Solutions for telecom towers

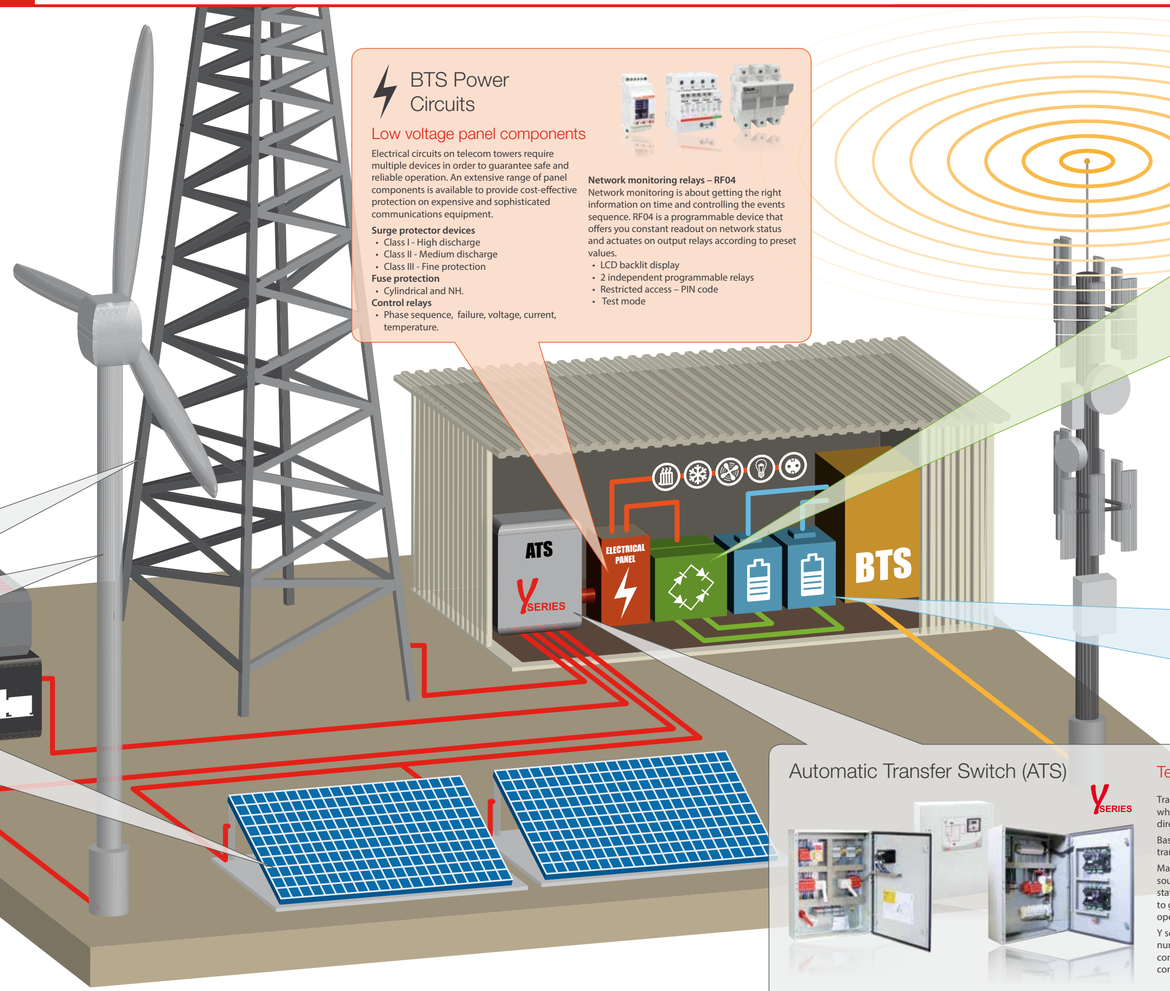
Gave
low voltage electrical material

«A complete range of expert solutions adapted to telecom particular needs»

Gave Electro has become a leading supplier providing components and solutions to the tower telecom industry. The fast evolution of telecom technologies emphasizes the need for a supplier that understands present and future needs, spotting market trends and developing advanced products that offer real added value solutions.

Power supply to base stations is a critical factor due to high revenue costs associated to its failure. Y5 series are the right solution on complex ATS systems that operate multiple power supplies.

Outdoor telecom panels for secondary circuits are highly exposed to weather and lightning conditions. Gave range of components to be installed on telecom panels will protect the installation.



BTS Power Circuits

Low voltage panel components

Electrical circuits on telecom towers require multiple devices in order to guarantee safe and reliable operation. An extensive range of panel components is available to provide cost-effective protection on expensive and sophisticated communications equipment.

Surge protector devices
- Class I - High discharge
- Class II - Medium discharge
- Class III - Fine protection

Fuse protection
- Cylindrical and NH.

Control relays
- Phase sequence, failure, voltage, current, temperature.

