

Multi-point measurement with the Multiplexer Unit Z3003 (20 locations with 4-terminal measurement)

RM3545-02

Insert up to two Z3003 units into the slots on the back of the instrument.

Scanning measurement using the Multiplexer Unit Z3003 is convenient in applications that require multi-contact measurement, for example when testing network resistors, steering switches, or 3-phase motor windings. Simply insert a Z3003 unit into one of the slots on the back of the RM3545-02 to enable scanning measurement of up to 20 locations* with 4-terminal measurement.

(*When using two Z3003 units, up to 42 locations can be measured with 2-terminal measurement.)



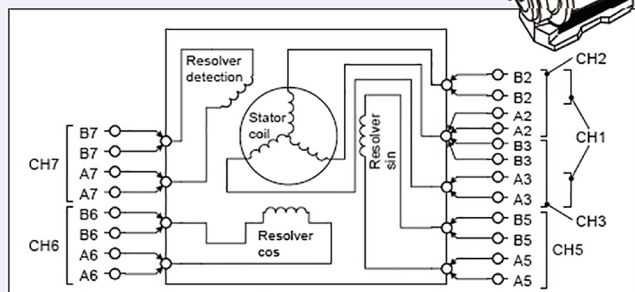
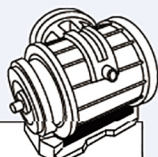
Multiplexer unit Z3003 (Option)



Pictured: Back of the RM3545-02 with two Z3003 units (optional feature) installed

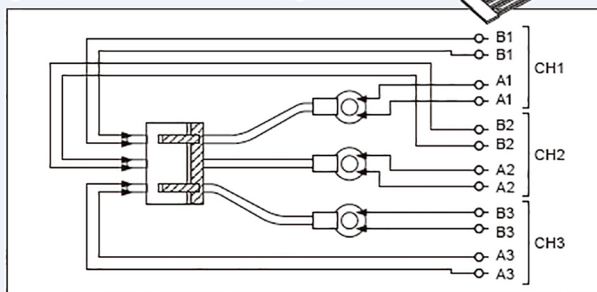
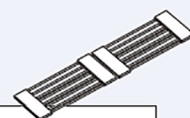
Application 1.

Measuring a 3-phase motor winding



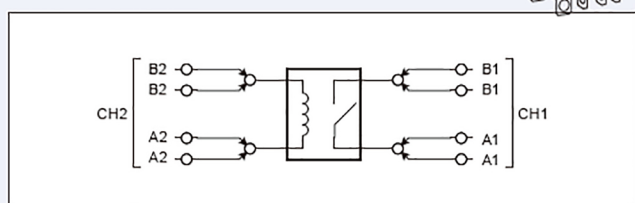
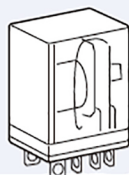
Application 2.

Testing a connector or wiring harness



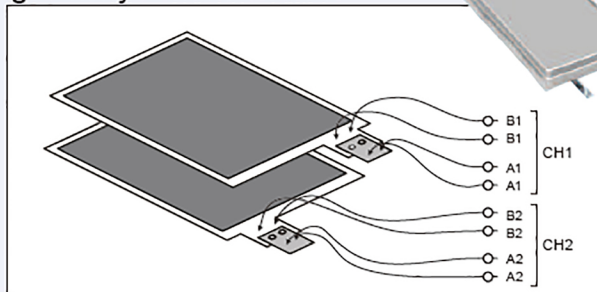
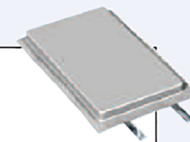
Application 3.

Testing a relay



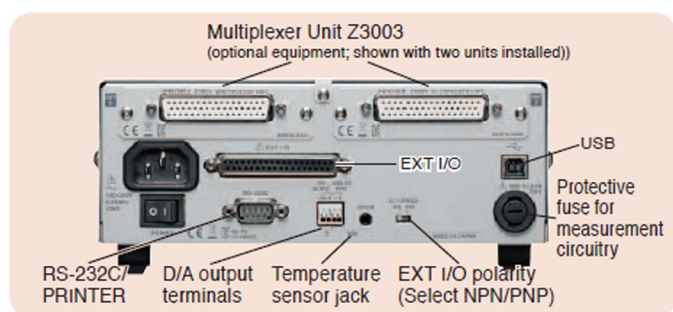
Application 4.

