

Ziegler

Redefine Innovative Metering

Technical Datasheet

ZDM Y04i

DIGITAL MULTIMETER

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Ziegler ZDM Y04i is suited for universal, general applications in the electrical and electronics fields, as well as in radio and television service, training and education. It is of especially pocket size design, and thus fit into pocket. The protective cover, which is provided as standard equipment, can be opened at an angle for convenient reading from the workbench, and provides for easy transport.

Product Features

- Direct and alternating voltages from 100 μ V ... 600V
- Direct and alternating currents from 10 μ A...10.00A
- Resistance from 1 Ω ...40.00M Ω with zero correction
- Capacitance from 1pF...200.00 μ F with zero correction
- Frequencies from 10.00Hz...500kHz
- Diode measurement and continuity testing
- Data Hold
- Relative measurement
- Duty cycle (%) measurement
- Non-Contact Voltage Detection for >120V AC without holster
- Auto/manual ranging facility
- Mounting clip facility at back side for hanging the meter hands free operation & save space
- Auto power off facility



Fact Sheet

Display

LCD display field (49.7mm x 23.9mm) with digital display & display of unit of measure, current type & various special functions

Digital

Display	7 segment
Character height	Main Display Character: 12.9mm
Number of digits/Counts	3 ¾ digits 3999 steps
Over range display	“OL” is displayed.
Polarity display	“-” sign is displayed when positive pole at “⊥”
Sampling rate	3 Measurements for V , I , Ω , Capacitance , frequency and duty cycle measurements

Applicable Standards

EMC Immunity	IEC 61326- 1:2012, Table A.1*
Immunity	IEC 61000-4-2 : 8 KV atmosphere discharge, 4 KV contact discharge
	IEC 61000-4-3 : 3 V/m
Safety	IEC 61010-1-2010
IP for water & dust	IEC 60529
Pollution degree	2
High Voltage Test	3.6kV

Technical Specifications

Measurement Function	Measuring Range	Resolution	Input Impedance		Intrinsic Uncertainty under Reference Condition ± (...% of the rdg.+...Digits)		Overload Capacity 1)		
					DC	AC	DC	AC	Value
					DC	AC/ACDC	DC	AC	
V	400.0 mV	100 µV ⁴⁾	>10 MΩ		1 + 9	2 + 9 ⁴⁾	1050 V	Continuous	
	4.000 V	1 mV			1 + 9	1.5 + 9			
	40.00 V	10 mV			1 + 9	1.5 + 9			
	400.0 V	100 mV			1 + 9	1.5 + 9			
	600 V	1 V			1 + 9	1.5 + 9			
Voltage Drop. Approx.									
mA	40.00 mA	10 µA	45 mV		1.5 + 9	1.5 + 9	480 mA	Continuous	
	400.0 mA	100 µA	450 mV		1.5 + 9	1.5 + 9			
A ⁷⁾	4.000 A	1 mA	45 mV		2 + 5	2.5 + 9	12 A: = 30 s		
	10.00 A	10 mA	120 mV		2 + 5	2.5 + 9			
		Input	Input Impedance						
Ω	400Ω	100 mΩ	approx. 0.45V		1 + 5		500V DC/AC rms	5 min	
	4.000 kΩ	1Ω			1 + 5				
	40.00 kΩ	10Ω			1 + 5				
	400.0 kΩ	100Ω			1.5 + 5				
	4.000 MΩ	1 kΩ			2 + 5				
	40 MΩ	10 kΩ			2.5 + 5				
Continuity	400.0Ω	100 mΩ			1.5 + 5				
Diode	1.0V	1 mV	approx. 1V		2.5 + 5				
F	5.000 nF	1 pF			5 + 40 ²⁾				
	50.00 nF	10 pF			3 + 10 ²⁾				
	500.0 nF	100 pF			1.5 + 10 ²⁾				
	5.000 µF	1 nF			2 + 10 ²⁾				
	50.00 µF	10 nF			2 + 10 ²⁾				
	200.0 µF	100 nF			5 + 40 ³⁾				
			f _{min}						
Hz ⁵⁾⁶⁾	9.999 Hz	0.001Hz	9 Hz		0.5 + 5		500V DC/AC rms	5 min	
	99.99 Hz	0.01Hz	9 Hz						
	999.9 Hz	0.1Hz	9 Hz						
	9.999 kHz	1Hz	9 Hz						
	99.99 kHz	10Hz	9 Hz						
	500.0 kHz	100Hz	9 Hz						
Duty Cycle ⁵⁾⁶⁾	2....98%	0.10%			10Hz..... 1kHz ±5D 1kHz... 10kHz ±5D/kHz				

