ZX0.2 Digital is an enhancement of the existing ZX0.2 gas-insulated switchgear portfolio for primary applications. This digital concept takes full advantage of well-proven components: current and voltage sensors, protection and control relays with IEC 61850 digital communication to ensure a reliable and efficient electrical network. ZX0.2 Digital covers all ZX0.2 switchgear variants up to a rated voltage of 36 kV, a rated current of 2500 A and a short time current of 31.5 kA, IEC standard.

ABB Ability™ GIS for MV - ZX is a digital concept for medium-voltage switchgear which finds implementation in ZX0.2 Digital. Thanks to this concept, we are able to simplify customer’s planning process of switchgear projects and allow late changes during project execution. Thus, we enable our customers to meet tough delivery times at maximum flexibility. Importantly, ZX0.2 Digital further increases safety during installation and operation of our switchgears.

Application
With ZX0.2 Digital you gain unprecedented flexibility for any application in all segments and areas, where customers rely on a premium gas-insulated switchgear. These customers typically require a reliable power supply, which cannot be affected by external influences while a minimized footprint of the switchgear lineup is desired. However, all unique values of ZX0.2 Digital are fully leveraged in projects with high complexity and an increased demand for flexibility during and after project execution.
Customer benefits of ZX0.2 Digital

ZX0.2 Digital is...

Safe and reliable
- Additional safety thanks to continuously supervised and redundant communication
- No aging effect thanks to fewer insulating components
- No fuse required for sensors because of low-level signals
- No unsafe situations arise because of possible failures in instrument transformers

Simple and efficient
- All ratings are covered by just one current sensor variant and one main voltage sensor variant
- Streamlined wiring in low voltage compartment thanks to GOOSE¹ interlockings and process bus according to IEC 61850
- Cable testing without removing voltage sensors: sensors sustain cable testing voltages
- Reduced delivery time
- Lower energy consumption by up to 250 MWh representing savings of up to 42,500 EUR²

Flexible and intelligent
- Superior flexibility towards grid disturbances and varying load flows thanks to linear sensor characteristic
- Late customization and changes possible without any replacement of sensors
- Interoperability thanks to native support of IEC 61850

ZX0.2 Digital panel
1 Voltage sensors for busbar voltage measurement
2 Test adapter box
3 Protection relay with IEC 61850
4 Current sensor
5 Voltage sensor for cable voltage measurement

¹ GOOSE = Generic Object Oriented Substation Events – a protocol for communication within a substation, which is part of the IEC 61850 standard
² Compared to a conventional ZX0.2 line up with 14 panels over 30 years and an energy price of 0.17 EUR per kWh