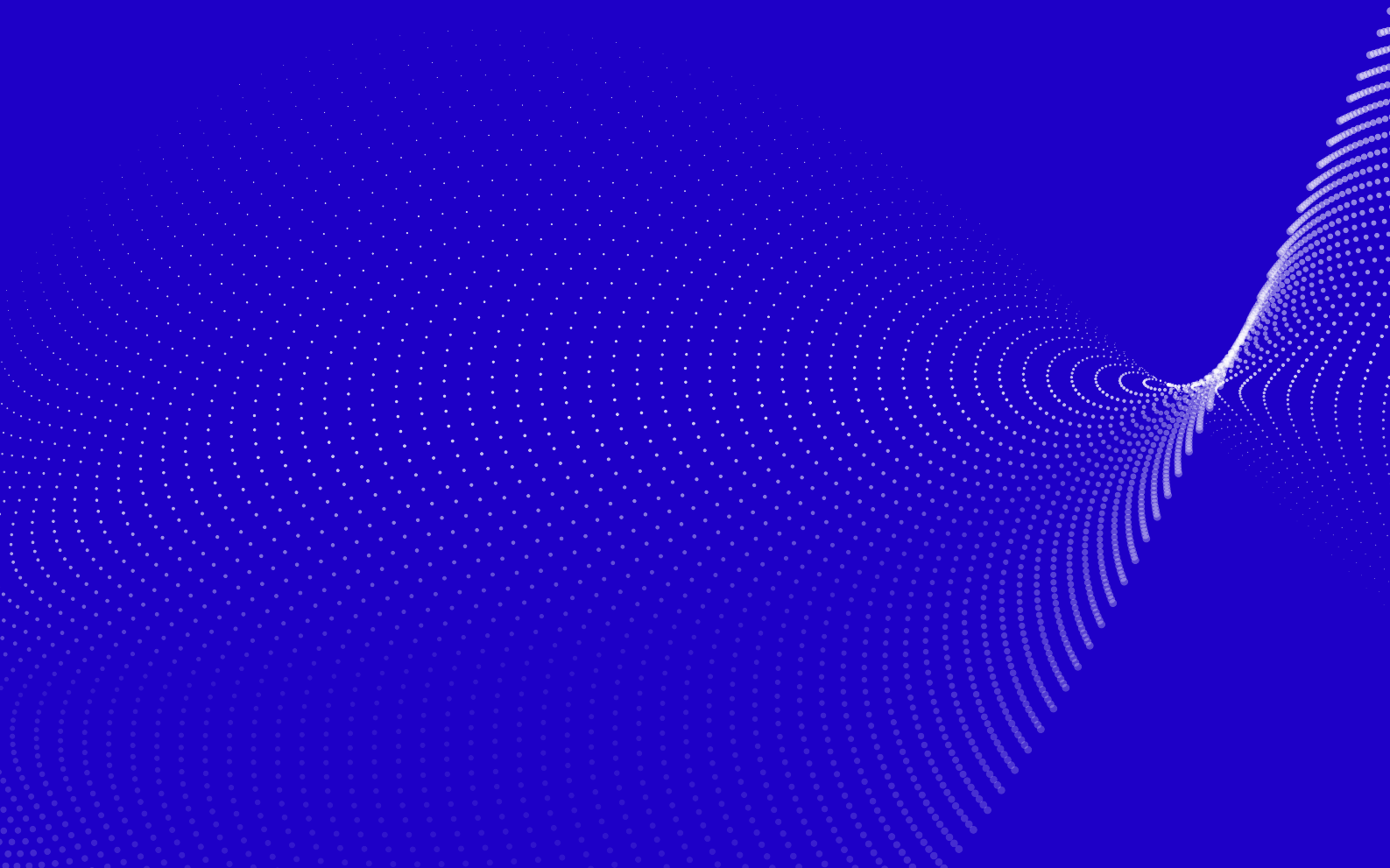
Optional Design Features & Accessories

- Oil moisture measurement
- Dissolved Gas Analyser (DGA) with 2/3/5 or 9 gas options.
- PD sensors (1/3 channel)
- Dual-voltage (series multiple) switch
- Delta-wye switch
- Hot-spot thermal sensor—Winding temperature indicator
- Hot-spot thermal sensor—Resistor temperature detector
- Accessory weather-resistant boxes
- Current transformer with RS-485 modbus communication
- LV Voltage measurement with RS-485 modbus communication 17. 30" Depth compartment

Available Rating

Sizes (kVA)	<ul style="list-style-type: none"> • Upto 50 MVA
Frequency	<ul style="list-style-type: none"> • 60 Hz
Cooling Class	<ul style="list-style-type: none"> • ONAN,ONAF,OFAF,ODWF,KNAN,KNAF
Temp Rise	<ul style="list-style-type: none"> • 55°C, 65°C, 55/65°C , 75°C (With Natural/synthetic ester) if required.
Voltages	<ul style="list-style-type: none"> • MV from 12470 Δ/Y to 46,000 Δ/Y Volts • LV from 100Δ/Y to 3600 Δ/Y Volts • Grd Y or Δ or Y configurations

Grounding Transformers



Grounding Transformers

Transformer intended primarily to provide a neutral point for grounding purposes.

