# Single Testers

# Testing device with only one integrated test method

|  | Handheld-HV | Handheld-Iso     | Handheld-PE | GLP1-e HV | GLP1-e HV | GLP1-e HV | GLP1-e HV | GLP1-e            | GLP1-e        | GLP2-e   ce |
|--|-------------|------------------|-------------|-----------|-----------|-----------|-----------|-------------------|---------------|-------------|
| high voltage<br>AC<br>W mA                               |             |                  |             | 3   6KV   | 12KV      | 1550KV    |           |                   |               | 312KV       |
| high voltage<br>DC<br>mA<br>GΩ                           | 2.5KV       |                  |             |           |           |           | 16KV      |                   |               |             |
| insulation<br>resistance<br>$\downarrow KVG\Omega\equiv$ |             | 1001000V<br>30MΩ |             |           |           |           |           | 100…1000V<br>30MΩ |               |             |
| PE resistance  |             |                  | 10A<br>0.7Ω |           |           |           |           |                   | 1030A<br>0.7Ω |             |
| leakage<br>current<br>$\mu^m_{\mu A}$                    |             |                  |             |           |           |           |           |                   |               |             |
|  |             |                  |             |           |           |           |           |                   |               |             |
| surge voltage  |             |                  |             |           |           |           |           |                   |               |             |
| standard<br>surge impulse<br>U                           |             |                  |             |           |           |           |           |                   |               |             |

| GLP2-e   ce HV | GLP2-e   ce | GLP2-e   ce           | GLP2-e   ce   | GLP2-e   ce                            | GLP2-e   ce | MTC2-light | MTC2            | MTC2                | MTC2      | Normstoß |
|----------------|-------------|-----------------------|---------------|--|-------------|------------|-----------------|---------------------|-----------|----------|
| 10100KV        |             |                       |               |  |             |            |                 |                     |           |          |
|                | 140KV       |                       |               |  |             |            |                 |                     |           |          |
|                |             | 2510000V<br>100kΩ10TΩ |               |  |             |            |                 |                     |           |          |
|                |             |                       | 1070A<br>0.7Ω |  |             |            |                 |                     |           |          |
|                |             |                       |               | 1µA30mA<br>1-phase 3-phase<br>50Hz1MHz |             |            |                 |                     |           |          |
|                |             |                       |               |  | 1μΩ1ΜΩ      |            |                 |                     |           |          |
|                |             |                       |               |  |             | 2.5   6KV  | 2.5   12   15KV | 2.5   6   12   15KV | 24   30KV |          |
|                |             |                       |               |  |             |            |                 |                     |           | 6KV      |

### Highlights

- reasonably priced
- compact | small
- OEM applications

Our single testers contain only one test method. They can be used for both, manual testing or automatic testing.

In production lines, you often find automatically performed tests that can be extended by switch-over relay fields (relay matrices).

We offer single testers mainly in the following families:

- Handheld
- GLP1
- GLP2
- MTC2







| er to:    |    | LS |
|-----------|----|----|
| ndheld    | 18 | te |
| 21-е      | 20 | S  |
| Р1-е НV   | 22 | ГЩ |
| 2-е       | 26 | Ð  |
| P2-ce     | 28 | g  |
| C2        | 48 |    |
| t methods | 94 | S  |
|           |    |    |

# **Combination Testers**

## Testing device with two or more integrated test methods

|               | high voltage<br>AC<br>KV<br>mA<br>A | arc detection | high voltage<br>DC<br>W MA<br>GQ | insulation<br>resistance<br>GΩ<br>Ξ | polarization | PE resistance | leakage<br>current<br>$\mu^{mA}_{\mu}$ | substitute<br>leakage current<br>$ \oint_{\underline{\underline{w}}} m_{\mu A}^{m A} $ | leakage<br>current medical<br>$\stackrel{mA}{=}$ <sup>mA</sup> | residual<br>voltage<br>V | short circuit | function<br>1-phase | $\overbrace{\substack{1-\beta-phase}}^{function} \bigvee_{\substack{A\\ W\\ VA\\ cos. \varphi}}$ |   |   | inductivity |
|---------------|-------------------------------------|---------------|----------------------------------|-------------------------------------|--------------|---------------|--|--|--|--------------------------|---------------|---------------------|--|---|---|-------------|
| Handheld      |                                     |               | ٠                                | •                                   |              | ٠             |  | •  |  |                          |               | ٠                   |  |   |   |             |
| GLP1-e        | •                                   | •             | •                                | •                                   |              | •             |  |  |  | •                        | •             | •                   |  |   |   |             |
| GLP2-e        | •                                   | •             | •                                | •                                   |              | ٠             | •                                      | •  | •  | •                        | •             | ٠                   | •  | • |   |             |
| GLP2-ce       | •                                   | •             | •                                | •                                   | •            | •             | •                                      | •  | •  | •                        | •             | •                   | •  | • |   |             |
| GLP3          | •                                   | •             | •                                | •                                   | •            | •             | •                                      |  | •  | •                        | •             | •                   | •  | • | • | •           |
| MTC2          |                                     |               | ٠                                | ٠                                   | ٠            |               |  |  |  |                          |               |                     |  | • |   | •           |
| МТС3          | •                                   | •             | •                                | •                                   | •            | •             |  |  |  |                          |               |                     |  | • | • | •           |
| MotorAnalyzer |                                     |               | ٠                                | •                                   | ٠            | ٠             |  |  |  |                          |               |                     |  | • |   |             |

### Highlights

- combination of various test methods, safety tests and functional tests in one device
- extendable by various physical tests
- automatic switch-over between the test methods
- switch-overs for smallest and highest voltages and currents
- one connection and automatic successive test performance
- significant time-saving during the process
- switch-overs for dual and multi test stations

Combination testers usually combine at least two individual test methods in one testing device. The internal switch-over assures an automatic connection of the respective test leads to the test object.

Standard switch-overs are usually designed for single-phase and three-phase test objects.

If the product under test has further test connections, additional matrices allocate the test leads to the remaining test points.

#### Semi-automatic and manual tests

After all leads, e.g. the mains plug, have been connected to the testing device, the PE test points are contacted manually with a test probe. Following, the tester performs all the other tests successively automatic in a pre-programmed routine. The internal switch-over connects test methods to the respective connections.

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#### **Fully-automatic tests**

All necessary test leads can be connected to the test object in one processing step. After activating the shock-hazard protection, the test process starts. All tests are performed successively. The internal switch-over connects test methods to the respective connections.

If the tester is designed as a dual or multi station, you can remove the tested product at any desired station and replace it by a new test object while the test is in process.



We offer combination testers for any imaginable combination of test methods. In addition to safety and functional tests, the tester can be equipped with physical tests such as temperature, pressure or flow rate.

Combination testers are available in the following families:

- Handheld
- GLP1
- GLP2
- GLP3MTC2
- MTC3
- Motor
- MotorAnalyzer

The largest variety of combinations can be achieved with GLP3 testers.

| Refer to:     |    |
|---------------|----|
| Handheld      | 18 |
| GLP1-e        | 20 |
| GLP1-e HV     | 22 |
| GLP1-e 60204  | 24 |
| GLP2-e        | 26 |
| GLP2-ce       | 28 |
| GLP3          | 36 |
| MotorAnalyzer | 46 |
| MTC2          | 48 |
| MTC3          | 50 |
| Test methods  | 94 |
|               |    |

**Combination Testers**