THE POWER BEHIND POWER.

Active harmonic filters from MR – protection against harmonics in data centers

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Innovation needs stability – especially when it comes to power supply. Data centers are the backbone of the digital transformation and drivers of innovation for the economy and society. In the coming years, the expansion of data centers will advance massively worldwide. This poses two specific risks for the power supply. Existing power grids often represent a bottleneck for new projects. Furthermore, the operation of cooling and ventilation technology often causes problems with power quality. This poses a challenge for grid operators and data center operators: harmonics spread throughout the power grid and increase the risk of damage to sensitive electronics or failures. You can protect your equipment from this threat.

Harmonics: Invisible threat from inside and outside for operation and service life

Data centers not only place high demands on supply reliability, but also on power quality. Particularly problematic are harmonics generated by non-linear consumers such as modern cooling systems and other power electronics. Especially if these systems are not decoupled from the grid by an uninterruptible power supply, their harmonics flow unhindered into the power grid. And spread throughout it.

The risks: Up to 30 % shorter service life

- Overheating of transformers, cables, and sensitive electronic components
- Reduced service life of equipment and components
- False triggering of protection devices (nuisance tripping)
- Malfunction of sensitive electronics, crashes, restarts, unstable system behavior

⟶ More than 40 % of power supply problems are caused by harmonics

> *Thanks to our close collaboration with MR, we successfully achieved long-term improvements in voltage quality across multiple data centers.*
>
> Mr. Won-Hong Lee, CEO | WonLee Solutions Korea

Active filters: The solution for safe and efficient data centers

When it comes to problems with harmonics in modern data centers, the use of active filters is a game changer. This key technology, which has been tried and tested in power grids for many years, detects and compensates for harmonics in real time—regardless of whether they originate outside your data center or inside, e.g. caused by cooling and ventilation loads.

⟶ Active filters reliably protect your critical infrastructure from damage and failures

Power quality solutions from MR – the quality leader

With the GRIDCON® ACF active filter and other power quality solutions, MR offers proven and reliable systems for sustainably improving power quality in data centers and reducing network disturbances. Our solutions are used worldwide and help operators to:

- extend the service life of their systems
- reduce operating costs
- ensure maximum availability

Active harmonic filters from MR are the safety belt for the power supply in data centers

- **Broadband filtering:** Effective reduction of all relevant harmonic frequencies
- **Robust design:** GRIDCON® ACF active filters offer high reliability and are designed for demanding data center environments
- **Compensate harmonic pre-distortion:** MR's innovative control is capable of protecting your equipment from harmonics that have already accumulated in the medium-voltage grid
- **High efficiency:** Low losses and fast response times ensure maximum operational reliability
- **Plug & Play:** Intuitive menu facilitates easy device setup and service
- **Extensive experience:** More than 3,000 GRIDCON® ACF active filters are already protecting systems from the risks of harmonics.

Your expert for MR active filters

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