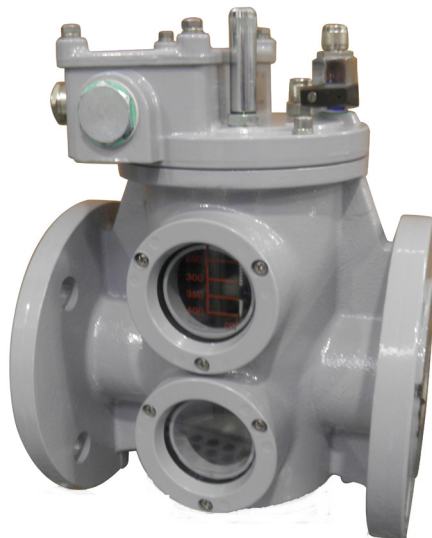


# Buchholz relay

## Gas accumulation and oil flow monitoring



A buchholz relay is a fundamental device for transformers, it keeps internal gas accumulation and oil flow monitored and under control.

Transformer outages have a considerable economic impact on the operation of a power supply network. Therefore it is the aim to ensure an accurate assessment of the transformer condition.

Partial discharges, leakage currents, hot spots and arcing are phenomena that contribute to degradation of oil insulating performances by generating dangerous gas flow inside the transformer tank.

ABB COMEM has developed a reliable **Buchholz relay** that promptly provide information about internal malfunctioning giving the possibility to eventually stop the system prior its destruction.

The **Buchholz relay** is sited in the pipework between the transformer and its conservator and it is filled with oil during normal transformer operation.

When gas is generated in the transformer it rises towards the conservator and collects in the upper chamber of the relay. The oil level drops and the top float triggers alarm switch. Gas shall not freely pass from the relay body and escape into the pipework before the alarm contact has operated.

Another important functionality of the Buchholz relay is to operate if oil flow from the transformer tank to the oil conservator. In case the oil flow speed exceed the pre-set value the flow vent operates and switch the trip contact.

### Application:

- Liquid-filled transformers with or without rubber bag
- Transformer conservator
- Transformer tank

### Features:

- Field-proven reliability
- No false alarms
- Robust design
- IP 65, upon request IP 66
- Special design for On-load tap-changer (OLTC) application, hermetic transformers and transformers with conservator with rubber bag

### Additional accessories:

- Gas sampling device

## TECHNICAL DATA

Housing	Aluminum alloy
RAL	7032
Nominal pipe diameter	DN25, DN50, DN80 and DN100 or G ½ threaded connection
Inspection glass	Tempered glass with UV filter
Oil temperature	from -40°C up to +120°C
Environment temperature	from -40°C up to +80°C Lower temperature version available upon request
Installation	Indoors and outdoors, tropical proof Off shore protection available upon request
Switches	Up to 4
Max. nominal current	2A
Min. switching current	10mA/24 VDC (for lower current the golden contact is available)
Rated insulation voltage	2.5 kV AC 1 min between contacts and earth, 1.0 kV AC 1 min between open contacts
Insulation resistance	1000 MΩ/500 VDC
Flow vents speed	1.0 m/s to 3.0 m/s (each ±15%)
Cable gland	2; M25x1.5
Degree of protection	IP 65 IP 66 upon request
Mechanical test (vibration class)	4M4 Class 4M6 Class upon request

