M-520 Capacitance Decade

Programmable Capacitance Decade Basic Features

- ***Designed for RCL meters calibration***
- ***Range of capacitance from 100 pF to 12 mF***
- ***Basic accuracy 0.25 %***
- ***Maximal operating voltage 50 V***
- ***Power supplying from internal battery or power line adapter***
- ***Remote control RS-232***

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Technical data

Capacitance range	:	100 pF - 12.2221 µF
Residual Co	:	typ. < 2 pF for floating L terminal and zero position typ. < 10 pF for grounded terminal L and zero position
Maximal operating voltage	:	50 V DC / 35Veff AC
Type of dielectricum	:	polypropylen
Connection	:	two-terminals
Terminals	:	instrument terminals 4 mm, gold plated
Manual control	:	rotary buttons
Remote control	:	interface RS 232
Range of reference temperatures:		23 °C ± 2 °C
Range of working temperatures	:	+5 °C … +40 °C
Range of storing temperatures	:	-10 °C … +50 °C
Power supply	:	internal battery 12 V LONG B-WP 1.9-12 Power line adapter 15 V/1A (100 – 240 V)
Battery operating time	:	6 hours
Housing	:	metal
Dimensions	:	W 325 mm, H 111 mm, D 316 mm
Weight	:	4.5 kg
Isolation resistance H,L to GND	:	> 10 GΩ (at 500Vdc), floating L terminal

Accuracy for both floating and grounding connection

Decade	Nominal value accuracy *	Dissipation factor *	Temperature coefficient
	[%]	[-]	[- ppm / °C]
100 pF – 1100 pF	**2.5 ±1pF**	< **0.05**	< **250**
1 nF – 11 nF	**0.25**	< **0.005**	< **250**
10 nF - 110 nF	**0.25**	< **0.005**	< **250**
100 nF – 1100 nF	**0.25**	< **0.005**	< **250**
1 uF - 11 uF	**0.25**	< **0.05**	< **250**

* for f = 1 kHz. Accuracy is related to OPEN position.

Capacitance decade is designed especially for calibration of capacitance ranges of multimeters and RCL meters. Due to its versatility it can be used in cal labs, repair centers and in production lines, where remote control of capacitance is requested. Main parts of the M-520 decade create relays with high current capability and capacitors with polypropylen dielectricum.

Important feature is calibration procedure, which allows to recalibrate decade easily. Process of recalibration consists of measuring of partial capacitors inside the instrument and writing new calibration values into internal calibration memory. Calibration can be performed via RS-232 interface with calibration SW. Capacitance decade contains both calibration data for floating and grounding connection.

Content of delivery

Capacitance decade M-520
Power line adapter
RS 232 cable
Application SW
Operation manual

Floating and grounding connection