



**KURTH
ELECTRONIC**

Fault locator bridge

KE-FLB



At a glance

- DC and AC fault location measurement
- Isolation resistance measurement
- Loop resistance measurement
- Resistance difference measurement
- Mutual capacitance measurement
- Conductor-shield capacitance measurement
- Break and split measurement
- DMM functions
- Cable temperature measurement by external test probe
- Simple, menu controlled operation
- Storage of setups and results
- Results can be logged on external printer or PC via RS232C
- Software upgrade via RS232C
- Program for supporting the calibration procedure according to ISO 9000
- 128 x 128 pixel graphic LCD display with backlight
- Small size, suitable for usage in the field
- Internal rechargeable battery pack

The **Fault Locator Bridge KE-FLB** is a microprocessor controlled DC and AC cable measuring instrument intended for fast and accurate fault location and quality testing of telecommunication cables.

The seven test modes of **KE-FLB** allow for precisely locating all kind of faults like water ingress, short, open resistance faults, split, insulation problems with the big display with backlight.

The **KE-FLB** is one of the smallest and lightweight cable qualifiers on the market. The serial interface allows to download and upload the measurement data to a PC. With this interface it is also possible to make a software upgrade if necessary. The unit comes with rechargeable batteries, a charger, test leads set and a carrying pouch.

KE-FLB Technical data

Loop resistance

Measuring range	1 Ω – 10 k Ω
Accuracy	
100 Ω – 10 k Ω	$\pm 0,2\%$ MV $\pm 0,1 \Omega \pm 1$ digit

Resistance difference (ΔR)

Measuring range of R	1 Ω – 5 k Ω
Measuring range of ΔR	1 Ω – 1 k Ω
Accuracy ΔR	
1 Ω – 10 Ω	$\pm 1\%$ FV $\pm 0,1 \Omega$
10 Ω – 100 Ω	$\pm 1\%$ – $\pm 0,2\%$ FV $\pm 0,1 \Omega$
100 Ω – 1 k Ω	$\pm 0,2\%$ FV $\pm 0,05 \Omega$

Insulation resistance

Measuring range	10 k Ω – 100 (20.000) M Ω
Accuracy	
100 k Ω – 10 M Ω	$\pm 1\%$ MV ± 1 digit
10 M Ω – 100 M Ω	$\pm 2\%$ MV
100 M Ω – 3 G Ω	$\pm 10\%$ MV
3 G Ω – 10 G Ω	$\pm 20\%$ MV
10 G Ω – 20 G Ω	$\pm 30\%$ MV

Capacity

Measuring range	1 nF – 10 (25) μ F
tan δ	0,0001 – 0,1
Accuracy	
1 nF – 10 μ F	$\pm 0,5\%$ MV ± 1 digit
Measuring range	11 Hz

DC fault locations

Measuring methods	Murray Loop Three Point Improved Hector (Küpfmüller)
Loop resistance range	1 Ω – 10 k Ω
Accuracy Lx/L (Rs = 2k Ω , Lx/L = 0,1 bis 1)	
Fault < 1 M Ω	$\pm 0,1\%$ MV ± 1 digit
Fault 1 – 5 M Ω	$\pm 0,2\%$ MV ± 1 digit
Fault 5 – 25 M Ω	$\pm 1\%$ MV ± 1 digit
Fault 25 – 100 M Ω	$\pm 5\%$ MV ± 1 digit
Measuring voltage	max. 100 V
Internal filter	> 70 dB at 50 Hz
Measuring current	max. 400 μ A



Stored cable parameters Standard Cu and Al cables
 User defined cables
 User defined MultiSection cables
 User defined Loaded cables

AC fault location

Wire break with or without leakage

Measuring range depending on cable up to 20 km

Accuracy of Lx/L
 20 nF – 10 µF ± 0,2 – 1% MV ± 1 digit

Measuring frequency 11 Hz

Split location

Measuring range depending on cable up to 20 km

Accuracy of Lx/L and L2/L
 20 nF – 10 µF ± 0,2 – 1% MV ± 1 digit

Measuring frequency 11 HZ

Voltage measurement

DC voltage 0 – 100 V

AC voltage 0 – 100 V_{eff}

Accuracy
 (DC u. AC at 50/60 Hz) ± 1% MV ± 0,1 V

Frequency range 15 – 300 Hz

Temperature (with Pt 1000 temperature probe)

Temperature range -20 – +60 °C

Resolution 0,1 °C

Accuracy ± 0,4 °C

Storage and print of measurement results

Memory for 128 result displays

Print from result display or from memory via RS232C-
 Schnittstelle transferrable to PC

Connectors

Conn. f. measuring cables 4 mm safety banana sockets

Interface f. RS232C D Sub9

Charger 2,1 / 5,5 mm

Allgemeine Spezifikationen

Power supply internal rechargeable battery pack

Operation time app. 8 hours

Ext. charging via charger 230V, 50/60 Hz
 via 12 V car charger

Charging time (fast charging) < 3 Hours

Auto power down after 10 minutes without keystroke

Display 192 x 192 pixel graphic LCD
 with backlight with autom..
 power down (5 mm)

Input protection 100 V_{eff} 50 Hz, 140 V_{DC},
 100 mA_{PEAK} für 30 s

Dimensions 200 x 100 x 40 mm

Mass 0,8 kg

Environmental conditions

Reference range +23 ± 5 °C
 RH 30 % – 75 %*


Specified operating range 0 – 40 °C
 RH 30 % – 75 % (< 25 g/m³)*

Operating range limits -10 – 50 °C
 RH 30 % – 75 % (< 25 g/m³)*

Transport / Storage range limits -20 – 70 °C
 RH 30 % – 75 % (< 35 g/m³)*

* no condensation
 MV = measured value
 FV = final value

Your Dealer

	Type	Description
KE-FLB	KE-FLB	KE-FLB fault locator bridge, including operating manual, calibration certificate, measuring cable set, interface cable, PC software on CD, mains adapter, built-in rechargeable battery, carrying case, shoulder bag, EFF 50 filter unit (temperature probe optional)