

Product Information

ABL Type C

AC Decoupling Device

AC Decoupling Device in accordance with the updated DVGW Code of Practice

The ABL Type C capacitive AC decoupling units are designed for the safe dissipation of high alternating currents without affecting the DC characteristics of the cathodic protection system. By utilizing high-capacitance capacitors, a low-impedance discharge path is achieved within the frequency range of 16.6 Hz to 50 Hz. The devices comply with the requirements of the revised DVGW Code of Practice GW 22-1 and the associated technical guidelines, and are designed for enhanced operational safety as well as future condition monitoring.

Technical Features

- Dissipation of high alternating currents while maintaining unchanged DC characteristics
- Frequency range: 16.6 Hz – 50 Hz
- High-quality capacitors
 - Low internal impedance to alternating current
 - Long service life
 - High short-term overload capability

Battery Backup

Ensures protection and signaling functions

- when the unit is de-energized
- at very low discharge currents



Safe, defined behavior even in the event of component failure or extreme overload.



Multi-stage protection and fail-safe concept (ABL Type C)

ABL Type C is equipped with advanced safety mechanisms in accordance with GW 22-3 to prevent uncontrolled operating conditions:

Capacitor stage

- Capable of withstanding multiple short-term overloads relative to the nominal discharge current

MOSFET-Stage

- Activated in the event of excessively high clamping voltage (> 31 V DC) or excessive discharge current
- Limitation of touch voltage

Thyristor-Bypass (Fail-Safe-Stage)

- Directly connected to the terminals
- Activated in the event of capacitor or MOSFET failure
- Transition to a defined short-circuit state under overload conditions
- Limitation of clamping voltage to max. 32 V DC

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Monitoring & Remote Inspection

Terminal connections for remote inspection

- Overload indication (relay contact NC/NO)
- Battery status
- Temperature sensor

Prepared for future remote inspection

- Integrated interface for remote acquisition of operating states

Integrated control panel

- Status indicators
- Reset function for overload fault memory

Standards & Regulations

- DVGW Code of Practice GW 22-1, effective since September 2025
- GW 22-3 (A), edition December 2024
- Objective: enhanced operational safety, harmonized requirements, and preparation for condition monitoring
- Additional transient protection must be provided in accordance with GW 22

Retrofit & Existing Installations

- Retrofit of extended protection, fail-safe, and monitoring functions possible
- Adaptation of existing installations to meet new safety requirements
- No complete replacement required

Technical Data

Type	ABL65C	ABL100C
Rated AC current	65A~	100A~
Nominal capacitance	2F	3F
Capacitance tolerance	+/-20%	
Residual voltage at rated current / 50 Hz	< 250mV~, typ. 220mV~	< 250mV~, typ. 220mV~
AC internal resistance at 50 Hz	typ. 3,5mOhm	typ. 2,5mOhm
Residual voltage at rated current / 16.6 Hz	< 800 mV~, typ. 650mV~	< 800 mV~, typ. 650mV~
AC internal resistance at 16.6 Hz	typ. 10mOhm	typ. 7mOhm
DC leakage current @ -1 VDC	< 1 mA, typ. 0,3mA	< 1 mA, typ. 0,3mA
DC leakage current @ -27 VDC	< 20 mA, typ. 10mA	< 20 mA, typ. 10mA
Anodic limiting voltage	< 1 V, typ. 0,6V	< 1 V, typ. 0,6V
Cathodic limiting voltage	< -27V	
Full activation of MOSFET stages	From approx. -31 VDC	
Activation of safety shutdown (short-circuit)	< -32V DC	
Performance of safety shutdown	max. 800A~ for 200ms	
Performance of MOSFET stages	max. 450A for 3s	
Overload capability of rated current for 1 minute	100A~	150A~
Capacitor overload capability for 3 seconds	400A~	600A~
Connection terminals	Screw terminal up to 50 mm²	
Signaling contact NC/NO	Max. 30VDC / 2A	
Mating connector for connection terminals	Phoenix-Contact FK-MCP 1,5/ 9-STF-3,81 (1851300)	
Compliance	GW 22-3 (A), December 2024 edition (see description above)	
Operating temperature range	0 up to +50 °C	

Maintenance & Operation

- Functional testing required after detected or suspected overload
- Periodic functional testing recommended
- Operation outside the permissible limits may lead to destruction of the decoupling device