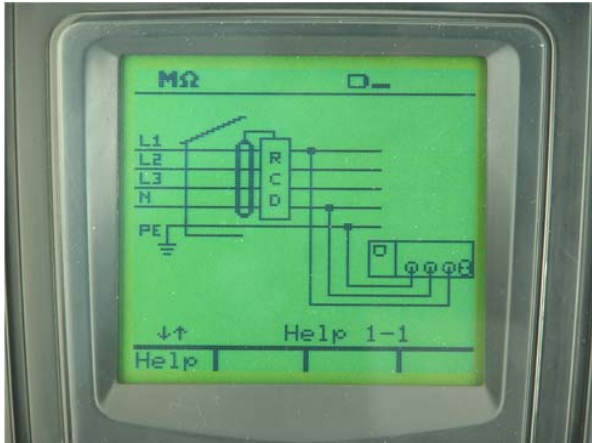
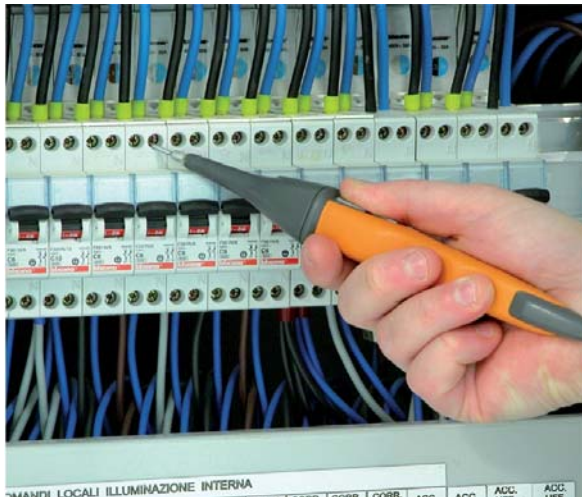


## 1. MAIN FEATURES OF FAMILY 400 METERS



Help on line (available on each function) to support the user while connecting the instrument to the installation under measurement



Each model permits the Start of measurements with remote probe (PR400 optional accessory)



General menu to quickly selection of available test performed by meter  
(COMBI419 and COMBI420 models only)

## 1. ELECTRICAL SPECIFICATIONS

Accuracy is indicated as  $\pm$  (% rdgs + no. of dgt) at 23°C  $\pm$  5°C, con relative humidity <60%HR

### Insulation resistance (DC voltage)

Test voltage (V)	Range (M $\Omega$ )	Resolution (M $\Omega$ )	Accuracy	Category of measure
50	0.01 $\div$ 9.99	0.01	$\pm(2.0\%rdg + 2dgt)$	CAT III 240V to Ground CAT III 415V between inputs
	10.0 $\div$ 49.9	0.1	$\pm(5.0\%rdg + 2dgt)$	
	50.0 $\div$ 99.9			
100	0.01 $\div$ 9.99	0.01	$\pm(2.0\%rdg + 2dgt)$	
	10.0 $\div$ 99.9	0.1	$\pm(5.0\%rdg + 2dgt)$	
	100 $\div$ 199	1		
250	0.01 $\div$ 9.99	0.01	$\pm(2.0\%rdg + 2dgt)$	
	10.0 $\div$ 99.9	0.1		
	100 $\div$ 249	1	$\pm(5.0\%rdg + 2dgt)$	
	250 $\div$ 499			
500	0.01 $\div$ 9.99	0.01	$\pm(2.0\%rdg + 2dgt)$	
	10.0 $\div$ 99.9	0.1		
	100 $\div$ 499	1	$\pm(5.0\%rdg + 2dgt)$	
	500 $\div$ 999			
1000	0.01 $\div$ 9.99	0.01	$\pm(2.0\%rdg + 2dgt)$	
	10.0 $\div$ 99.9	0.1		
	100 $\div$ 999	1	$\pm(5.0\%rdg + 2dgt)$	
	1000 $\div$ 1999			

Open leads voltage:

1.25 x nominal test voltage  
voltage measurement resolution:1V

Short circuit current:

<15mA (peak) for each test voltage

Nominal current:

>2.2mA with 230k $\Omega$  @, 500V; 1mA with 1M $\Omega$  @ other test voltage

### Continuity test on protective conductors

Range ( $\Omega$ )	Resolution ( $\Omega$ )	Accuracy (*)	Category of measure
0.00 $\div$ 9.99	0.01	$\pm(2.0\%rdg + 2dgt)$	CAT III 240V to Ground CAT III 415V between inputs
10.0 $\div$ 99.9	0.1		

(\*) after cable calibration which eliminates the cable resistance

Test current:

>200mA DC per R $\leq$ 5 $\Omega$  (calibration included)

current measurement resolution: 1mA

Open leads voltage:

4 < V<sub>0</sub> < 24V



## 2. GENERAL SPECIFICATIONS

### MECHANICAL FEATURES

Dimensions:	240 (L) x 160 (W) x 70 (D) mm
Weight (batteries included):	about 1.2kg
Protection degree:	IP50

### MEMORY AND SERIAL INTERFACE

Each measurement can be stored

Memory:	>600 locations
PC communication port:	optical / USB

### DISPLAY:

Features:	graphic LCD with backlight
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### POWER SUPPLY:

Batteries:	6x 1.5V type LR6, AA, AM3, MN 1500
Battery life:	> 600 measurements (without using the timer)

### ENVIRONMENTAL CONDITIONS:

Reference temperature of calibration:	23°C ± 5°C
Working temperature:	0° ÷ 40°C
Working humidity:	< 80%HR
Storage temperature (batteries not included):	-10 ÷ 60°C
Storage humidity:	< 80%HR

### GENERAL REFERENCE STANDARDS:

Product guideline:	IEC61557
Insulation:	class 2 (double insulation)
Pollution degree:	2
Overvoltage category of the voltage inputs (installation/measurement):	CAT III 240V to ground, 415V between inputs
Overvoltage category of the AUX input:	5V to ground
Max altitude:	2000m

**This instrument complies with the requirements of the European Low Voltage Directives 2006/95/EEC (LVD) and EMC 2004/108/EEC**