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PRECISION INSTRUMENTATION

TEST & MEASUREMENT
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DATASHEET Issue 1

NEW PRODUCT

GAMMA 36
DIGITAL MULTIMETER

Multifunction Meters
Transducers & Isolators
Temperature Controllers
Converters & Recorders
Digital Panel Meters
Current Transformers
kWh Energy Meters
Analogue Panel Meters
Shunts
Digital Bargraphs
Digital Multimeters
Protection Relays
Synchroscope Series
Rotary Switches
Power Supplies
Test & Measurement

SUBJECT TO CHANGE WITHOUT NOTICE
This datasheet superseded all previous versions – please keep for future reference

Product Features:

- Direct and alternating voltages from 10 µV ... 1000V
- Direct and alternating currents from 10 µA ... 10.00A
- Resistance from 0.1Ω...60.00M Ω with zero correction
- Logic Frequencies from 0.01Hz ... 1MHz Approx
- Diode measurement and continuity testing
- Hold measurement
- Relative measurement
- Duty cycle (%) measurement
- Temperature measurement with K type Thermocouple
- Backlit Facility
- NCV (Non Contact Voltage Detection)
- Auto Power Off

GAMMA 36 - Digital Multimeter

Gamma 36 digital multimeter 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.

Application

Hold

By pressing the HOLD key, the currently displayed measurement value can be held and“HOLD” is simultaneously displayed.

Relative measurement (REL)

By pressing the REL key, the zero correction is made and Relative Value is measured. All functions can measure Relative Value except Hz/Duty.

Automatic / manual measuring range selection

The measurement functions are chosen with the rotary selector switch. The measuring range is automatically adjusted to the measurement value. The measuring range can also be manually selected with the AUTO/MAN button.

Note: For Temperature (°C), Frequency (Hz), Duty cycle (%), and Capacitance (F) measuring range is AUTO. No Manual range selection is possible.

Hz / Duty

The instrument can measure Linear frequency (Hz) and duty cycle (%) of the AC Voltage by pressing Hz/Duty key in Vac, mVac, mAac and Aac.

Temperature Measurement

Gamma 36 allows you to measure temperature with “K” type Thermocouple (Ni Cr-Ni) sensor in the range from -200°C to +1200°C.

Diode and continuity testing

This provides for the testing of the polarity of diodes, as well as inspection for short-circuits and circuit interruptions. In addition to the display, resistance of less than approx 50Ω are indicated with an acoustic signal.

Overload warning

An acoustic signal occurs when measuring AC voltage>1000V, DC Voltage>1000V, AC/DC current>6A.

Energy saving circuit (Auto Power Off)

The instrument is switched off automatically, if none of the operating elements have been activated for about 15 minutes.

Protective cover for rough operating conditions

A protective cover of Rubber Holster with a built-in stand protects the instrument against jolts and falls. It also secures the test probe for one-hand operation, and allows for winding of the measurement cable which provides protection during transport.

Automatic blocking socket(ABS)

The automatic terminal blocking system prevents incorrect connection of test lead and incorrect selection of measurement quantity, which provide safety to the user.

Backlit

The Gamma 36 multimeter provides facility of measurement in poor light condition by pressing backlit key.

Calibration

The Gamma 36 multimeter provides facility of measurement in poor light condition by pressing backlit key.

Non Contact Voltage Detection

Presence of Hazardous Voltage > 50V 50/60Hz.This is very useful while performing measurements in the circuit which takes longer times to discharge its capacitor. Easy/Quickly test Live power.

Others

Separate compartment for batteries which makes battery replacement easy and faster. Also it has provision of mounting clip for hands free operation in awkward situation.

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

Applicable regulations and standards

EMC Immunity	IEC 61326-1:2020, Table A.1
Emission	IEC 61000-4-2 : 8 KV atmosphere discharge, 4 KV contact discharge
	IEC 61000-4-3 : 3 V/m
Safety	IEC 61010-1-2010,IEC 61010-2-33,IEC 61010-031
IP for water & dust	IEC 60529
Pollution degree	2
Installation category	600 V CATIII / 1000 V CATII
High Voltage Test	3.5 kV (IEC 61010-1-2010)

* Short-term measured value deviation may occur during electro-magnetic interference thus reducing

Environmental Conditions

Operating temperature	0 to +50°C
Storage temperature	- 25 to +70°C (without battery)
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 AA Cells
Battery type	Alkaline manganese Dioxide cells.
Battery test	Automatic display of ▭ symbol when battery voltage drops below approx. 2.4V

Influence Quantity

Influence Quantity	Range of Influence	Measured Quantity / Measuring Range 1)	Variation ± (….%of rdg. + ….digits)
Temperature	0ºC + 21ºC and +25°C to 50°C	mV, VDC	0.1 × intrinsic error / K
		mV, VAC	
		mA, ADC	
		mA, AAC	
		Ω	
		Diode	
		F	
		Hz	
		%	
		ºC	
Relative humidity	55...75%	V~, VDC	1 x intrinsic error
		A~, ADC	
		Ω	
		F	
		Hz	
		ºC	
		%	
Frequency of Measured Quantity	20 Hz...< 50 Hz	VAC	2.0+3
	> 50Hz… 1 kHz	AAC	2.5+3