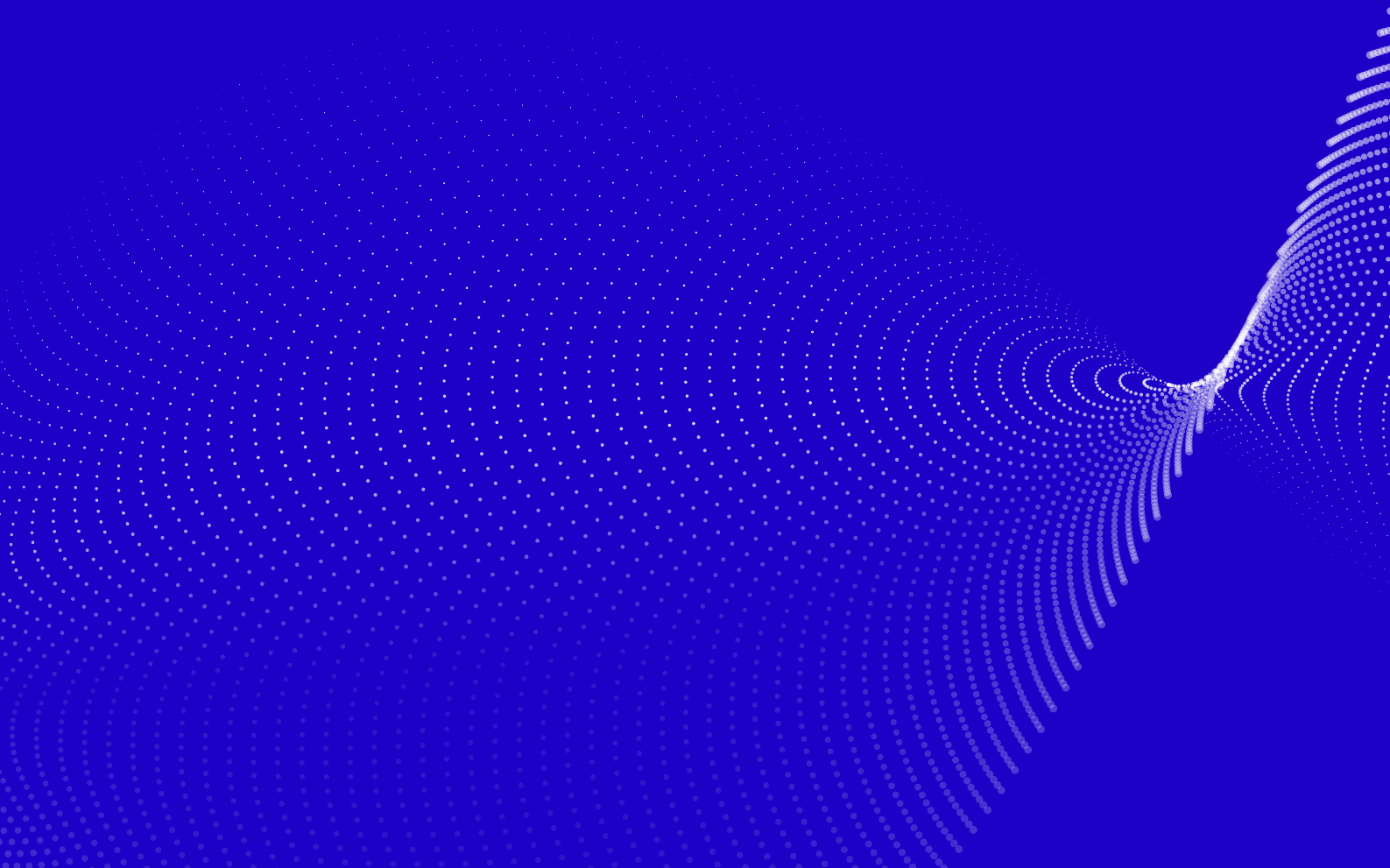
Design

HV Bushing Config	<ul style="list-style-type: none"> • Dead front or live front
Fluid Options	<ul style="list-style-type: none"> • Type II Mineral Oil • Natural ester : Envirottemp™ FR3™ / Bio TRANSOL • Synthetic ester oil.
Standard Gauge/ Accessory Package	<ul style="list-style-type: none"> • Pressure relief valve • Pressure vacuum gauge • Liquid-level indicating device • 1-in NPT upper plug (or cap) for filling and pressure testing (low-voltage compartment.) • 1-in NPT drain valve with built-in sampling device (low-voltage compartment.) • De-energized tap changer • Liquid temperature indicating device • Grounding provisions
Switch Options	<ul style="list-style-type: none"> • Not applicable
Fusing Options	<ul style="list-style-type: none"> • Not Applicable
Construction	<ul style="list-style-type: none"> • 5 or 3-legged core • Round/oval wound copper or aluminum windings • Carbon reinforced or stainless steel tank
Optional Design Features & Accessories	<ul style="list-style-type: none"> • Gauges w/ Contacts & RS 485 modbus communication • External drain and sample valve • K-Factor Design • Step-up/down (bidirectional) Design • Surge-Arresters • IR window

Available Rating

Sizes (kVA)	<ul style="list-style-type: none">• Upto 69kV, 20,000 AMps /30 sec
Frequency	<ul style="list-style-type: none">• 60 Hz
Cooling Class	<ul style="list-style-type: none">• ONAN,ONAF,KNAN,KNAF
Temp Rise	<ul style="list-style-type: none">• 55°C, 65°C, 55/65°C , 75°C (With Ntural/synthetic ester) if required.
Voltages	<ul style="list-style-type: none">• MV form 12470 Δ to 34,500 Δ Volts• LV from 480Y/277 to 800 Δ Volts• Grd Y or Δ or Y configurations

Station Service Voltage Transformers



Station Service Voltage Transformers

Engineered for decades of continuous operation, these transformers are designed for high reliability, efficiency, and safety. They step down medium-voltage power from local distribution lines for residential, commercial, and industrial applications.

AYR Sub-Station Distribution Transformers are ground-mounted electrical transformers as per IEEE Std C57.12.00, tested in accordance with IEEE Std C57.12.90.

Design

HV Bushing Config	<ul style="list-style-type: none">• Open bushing• Inside ATC /Throat