Testing battery terminal welds



RM3545-02 rear panel

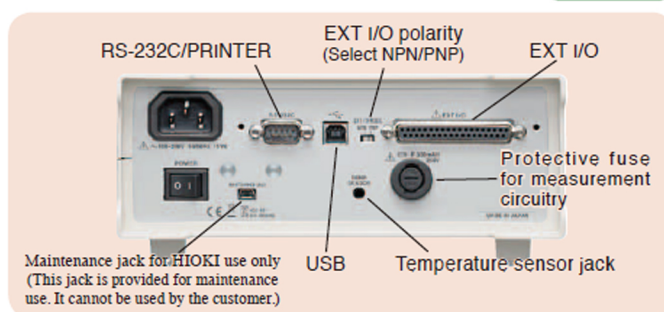
RM3545



*Multiplexer Units cannot be installed in the RM3545 or RM3545-01. The RM3545-01 has a GP-IB connector.

RM3544-01 rear panel

RM3544



*The RM3544 does not include EXT I/O or communication interfaces (RS-232C or USB). Select the RM3544-01 for these functions.

Interface and EXT I/O selection

Select the interfaces and EXT I/O capability needed for your application.

RM3545

RM3544

RM3545 series comparison chart	(Base model)	-01	-02
External I/O (comparator, BCD, BIN function)	✓	✓	✓
Communication interfaces	RS-232C/Printer/USB	✓	✓
	GP-IB	N/A	✓
Multiplexer* (scanner function)	N/A	N/A	✓ (Max. 20 channels)

*When using 4-terminal measurement with two MULTIPLEXER UNIT Z3003 (option) cards.

RM3544 series comparison chart	(Base model)	-01
External I/O (comparator, BCD)	N/A	✓
Communication interfaces RS-232C/Printer/USB	N/A	✓

MULTIPLEXER UNIT Z3003 Specifications

Measurement targets	4-wire: 10 locations (when using 2 units, 20 locations) 2-wire: 21 locations (when using 2 units, 42 locations)
Measurable range	[Measurement current] Internal instrument: 1A DC or less External instrument: 1A DC or less, 100mA AC or less [Measurement frequency] External instrument DC, 10 Hz to 1 kHz
Contact specifications	Contact type: Mechanical relay Maximum allowable voltage: 33 V RMS and 46.7 V peak or 70 V DC *1 Maximum allowable power: 30W (DC), (Resistance load) Contact service life: 4-wire: 50 million cycles*2 (reference value) 2-wire: 5 million cycles (reference value)
Dimensions	Approx. 92W × 24.5H × 182D mm (3.62"W × 0.96"H × 7.17"D) (without projections)
Mass	Approx. 180 g (6.3 oz)
Accessories	Instruction manual ×1, D-SUB 50pin connector ×1

Product warranty: 1 year

RM3545-02

• About scanning time
The Z3003 switching time is 30 ms/ch.
The total scanning time can be calculated as follows:
(Switching time + measurement time including delay) × number of channels
For measurement time typical values, please see page 11.

• Example scanning times

Range	Number of channels	Measurement speed	Delay	Time to output judgment results after TRIG input (When the measurement current is set to "High")
1000mΩ	10	FAST	0 ms	Approx. 300ms
1000mΩ	10	FAST	Preset	Approx. 800ms

*1 Cannot be used in combination with a withstand voltage tester. When used with a withstand voltage tester, the Z3003's internal relay will cause an insulation breakdown, resulting in electric shock or equipment damage.

*2 Assuming 24-hour operation, the guideline of 50 million cycles corresponds to approximately 1.5 years on a line operating at 1 sec. per workpiece or approximately 15 years on a line operating at 10 sec. per workpiece.

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