Specifications

Measurement Function	Measuring Range	Resolution	Input Impedance	Digital Display Inherent Deviation at referance conditions ±(…% of the rdg.+…Digits)	Overload Capacity 2)	
					Overload Value	Overload Duration
V(AC)	6.000V	1mV	10MΩ	0.8+5	1000Vac rms	Continuous
	60.00V	10mV	10MΩ			
	600.0V	100mV	10MΩ			
	1000V	1V	10MΩ	1+10		
V(DC)	6.000V	1mV	10MΩ	0.5+3	1000VDC	Continuous
	60.00V	10mV	10MΩ			
	600.0V	100mV	10MΩ			
	1000V	1V	10MΩ			
mV(AC)	60.00mV	10uV	10MΩ	3+5	500VDC/ ACrms	10 Mins
	600.0mV	100uV	10MΩ	1.5+5		
mV(DC)	60.00mV	10uV	10MΩ	1+5	500VDC/ ACrms	10 Mins
	600.0mV	100uV	10MΩ	0.5+5		
			“Approx Voltage Drop at max measuring current”			
ADC	60.00mA	0.01mA	60mV	1.5+3	600mADC	Continuous
	600.0mA	0.1mA	600mV			
	6.000A	1mA	60mV	1.5+3	10ADC	1)
	10.00A	10mA	100mV			
AAC	60.00mA	1mA	60mV	1.8+5	600mAac rms	Continuous
	600.0mA	10mA	600mV			
	6.000A	1mA	60mV	2+5	10Aac rms	1)
	10.00A	10mA	100mV			
			Open Circuit Voltage			
Ω	600.0Ω	100mΩ	Approx 0.5V	0.5+3	500VDC/ ACrms	10 Min
	6.000kΩ	1Ω		0.5+2		
	60.00kΩ	10Ω				
	600.0kΩ	100Ω				
	6.000MΩ	1kΩ				
	60.00MΩ	10kΩ		2+5		
Farad	6.000nF	1nF	Approx 3V	5+20	500VDC/ ACrms	10 Min
	60.00nF	10nF		5+20		
	600.0nF	100nF				
	6.000uF	1uF				
	60.00uF	10uF				
	600.0uF	100uF				
	6.000mF	1mF		5+20		
	60.00mF	10mF		unspecified		
BUZZER	600	100m	Approx 0.5V	Acoustic Signal 0...<50 approx	500VDC/ ACrms	10 Min
Diode	3.000V	0.001V	Forward Current 1mA	2+10	500VDC/ ACrms	10 Min
°C/°F	-200-0°C/392°F-32°F			5+4 4) 2+3 4) 2+2 4)	500VDC/ ACrms	10 Min
	0-400°C/32°F-752°F					
	400-1200°C/752°F-2192°F					

Measurement Function	Measuring Range	Resolution	Input Impedance	Digital Display Inherent Deviation at reference conditions ±(…% of the rdg.+…Digits)	Overload Capacity 2)	
					Overload Value	Overload Duration
Hz	logic Frequency			0.1+3 3)	500VDC/ ACrms	10 Min
	99.99Hz	0.01Hz				
	999.9 Hz	0.1Hz				
	9.999kHz	0.001kHz				
	99.99kHz	0.01kHz				
	999.9kHz	0.1kHz				
	linear Frequency					
	99.99Hz 999.9 Hz 9.999kHz	0.01Hz 0.1Hz 0.001kHz		0.05+8	500VDC/ ACrms	10 Min
Duty Cycle	2.0...98.0%	0.1%	Forward Current 1mA	“10...1Khz: +/-5D 1Khz...10Khz: +/-5D/Khz”	500VDC/ ACrms	10 Min
1) For Measurement >6A 15s ON and 10Min OFF						
2) At 0-40?						
3) At input 5Vrms Square wave ,bipolar inputs						
4) Without Sensor						
5) For Frequency display extended to 9999 counts						
6) add 10 digits =1nF						

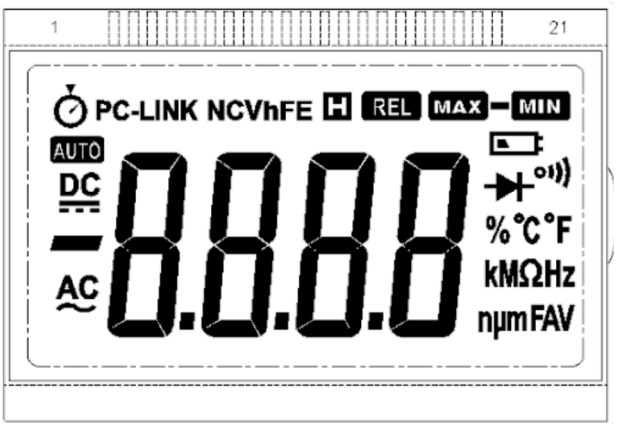
Display

LCD display Field (58mm x 31.4mm) with digital display, analogue scale and with display of measurement unit, and Various special functions.

Digital

Display	7 segment
Number of digits/Counts	4 digits 6000 steps
Over range display	“OL” is displayed.
Polarity display	“–” sign is displayed automatically
Sampling rate	3 times/s for digital data

Analogue



1. Digital display with dot and polarity.
2. Low Battery Indication.
3. Display for REL and HOLD.
4. Continuity test display:
   Buzzer symbol appears when acoustic signal is switched on.
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”.

Fuse

Fuse for ranges up to 400 mA Fuse for 10 A range	1.6 A / 600V; 6.3mm x 32mm
	16 A / 600V; 6.3mm x 32mm

Mechanical Design

Protection	Instruments: IP 52
	Connector sockets: IP 20
Dimensions	W x H x D
With Holster	86mm x 188mm x 53mm
Without Holster	79mm x 174mm x 38mm
Weight	Approx. 0.480Kg with battery

Standard Scope Of Supply

1 Multimeter

1 Cable set

1 Copy Operating Instructions 1 Protective Case (Holster).

Contact

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