Fluid Options	<ul style="list-style-type: none">• Type II Mineral Oil• Natural ester : Envirotemp™ FR3™ / Bio TRANSOL• Synthetic ester oil
Standard Gauge/ Accessory Package	<ul style="list-style-type: none">• Pressure relief valve on top cover• Pressure vacuum gauge in Segment 1• Liquid-level indicating device in Segment 1• 1-in NPT upper plug (or cap) for filling and pressure testing in Segment 1• 1-in NPT drain valve with built-in sampling device in Segment 1• De-energized tap changer in Segment 1• Liquid temperature indicating device in Segment 1• Grounding provisions
Switch Options	<ul style="list-style-type: none">• Primary load-interrupter switch (optional)
Fusing Options	<ul style="list-style-type: none">• Not Applicable
Construction	<ul style="list-style-type: none">• 5 or 3-legged core• Round/oval wound copper or aluminum windings• Carbon reinforced or stainless steel tank

Optional Design Features & Accessories

- Gauges w/ Contacts & RS 485 modbus communication
- External drain and sample valve
- Electrostatic Shielding
- K-Factor Design
- Step-up/down (bidirectional) Design
- Surge-Arresters
- IR window
- Oil moisture measurement
- Dissolved Gas Analyser (DGA) with 2/3/5 or 9 gas options.
- PD sensors (1/3 channel)
- Dual-voltage (series multiple) switch
- Delta-wye switch
- Hot-spot thermal sensor—Winding temperature indicator
- Hot-spot thermal sensor—Resistor temperature detector
- Accessory weather-resistant boxes
- Current transformer with RS-485 modbus communication
- LV Voltage measurement with RS-485 modbus communication
- On load tap changer (LTC)
- Sudden pressure relay
- Cooling fans (ONAN/ONAF or KNAN/KNAF)
- ATC for closed couple switchgear on HV side.

Available Rating

Sizes (kVA)	<ul style="list-style-type: none"> • Upto 20 MVA(STD) ,Any rating on special request
Frequency	<ul style="list-style-type: none"> • 60 Hz
Cooling Class	<ul style="list-style-type: none"> • ONAN,ONAF,KNAN,KNAF
Temp Rise	<ul style="list-style-type: none"> • 55°C, 65°C, 55/65°C, 75°C (With Natural/synthetic ester) if required.
Voltages	<ul style="list-style-type: none"> • MV from 2,400 Δ to 34,500 Δ Volts • LV from 208Y/120 to 13, 800 Δ Volts • Grd Y or Δ or Y configurations