

NEW

YOKOGAWA 

High Accuracy & Performance Digital Multimeter

TY700 series Advanced Type TY720 / Standard Type TY710

Most Reliable Handheld DMM

•Highest Precision

- Basic accuracy 0.020%
- True RMS measurement

•New Functions for Electronic and Industrial Use

- Simultaneous measurement and display of DC and AC
- Switchable RMS/MEAN detection*
- Low-pass Filter (LPF)*
- AC50mV range*
- Lo-Power resistance measurement*

*TY720 only

•Full Support for Data Management

- A large-capacity logging-mode memory
TY720: 10,000 data
TY710: 1,000 data
- USB communication, application software
(Optional DMM communication package)

•Safe Design and Wide Temperature Range for Harsh Use

- Conforms to safety standards EN61010-1
1000V CAT. III, 600V CAT. IV
- Safety shutters for preventing erroneous insertion of test leads into current measurement terminals
- Operating temperature range -20 to +55°C
- Storage temperature range -40 to +70°C

•Closed Case Calibration

•3-year Warranty



Advanced type

TY720

Standard type

TY710

Yokogawa Meters & Instruments Corporation

LF TY720/710-E

Model and Specification Code

Name	Model
Digital Multimeter	TY710
	TY720

Optional Accessories

Name	Model	Specification
DMM communication package	92015	USB communication adapter + USB communication cable + Application software
Communication package for printer	97016	Printer adapter + Printer cable
Printer	97010	Thermal printer Paper width 112mm
AC adapter for printer	94005	AC 100V ± 10%
	94006	For Printer, Europe
Thermal printing paper	97080	10 rolls (1 set)
Test leads	98015	1000V CAT III , 600V CATIV Red/black (1 set)

Name	Model	Specification
Fuse	99015	440 mA/1000V (1 piece/1 unit)
	99016	10 A/1000 V (1 piece/1 unit)
TC-K temperature probe	90050	-50 to 600°C (For liquids)
	90051	-50 to 600°C (For liquids)
	90055	-20 to 250°C (For surfaces)
	90056	-20 to 500°C (For surfaces)
	96001	For 400A, AC Output: 10mV/A, AC
Current clamp probe	96001	For 400A, AC Output: 10mV/A, AC
Carrying case	93029	Hard type (Houses the DMM, the test leads and communication cable)

TY700 General Specifications

Measurement Functions	DC voltage, AC voltage, DCV+ACV, DC current, AC current, DCA+ACA, resistance, frequency, temperature, capacitance, duty cycle, decibel calculation, continuity check, diode test, low-power resistance (TY720 only)
	For AC voltage/current, RMS/MEAN detection can be switched (TY720 only).
	For AC voltage/current, the low-pass filter can be turned on/off (TY720 only).
Additional Functions	Data hold/auto hold/peak hold (TY720 only), range hold, maximum/minimum/average values
	resistance, capacitance zero, relative and percentage value calculation, manual-mode memory, logging-mode memory, auto power off, backlight (white LED)
Display	:5-digit LCD: 7-segment
	Digital display: Main display; [50,000] counts
	Sub-display; [50,000] counts
	Bar graph display: 51-segment
	Polarity indicator: "-" appears automatically when the polarity is negative
	Overrange indicator: "OL"
	Low-battery indicator: " " appears at or below the minimum operating voltage.

Measuring Rate	:6 times/sec (Frequency: 1 time/sec, Capacitance: max. 0.03 times/sec (50mF), Resistance: 4 times/sec)
	Bar graph display: 15 times/sec
Operating Temp. and Humidity	: -20 to 55°C; 80% RH or less (no condensation) 40 to 55°C: 70% RH or less
Storage Temp. and Humidity	: -40 to 70°C; 70% RH or less (no condensation)
Temperature Coefficient	: Add the accuracy 0.05%/°C to the basic accuracy at a temperature within -20 to 18°C and 28 to 55°C.
Power Supply	: Four AA (R6) dry cells
Battery Life	: Approx. 120 hours (for continuous DC voltage measurement with alkaline cells)
Withstanding Voltage	: 6.8kV for 5 seconds (between input terminals and casing)
Dimensions	: Approx. 90(W) x 192(H) x 49(D) mm
Weight	: Approx. 560g (including batteries)
Compliance with Standards	: Safety EN61010-1, EN61010-031, 1000V CAT III , 600V CATIV , pollution level 2, indoor, 2000m max. above sea level EMC: EN61326-1 Class B, EN55011 Class B Group 1

Standard Accessories : AA (R6) dry cells: 4, Test lead set (98015): 1, Fuse (installed) 440mA/1000V and 10A/1000V, Instruction manual: 1

Performance

Test conditions: Temperature and humidity = 23 ± 5°C, 80% RH or less; Accuracy = ± (% rdg + dgt).
Note: A response time is the time required for achieving the accuracy specified for the corresponding range.