1) At 0°C to 50°C

2) With Zero Adjustment "REL"

3) Time required for Measurement approx. 60 sec

4) Specified Accuracy is valid as of 5% of the measuring range for 400.0m V AC


5) For Hz & Duty Cycle measurement, select proper range for VAC function

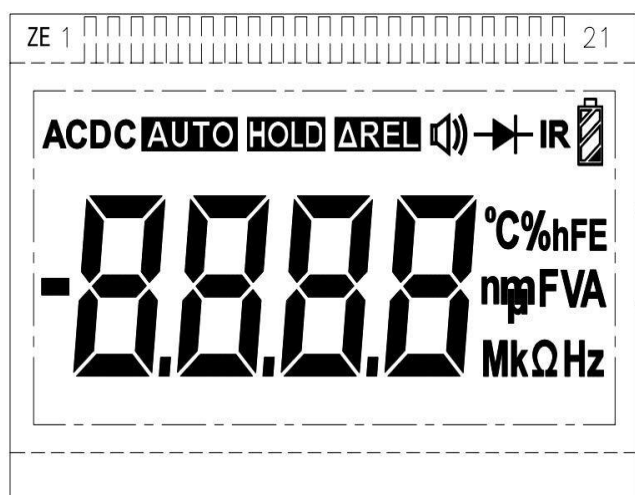
6) At input, ±5Vrms, Square Wave, Bipolar inputs.

7) 10A Max 5 Minute

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Fuse	
Fuse for ranges up to 400 mA	400 mA / 250V; 5 mm x 25 mm
Fuse for 10 A range	12 A / 250V; 5 mm x 25 mm
Mechanical design	
Protection	Instruments: IP 52, Connector sockets: IP 20
Dimensions	
With Holster	W x H x D 74.3 mm x 154.1 mm x 47.6 mm
Without Holster	68.3 mm x 142.9 mm x 39.3 mm
Weight	Approx. 0.350 Kg with battery
Reference conditions for accuracy	
Reference Temperature	23°C ± 2K
Relative Humidity	45%...55% RH
Waveform of measured quantity	Sinusoidal
Input frequency	50 Hz
Battery Voltage	3 V ± 0.1 V
Environmental conditions	
Operating temperature	0 to +50°C
Storage temperature	- 25 to +70°C
Relative humidity	45%.....75%
Terminal Protection	IP 52 for instrument and IP20 for terminals.
Altitude	Up to 2000 m
Battery	
Battery Voltage	2 X 1.5 V Cells
Battery type	Alkaline manganese Dioxide cells.
Battery Life	Alkaline manganese dry cell : Approx. 400hours.
Battery test	Automatic display of  symbol when battery voltage drops below approx. 2.4 ±0.1 V




ANALOG

1. Digital display with dot and polarity
2. Low Battery Indication
3. Display for REL and HOLD
4. Continuity test display:
Buzzer symbol appears on screen
5. Display for diode measurement
6. Measurement unit display
7. Display for automatic measuring range selection
8. Display for selected type of Voltage/Current (AC or DC)
9. Display for overload value "OL"

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Influence Quantities

Influence Quantity	Range of Influence	Measured Quantity / Measuring Range ¹⁾	Variation ± (... % of rdg. + ...digits)
Temperature	0 °C to + 21 °C and +25 °C to 50 °C		1.5 × intrinsic error / 10K
Relative humidity	75% 3 Days Meter off	V, A, Diode, F, Hz, %, OHM	1 × intrinsic error
Frequency of Measured Quantity	20 Hz...<50 Hz	400m V~, 600V~	3.5 + 3
	>50 Hz.. 500 Hz		
	20 Hz...<50 Hz	4V~, 40V~, 400V~	
	>50 Hz.. 750 Hz		
Battery Variation	Upto Low Battery 	V, A, Diode, Hz, %, OHM	20D
		F	70D

Standard Scope of Supply

- 1 Multimeter
- 1 Cable set
- 1 Copy Operating Instructions
- 1 Protective Case (Holster)
- 2 Battery 1.5V

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Ziegler Instrumentation UK Ltd.

Central Buildings, Woodland close old woods Trading Estate, Torquay Devon, TQ2 7BB, United Kingdom
+441803 616 800 | info@ziegler-instrument.com | ziegler-instrument.com