

## Drop shock proof meter



## SP21

## Continuity check buzzer

- Drop shock proof taut-band meter
- $\pm$ DCV zero center meter
- Fuse and diode protection
- Battery check
- Tilt stand

Bandwidth : 40~100kHz (AC12V)

Safety : IEC61010-1 (EN61010-1) 2001-02 CAT.III 600V

## Optional accessories

HV probe : HV-20

Carrying case : C-SPH or C-SP

Clip adapter : CL-11, TL-8IC, CL-15

Test lead : TL-21M, TLF-120



| Function                      | Measuring range  | Accuracy   |
|-------------------------------|--|--|
| DCV (NULL)                    | 0.3 (5k $\Omega$ )/3/12/30/120/600V (20k $\Omega$ /V)<br>$\pm$ 6/30V (20k $\Omega$ /V) | $\pm$ 3% of full scale<br>$\pm$ 3% of full scale |
| ACV                           | 12/30/120/300/600V   | $\pm$ 3% of full scale                           |
| DCA                           | 60 $\mu$ /30m/0.3A   | $\pm$ 3% of full scale                           |
| Resistance                    | 2k/20k/2M $\Omega$   | $\pm$ 3% of arc                                  |
| Capacitance                   | 500 $\mu$ F  | *1   |
| Continuity                    | Buzzer sounds at less than approx. 10 $\Omega$ . Open voltage: 3V                      |  |
| Bandwidth                     | 40 ~ 100kHz (AC12V)  |  |
| Battery                       | R6P $\times$ 2   |  |
| Fuse                          | $\phi$ 6.3 $\times$ 30mm (250V/0.5A)   |  |
| Size / Weight                 | H144 $\times$ W99 $\times$ D41mm/approx. 270g  |  |
| Standard accessories included | Test lead (TL-21), Instruction manual  |  |

The value in ( ) at DCV and ACV is input resistance.

\*1 Pointer indication of the maximum move by charged current in the capacitor.



## SP20

## DC high voltage &amp; temperature measurable

- 20ch measurement ranges
- Capacitance measurement 500 $\mu$ F
- Tilt stand
- DC high voltage and temperature measurement (with optional accessories)

Bandwidth : 40~100kHz (AC10V)

## Optional accessories

HV probe : HV-10

Temperature probe : T-THP

Carrying case : C-SPH or C-SP

Clip adapter : CL-11, TL-8IC

Test lead : TLF-120



| Function                      | Measuring range   | Accuracy               |
|-------------------------------|---|------------------------|
| DCV                           | 0.25/2.5/10/50/100V (20k $\Omega$ /V)/500V (9k $\Omega$ /V) | $\pm$ 3% of full scale |
| ACV                           | 10/50/250/500V (9k $\Omega$ /V)                             | $\pm$ 3% of full scale |
| DCA                           | 50 $\mu$ /2.5m/25m/0.25A                                    | $\pm$ 3% of full scale |
| Resistance                    | 2k/20k/200k/2M $\Omega$                                     | $\pm$ 3% of arc        |
| Capacitance                   | 500 $\mu$ F   | *1                     |
| DC high voltage               | DC25kV (Optional probe "HV-10" is necessary)                | —                      |
| Temperature                   | -20 ~ +200°C (Optional probe "T-THP" is necessary)          | $\pm$ 3% (T-THP)       |
| Bandwidth                     | 40 ~ 100kHz (AC10V)   |                        |
| Battery                       | R6P $\times$ 2  |                        |
| Fuse                          | $\phi$ 6.3 $\times$ 30mm (250V/0.5A)                        |                        |
| Size / Weight                 | H144 $\times$ W99 $\times$ D41mm/approx. 270g               |                        |
| Standard accessories included | Test lead (TL-61), Instruction manual                       |                        |

The value in ( ) at DCV and ACV is input resistance.

\*1 Pointer indication of the maximum move by charged current in the capacitor.



## SP-18D

## Protective body cover

- Low power ohm (3V) measurement upto 200M $\Omega$
- Capacitance measurement 0.01 $\mu$ F~1000 $\mu$ F
- LED check by 3V terminal voltage at resistance range
- Battery check
- Protective body cover

Bandwidth : 30~80kHz (AC12V), 30~20kHz (AC30V)

## Optional accessories

Clip adapter : CL-11, TL-8IC



| Function                      | Measuring range                                      | Accuracy               |
|-------------------------------|--|------------------------|
| DCV                           | 0.3/3/12/30/120/600V (20k $\Omega$ /V)               | $\pm$ 3% of full scale |
| ACV                           | 12/30/120/300/600V (9k $\Omega$ /V)                  | $\pm$ 3% of full scale |
| DCA                           | 60 $\mu$ /30m/0.3A                                   | $\pm$ 3% of full scale |
| Resistance                    | 2k/20k/2M/200M $\Omega$                              | $\pm$ 3% of arc        |
| Battery check                 | 1.5V/1.5V Coin battery                               | —                      |
| Capacitance                   | 1000 $\mu$ F   | *1                     |
| Bandwidth                     | 30 ~ 80kHz (AC 12V) 30 ~ 20kHz (AC 30V)              |                        |
| Battery                       | R6P $\times$ 2                                       |                        |
| Fuse                          | $\phi$ 5.2 $\times$ 20mm (250V/0.5A)                 |                        |
| Size / Weight                 | H159.5 $\times$ W129 $\times$ D41.5mm / approx. 320g |                        |
| Standard accessories included | Instruction manual                                   |                        |

The value in ( ) at DCV and ACV is input resistance.

\*1 Pointer indication of the maximum move by charged current in the capacitor.



## TA55

## 30A range for automotive

- High level panel visibility
- Continuity check buzzer
- Tilt-stand
- Measureable upto DC30A / DC300A with optinal clamp probe

Bandwidth : 40~5kHz

## Optional accessories

Clamp probe : CL33DC

Carrying case : C-SPH or C-SP

Clip adapter : CL-11, TL-8IC

Test lead : TL-91M, TLF-120



| Function                      | Measuring range  | Accuracy               |
|-------------------------------|--|------------------------|
| DCV                           | 0.3/3/16/30/60V (20k $\Omega$ /V)                                  | $\pm$ 3% of full scale |
| ACV                           | 30/120/300V (9k $\Omega$ /V)                                       | $\pm$ 4% of full scale |
| DCA                           | 0.5/3/30A  | $\pm$ 5% of full scale |
| Resistance                    | 2k/20k/200k/2M $\Omega$  | $\pm$ 3% of arc        |
| Continuity                    | Buzzer sounds at less than approx. 10 $\Omega$ . Open voltage : 3V |                        |
| Bandwidth                     | 40~5kHz  |                        |
| Battery                       | R6P $\times$ 2   |                        |
| Fuse                          | $\phi$ 6.3 $\times$ 30mm (250V/3A)                                 |                        |
| Size / Weight                 | H142 $\times$ W97 $\times$ D38mm/approx. 300g                      |                        |
| Standard accessories included | Test lead (TL-91), Instruction manual                              |                        |

The value in ( ) at DCV and ACV is input resistance.