Network monitoring relays – RF04

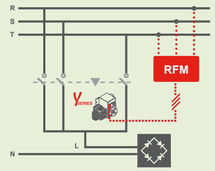
Network monitoring is about getting the right information on time and controlling the events sequence. RF04 is a programmable device that offers you constant readout on network status and actuates on output relays according to preset values.
- LCD backlit display
- 2 independent programmable relays
- Restricted access – PIN code
- Test mode

Rectifier

Phase selector motorised changeover switches

Associating phase monitor relays with motorised phase selector switches is an innovative solution that reduces the number of rectifiers from 6 units in a typical installation down to just 2 units. Capital investment is therefore significantly reduced.

On those installations where a minimum of two rectifiers need to operate simultaneously we can use double channel motorised phase selector switches.

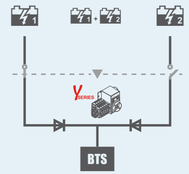


Batteries

Overlapping motorised changeover switches

Batteries supplying power to the BTS find an ideal solution on motorised overlapping changeover switches that switch between 2 or 3 battery banks without electrical break thus guaranteeing power supply continuity.

Local manual operation is also of great value during battery maintenance and replacement operations. Operating handle can be padlocked to safeguard switch position.



Combined energy sources

BTS stations may combine multiple energy sources that will guarantee power availability on the transceiver.

Multiple designs are possible running from the basic manual switching between two power sources, through the widely implemented motorised changeover switches and ending with complex switching layouts between three independent sources. The system is designed to switch always to the most economic generation source and therefore Opex costs will be minimised.

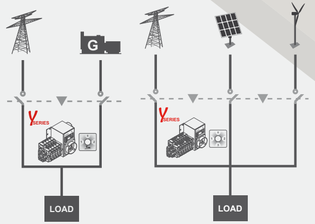
2 or 3 Sources Motorised changeover switches

Automatic transfers using motorised changeover switches are the right solution that minimises investment while not compromising system reliability and safety.

Energy supply on telecom towers are characterised by constant switching operations which require high electromechanical characteristics. Y series motorised changeover switches are based on rotary cam technology which is widely known by its outstanding electrical endurance. Integrated mechanical and electrical interlocks ensure system safety and circuit isolation. Stable mechanical positions (coil free) avoid problems related to supply voltage instability.

Remote/Local

Most common telecom facilities integrate control systems that run on automatic mode and operate remote switching operations. System design may consider providing and additional circuit to manually perform switching during maintenance or test operations. When using motorised changeover switches system design is simplified into a single unit that integrates remote and manual local operation. Significant savings are achieved by reducing number of components, installation time and panel space. Capex investment is minimised.



Automatic Transfer Switch (ATS)

Telecom ATS Solutions

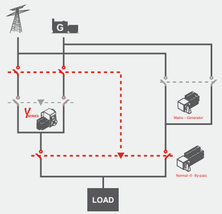
Transfer switches are at the heart of an emergency power system where reliable remote electrical operation can be overrided by direct manual operation.

Based on the installation characteristics we determine which transfer is most suitable to our needs.

Main criteria to be considered are number and type of power sources, maintenance operations and test functionality. Telecom stations with heavy traffic should always include by-pass systems to guarantee power supply continuity during maintenance operations.

Y series customised solutions manage to integrate the maximum number of electrical circuits and functionalities within the most confined space. Total investment is significantly reduced without compromising installation performance.

By-pass double line



The expertise advantage

Gave Electro engineering team has been working on telecom infrastructure components and application solutions for over two decades with thousands of sites installed worldwide. Extensive experience is the base for a product range full of advantages.

See how it works!

	Automatic Transfer Switches (ATS)	Motorised Changeover Switches	Network monitoring relays (RF04)
Functions	• Sources monitoring and load transfer • ATS by-pass single or double line (if equipped)	• On load changeover switching • Circuit disconnection and isolation • Transfer manual testing	• Monitoring network performance and actuating output relays • Displaying network information
Highlights	• Extremely compact size • Plug&play • Built-in electronic controller • Design flexibility	• Electrical scheme flexibility (2 or 3 sources, phase selector, by-pass, auxiliaries,...) • Integrated mechanical and electrical interlock • Local manual operation overrides automatic mode • Operation counter	• Unit supplied by external batteries independent from controlled network • Two output relays • Compact modular size • Digital display • Access control • Test mode.
Saves	• Up to 60% of space saving • Economic savings • Commisioning technician time	• Reduce number of rectifiers • Lower number of components and space • Shorten installation time	• Two relays in one • Reduced space • Troubleshooting

Retrofit

During the last twenty years telecom and energy generation technologies have dramatically changed from its original conditions.

Telecom sites that initially were relying on grid and generator sources now can turn into new systems that integrate hybrid and renewable energy sources.

Retrofitting these installations source transfers becomes a real challenge as they are typically located in confined spaces.

Motorised changeover switches are the unique solution able to solve this problem and even able to fit up to three energy sources.

References

Referenced worldwide in a large number of market players with global reach:

- Vodafone
- Movistar
- MTN
- Claro
- American tower

099DS00462.03EN

gave electro, s.l.
P. O. Box 12 08430 La Roca del Vallès (Barcelona) SPAIN
www.gave.com - export@gave.com
Phone +34 93 842 48 87
Fax +34 93 842 27 55