

# Life Cycle Services for distribution protection and control relays

## Relion® BIO-Testers



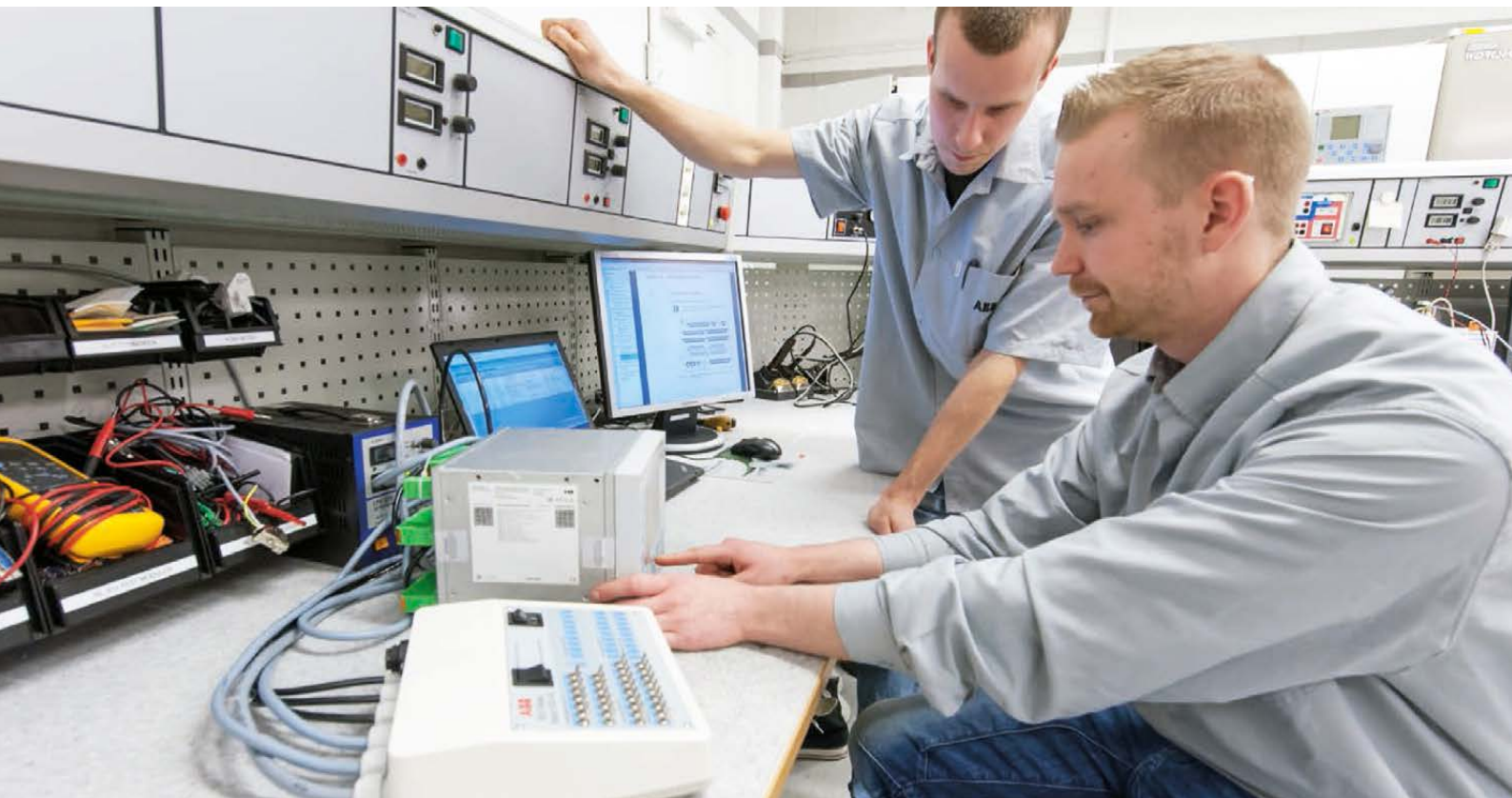
Healthy binary inputs and outputs (BIOs) prevent incorrect operation, ensure optimal personnel safety, minimize the risk of damages to equipment, maximize process uptime, and save time and money. ABB's Relion® BIO-Tester range makes testing BIOs can be fast and easy, throughout the entire relay life cycle.

**Relion® BIO-Testers are intended for testing the binary inputs and outputs of ABB's Relion® protection relays. These easy-to-use compact testers can be used for simulation during the design of the application configuration, including troubleshooting, as well as for routine maintenance and testing.**

**Relion® BIO-Testers – an easy, fast and safe choice** Binary inputs and outputs (BIOs) play an important role in the overall operation of protection relays, for example in various control and interlocking schemes, and by generating alarm and trip signals to the circuit breaker. Ensuring the health of the BIOs through simulation and testing is advisable to prevent incorrect operation of a control scheme, which may pose a safety risk to personnel, damage equipment and result in process or revenue loss.



BIOs can be tested already at the primary design stage to ensure the correctness of the logic and during periodic maintenance. Relion® BIO-Testers have been specifically developed to facilitate the testing of both the configuration and the operation of inputs and outputs. Where using a digital ohmmeter is laborious, the BIO testers make the simulation and testing fast, safe and easy.



#### **Relion® BIO-Tester range**

Relion® BIO-Tester 610-611-615-620 can be used with the following Relion relays:

- REX610
- REF611, REM611, REB611, REU611
- REF615, REM615, RET615, REG615, RED615, REU615, REV615
- REC615, RER615
- REF620, REM620, RET620, RER60

BIO-Tester Relion® 630 can be used with the following Relion relays:

- REF630, REM630, RET630, REG630

BIO-Tester Relion® REX640 can be used with the all-in-one protection and control relay REX640.

#### **Content of delivery**

The delivery includes:

- Relion® BIO-Tester with connector cables
- Power cord (AC adapter and power cord for BIO-Tester Relion® 630)
- User guidelines

#### **Benefits**

- Easy and fast simulation of the configuration during the entire relay lifetime
- Minimized risk of configuration errors
- Less time required for testing the operation of inputs and outputs
- Short payback due to time savings and reduced number of configuration errors
- Increased operational safety due to low operating voltage and fully sheltered housing
- Easy to use – no training required
- Easy to bring on-site due to portability

#### **Additional information**

For more information, please contact your local ABB representative or visit our website at:

[www.abb.com/service](http://www.abb.com/service)

[www.abb.com/mediumvoltage](http://www.abb.com/mediumvoltage)