DC Voltage Measurement (≡ V)

Range	Resolution	Accuracy TY710, TY720	Input Resistance	Maximum Input Voltage
50mV	0.001mV	0.05+10	Approx. 100MΩ	1000V DC
500mV	0.01mV	0.02+2		
2400mV	0.1mV	0.025+5		
5V	0.0001V	0.03+2		
50V	0.001V		10MΩ	1000V rms AC
500V	0.01V			
1000V	0.1V			

MMRR: 80dB or greater for 50/60Hz ± 0.1%At 50mV of range, 70dB or greater for 50/60Hz ± 0.1%
CMRR: 100dB or greater for 50/60Hz(Rs=1kΩ) Response time: 0.3 seconds or less

AC Voltage Measurement [RMS] (∼V)							AC coupling, RMS detection, crest factor for 1000V of range: 1.5 ; crest factor for ranges other than 1000V: 3	
Range	Resolution	Accuracy (Upper: TY710, Lower: TY720; the display of "—" is not specified)					Input Impedance	Maximum Input Voltage
		10 - 20Hz	1k - 10kHz	10k - 20kHz	20k - 50kHz	50k - 100kHz		
50mV	0.001mV	—	—	—	—	—	11MΩ<50pF	1000V rms AC 1000V DC
500mV	0.01mV	2+80 ⁺²	0.4+40 ⁺²	5+40 ⁺²	5.5+40 ⁺²	15+40 ⁺²		
5V	0.0001V	1.5+30 ⁺¹	0.7+30 ⁺¹	2+50 ⁺²	—	—		
50V	0.001V	1+30 ⁺¹	0.4+30 ⁺¹	1+40 ⁺¹	2+70 ⁺²	5+200 ⁺²		
500V	0.01V	—	—	—	—	—	10MΩ<50pF	10A fuse-protected
1000V	0.1V	*2	*2	3+30 ⁺²	—	—		

*1: At 5 to 100% of range *2: At 10 to100% of range CMRR: 80dB or greater for DC to 60Hz(Rs=1kΩ) Response time: 1 second or less

AC Voltage Measurement [MEAN] (–V)				AC coupling, Mean-value detection and RMS-value calibration (sinusoidal wave)		
Range	Resolution	Accuracy TY720			Input Impedance	Maximum Input Voltage
		10 - 20Hz	20 - 500Hz	500 - 1kHz		
50mV	0.001mV	4+80 ⁺²	1.5+30 ⁺²	5+30 ⁺²	11MΩ<50pF	1000V rms AC 1000V DC
500mV	0.01mV					
5V	0.0001V	2+30 ⁺¹	1+30 ⁺¹	3+30 ⁺¹		
50V	0.001V					
500V	0.01V				10MΩ<50pF	
1000V	0.1V	*2	*2	*2		

*1: At 5 to 100% of range *2: At 10 to 100% of range CMRR: 80dB or greater for DC to 60Hz (Rs= 1kΩ) Response time: 1 second or less

DCV + ACV (≡+∼)								AC coupling, RMS detection crest factor for 1000V of range: 1.5 ; crest factor for ranges other than 1000 V: 3	
Range	Resolution	Accuracy (Upper: TY710, Lower: TY720; the display of "—" is not specified)						Input Impedance	Maximum Input Voltage
		DC, 10 - 20Hz	DC, 20Hz - 1kHz	DC, 1k - 10kHz	DC, 10k - 20kHz	DC, 20k - 50kHz	DC, 50k - 100kHz		
5V	0.0001V	—	—	—	—	—	—	11MΩ<50pF	1000V rms AC 1000V DC
50V	0.001V	1.5+10 ⁺¹	1+10 ⁺¹	2+10 ⁺²	—	—	—		
500V	0.01V	1.5+10 ⁺¹	0.5+10 ⁺¹	1+10 ⁺¹	2+10 ⁺²	5+20 ⁺²	—		
1000V	0.1V	*2	*2	—	—	—	—		

*1: At 5 to 100% of range *2: At 10 to 100% of range CMRR: 80dB or greater for DC to 60Hz (Rs = 1kΩ) Response time: Approx. 2 seconds

Resistance Measurement (Ω)

Range	Resolution	Accuracy		Maximum Testing Current	Open-circuit Voltage	Input Protection Voltage
		TY710	TY720			
500Ω	0.01Ω	0.1+2 ⁺¹	0.05+2 ⁺¹	<1mA	<2.5V	1000V rms
5kΩ	0.0001kΩ			<0.25mA		
50kΩ	0.001kΩ			<25μA		
500kΩ	0.01kΩ			<2.5μA		
5MΩ	0.0001MΩ	0.5+2	—	<1.5μA		
50MΩ	0.001MΩ	1+2	—	<0.13μA	—	—

*1: Accuracy after zero calibration Response time: 1 second or less for 500Ω to 500kΩ, 5 seconds or less for 5MΩ to 50MΩ

Low-power Resistance Measurement (LP-Ω)

Range	Resolution	Accuracy	Maximum Testing Current	Open-circuit Voltage	Input Protection Voltage
		TY720			
5kΩ	0.001kΩ	—	<10μA	<0.7V	1000V rms
50kΩ	0.01kΩ	0.2+3	<1.0μA		
500kΩ	0.1kΩ	—	<0.6μA		
5MΩ	0.001MΩ	1+3	<0.05μA		

Continuity Check ()						Maximum effective display: 5000
Range	Resolution	Continuity Beeper TY710, TY720	Testing Current	Open-circuit Voltage	Input Protection Voltage	
500Ω	0.1Ω	Buzzer sounds at 100 ± 50Ω or less.	Approx. 0.5mA	<5V	1000V rms	



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NOTICE

● Before using the product, read the instruction manual carefully to ensure proper and safe operation.

Represented by:

Subject to change without notice.

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