

MultiSafe DSP 4
Precise indication up to 1200 V AC / 1500 V DC



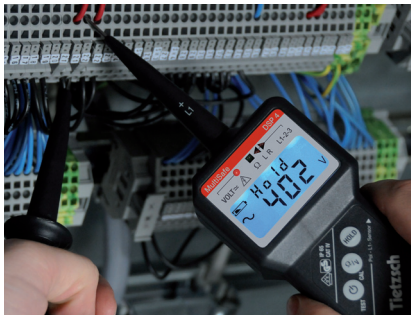
DSP 4-F
with push button F for:
phase sequence tests in ungrounded
mains, frequency measurement or data hold



DSP 4ST - Slide tip
with adjustable electrode length to
4 mm or 16 mm

- The MultiSafe DSP 4 is a safe testing device for all applications in power engineering – easy handling, precise, reliable.
- Precise indication of voltage from 1 V up to 1200 V AC 30 mV up to 1500 V DC
- Phase and phase sequence tests (possible with gloves) continuity tester 1 kΩ up to 2000 kΩ
- Highest degree of safety provided by protective resistors in both test prods
- Easy operation large illuminated display

EN/IEC 61243-3
CAT IV 600 V



- Many test-functions
Fast and safe measuring and testing of:
Direct and alternating voltage
Resistance / continuity
Polarity
Phase
Phase sequence grounded
Phase sequence test ungrounded for IT mains
Frequency measurement

- Easy operation
Fully automated test procedures obviate operating errors:
At 24 V the MultiSafe switches on, or from continuity over to voltage testing
Automatic selection of correct measurement range
Indication of voltage and polarity
Self-test per keypress
Hold-function

- Three readout systems
Unambiguous and rapid recognition of function and result:
Round red flares for voltage, green square symbol for resistance and two red triangles for phase sequence.
The display shows precise values in V or kΩ as well as voltage type and polarity
An acoustic signal indicates continuity up to 10 kΩ.

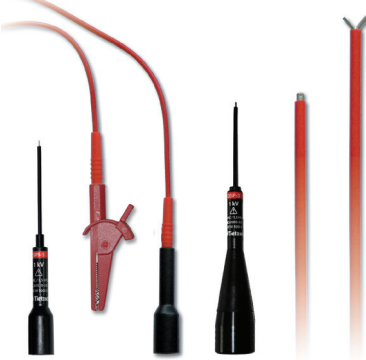
- Robust design
High-quality elements guarantee function and safety under extreme conditions:
Impact resistant plastic casing and break-proof display cover
Dust- and waterproof (IP 65, approved for operation in outdoor areas)
Spring-mounted test contacts
Twin insulated PUR sheathed cable



- Highest level of safety
Protective resistors located directly behind both test electrodes protect user and device especially against dangerous voltage peaks and energy from external sources
Clear LED indication of hazardous voltages > 50 V AC / 120 V DC, which works without battery
The MultiSafe has been tested and certified by VDE

- Phase sequence test
Exact phase sequence test in grounded mains from 165 V up to 1200 V / 50 Hz by microcontroller analysis.
The phase sequence test is possible with gloves.
DSP 4-F additionally:
New measuring principle for phase sequence tests works also in unearthed mains, applicable for IT mains

- Safety accessories
Accessories are not included in scope of delivery
Pin prod, adapter and extensions (page 30)



Technical data
Two-pole voltage tester
MultiSafe DSP 4 / DSP 4-F tested and certified by VDE in accordance with EN/IEC 61243-3 (VDE 0682 part 401)

Nominal voltage
24 ... 1000 V AC / 1500 V DC
(Display range)
1 V ... 1200 V AC
0,03 V ... 1500 V DC

Frequency
15 Hz ... 10 kHz < 500 V, 15 Hz ... 4 kHz > 500 V
Indication of voltage/phase/phase sequence

4 LEDs for voltage, continuity, phase sequence
LCD digital indication, backlit
7-segment display, 2 lines, 0 ... 1999 digit
Measuring ranges - voltage
AC: 1,0...99,9/100...1200 V (1,5% + 3 D)
(TRMS 15...1800 Hz)
15...1200 V (15% + 3 D)
(sineff >1,8...4/10 kHz)
DC: 0,03...8,99/9,0...99,9/100...1500 V (1,5% + 3 D)

Indication of resistance/continuity/diodes
Green LED for continuity up to 1999 kΩ and diodes, LCD 3½-digit for kΩ-measurement value
buzzer ≤ 10 kΩ

Measuring range - resistance
0 ... 1999 kΩ (5 % + 3 D)

Measuring ranges - frequency
Only DSP 4-F: 15 ... 1999 Hz, 2,00 ... 10,00 kHz

Input resistance
412 kΩ at 50 V / 50 Hz
311 kΩ at 1000 V AC, 720 kΩ at 1000 V DC
protective resistors directly behind both test electrodes

Current peak value
3,2 mA at 1000 V

On-time
30 s

Overvoltage category
CAT IV 600 V / CAT III 1000 V
in accordance with IEC 60664-1 (VDE 0110)

Surge voltage strength
>12 kV case insulation to user
> 8 kV circuit between test prods

Insulation test voltage
6 kV unit inspection of case and line

Operating temperature
-15°C ... + 45°C

Standards
DSP 4/DSP 4-F: EN/IEC 61243-3 (VDE 0682 Teil 401)
DSP 4ST: additionally according to UK HSE GS38
DSP 4UL: UL 61010-1, 3rd Edition
CAN/CSA-C22.2 No. 61010-1, 3rd Edition

Power supply
9 V-block IEC 6LR61 / 6LF22 / 6LP3146 energy-saving circuit, automatic switch-off after 30 s without measuring, multi-stage battery indicator

Casing
ABS, display cover PC impact resistant, test electrodes spring-mounted

Protection category
IP 65, device can be used in moist environments

Line
PUR sheathed cable, 1000 V, 1 m with protective cap for electrodes

Dimensions / Weight
240 x 62 x 39 mm (display part) / 270 g

Type	Article no.	Phase- / phase sequence test	Phase sequence test for IT power grids	Continuity test with value	Additional load 30 mA-RCD-tripping	Slide tip 4 / 16 mm
DSP 4						
1 - 1200 V AC	84402	■		■		
0,03 - 1500 V DC						
DSP 4F						
1 - 1200 V AC	84403	■	■	■		
0,03 - 1500 V DC						
DSP 4ST						
1 - 1200 V AC	84405	■		■		■
0,03 - 1500 V DC						
DSP 4FST						
1 - 1200 V AC	84406	■	■	■		■
0,03 - 1500 V DC						