Rymel

BESS TRANSFORMERS

SMART, SAFE, AND EFFICIENT SOLUTIONS FOR ENERGY STORAGE

The global energy transition is driving the rapid adoption of Battery Energy Storage Systems (BESS).

These systems allow energy to be stored and released precisely when the market, the grid, or the user requires it, helping stabilize power networks, optimize energy tariffs, and ensure operational continuity.

BESS installations require specialized equipment to connect stored energy to the electrical grid.

Rymel has developed transformers specifically designed for the integration of BESS into power networks.

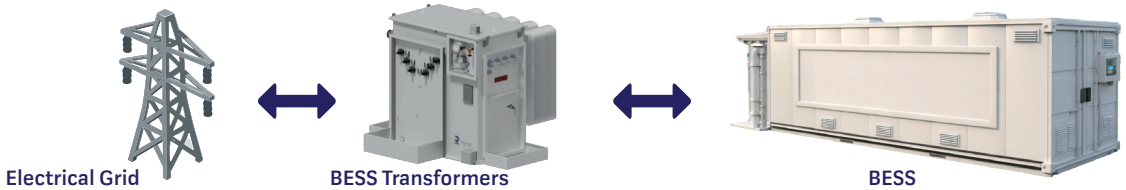
Rymel's BESS transformers are engineered to operate with bidirectional inverters, high harmonic levels, fast charge and discharge cycles, and dynamic power conditions.

BESS transformers are built to withstand dynamic operating conditions:

- High harmonic content generated by inverters
- Transient overvoltages
- Stable operation in charge/discharge mode with bidirectional power flow
- Continuous cycling with rapid thermal variations

Advantages of RYMEL Transformers for BESS

- Reinforced thermal design, suitable for cyclic operation and extended service life.
- Harmonic withstand capability with K-factor rating.
- Special insulation system designed to withstand transients up to 2400 V/µs.
- Electrostatic shield that filters dV/dt gradients and protects the windings.
- Bidirectional power flow design, allowing both charge and discharge operation.
- High tolerance to cyclic overloads, thanks to reinforced thermal design and high thermal class materials.
- Full galvanic shielding, minimizing interference propagation.
- High efficiency and low losses.
- Low audible noise level.
- Fast energy discharge capability, ideal for operation with BESS systems.
- Dead-front terminals for enhanced safety.
- Four-position switch (ON–OFF–A–B) allowing safe operation and switching under load.



For further information, please contact a Rymel representative

rymel@rymel.com.co

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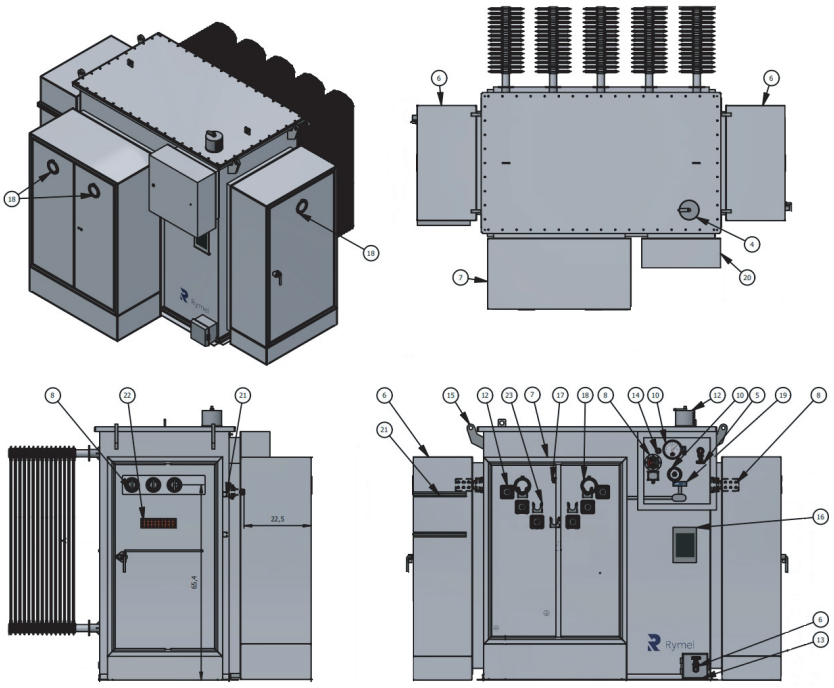

1. Seismic anchoring
2. Ground pad
3. Oil level
4. Pressure relief device
5. Oil filling / oil drain
6. LV cabinet
7. MV cabinet
8. LV bushing
9. Thermometer
10. Pressure gauge
11. Radiators
12. MV bushing
13. Oil sampling cover
14. Filter press connection
15. Lifting lugs
16. Nameplate
17. Open / close switch
18. IR window
19. Relay SEL 851
20. Cabinet accessories
21. 1-5/8" rail
22. Ground bar
23. Parking stand

TECHNICAL INFORMATION	
Power Ratings [kVA]:	500 to 5000
Series voltage [kV]:	36
Voltage HV [V]	13200 - 34500
Voltage LV [V]:	Up to 800 V
Number of Phases:	3
Operating Frequency Range [Hz]:	50 - 60
Vector Group:	DD, YY, DY
Mounting Type:	Outdoor
Standards:	IEEE
Winding Temperature Rise:	65 °C or 55 °C
BIL [kV]	Up to 200
K Factor	1 to 20
Insulation Class	120
Insulating Fluid	Mineral or Vegetable
Cooling	ONAN KNAN
Tap Changer	5 positions

Special Features:

- Load break switch
- Capability to operate with harmonics
- Electrostatic shield
- Dead-front bushings
- Low-voltage side cabinets for easy connection
- Electrostatic powder coating
- Designed for integration with BESS systems