

# ELECTRICAL-ENGINEERING.ACADEMY

## Cable Type Current Transformers - What really matters!

**WELCOME** dear friends of electrical engineering. Siemens recently launched a new fluorine-gas-free ring cable switchgear. In the following we present you the first publicly known information. Have fun while reading!



The new F-gas-free Clean Air Ring Main Unit 8DJH 24

# F-gas-free ring main unit by Siemens

## New standards for climate-friendly power distribution

-  Climate-neutral insulating medium “Clean Air” consists exclusively of components of ambient air
-  Innovative load-break switch enables F-gas-free power distribution on the secondary distribution level, up to 24 kilovolts
-  Same compact dimensions, consistent handling enable simple, future-proof transition to sustainable power distribution

Siemens Smart Infrastructure has introduced the 8DJH 24 switchgear, a ring main unit (RMU) for line voltages up to 24 kilovolts (kV), completely free of fluorinated gases. This medium-voltage switchgear for secondary electrical distribution has the same compact dimensions as the variant with sulfur hexafluoride (SF<sub>6</sub>) but uses the climate-neutral insulation medium “Clean Air”, which consists exclusively of natural components from ambient air. The core of the unit is a three-position load-break switch with vacuum interrupter in the auxiliary path (blue switch). This new technological development from Siemens eliminates SF<sub>6</sub> as an insulating medium, as well as any gas mixture based on fluorine (F-gases). As a result, the new switchgear also reduces the CO<sub>2</sub> footprint of grid operators. Other benefits include easy and safe handling of the switchgear and effortless recycling at the end of its service life. In addition to the high level of environmental compatibility, digital applications make the new switchgear future-proof and cost-efficient for the grid of tomorrow. The new unit has been in use since fall 2020 in a local substation in the Oberallgäu region of Germany as part of a development cooperation with German distribution grid operator Netze BW.

“We set new standards by offering a completely fluorine gas free ring cable switchgear for voltages up to 24 kV. This new development enables our customers to make power distribution sustainable and at the same time future-proof,”

said Stephan May, CEO of the Distribution Systems Business Unit at Siemens Smart Infrastructure.

“At Siemens, we believe that the only right technological approach is to replace fluorinated gases completely. That’s why we’re eliminating not only the climate gas SF<sub>6</sub>, but all F-gases and chemical additives.”

Siemens developed the new ring main unit for use in public and industrial power grids at the secondary distribution level. Areas of application include secondary, transfer and switching substations of energy providers, as well as industrial and infrastructure facilities.



8DJH 24 has been in use since fall 2020 as part of a development cooperation with German distribution grid operator Netze BW

With the new development, Siemens is bringing environmentally friendly and future-proof power distribution to the broader market. Load-break switches on the secondary distribution level with line voltages of up to 24 kV account for approximately 80 percent of all installations in Europe. At the same time, the trend toward distributed energy systems is leading to an increased need for optimized control, monitoring and utilization of distribution grids. In addition to the high level of environmental compatibility, digital applications make the new switchgear future-proof and cost-efficient to meet the requirements of decentralized grids. The ring main unit can be remote-controlled, offers communications capabilities and can be connected to IoT platforms such as MindSphere, the cloud based, open IoT operating system from Siemens, as well as other systems.

The new 24 kV load-break switchgear expands the sustainable blue GIS switchgear portfolio from Siemens. All products are free of fluorinated gases and use climate-neutral Clean Air insulation as well as vacuum technology. The first switchgear for primary technology for line voltages up to 12 kV was launched by Siemens in 2018 as type 8DAB 12. This was followed in spring

2019 by variant 8DJH 12 for the secondary distribution level. The NXPLUS C 24 unit with a rated voltage of 24 kV was introduced in spring 2020. As a next step, Siemens plans to complete its fluorine gas-free medium-voltage portfolio with products up to the 36 kV voltage level. These new developments will feature Clean Air insulation, vacuum technology and all the proven benefits of gas-insulated switchgear.

[Further information](#) can be found at the vendors [page](#).

**Kind regards**

**Your EEA-TEam**