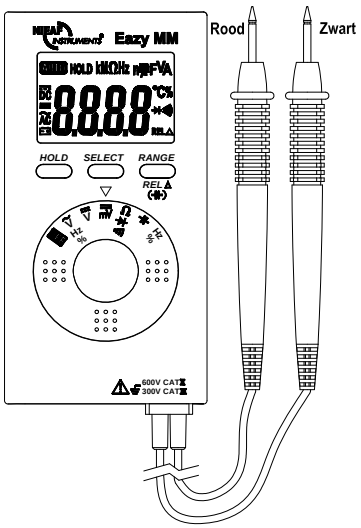
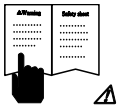
NIEAF INSTRUMENTS™

Eazy MM





⚠ Read First

Veiligheidsmaatregelen

- Om de veiligheid te waarborgen dient de meter alleen gebruikt te worden onder de voorwaarden zoals vermeld in de handleiding.
- Maak altijd gebruik van gespecificeerde terminals, schakelpositie en meetbereiken.
- Gebruik de meter niet bij een hogere spanning dan aangegeven op de meter, tussen terminals of tussen een willekeurige terminal en aarde.
- Om onjuiste metingen te voorkomen, welke kunnen leiden tot elektrische schok en verwondingen, dient u de batterij te vervangen zodra de “batterij leeg” indicatie wordt weergegeven.
- Schakel de spanning uit en ontlaadt alle hoogspanning condensatoren vóór het testen van de weerstand, continuïteit, diodes, of elektrische capaciteit.
- Gebruik de meter niet in de buurt van explosieve gassen of dampen.
- Om het risico van brand of elektrische schok te verkleinen, dient de meter niet blootgesteld te worden aan regen of vochtigheid.

Symbolen zoals aangegeven op de meter en in de Gebruikershandleiding

	Voorzichtig! Gevaarlijke Spanningen
	Raadpleeg de handleiding
	Dubbel geïsoleerd
	Batterij
	Aarde
CE	Conform EU standaard
	Toepassing in de buurt van en verwijderen van onbeschermde geleiders is toegestaan.

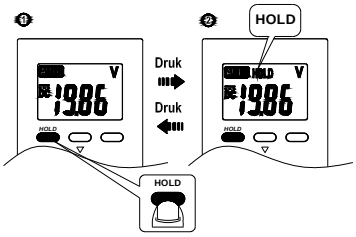
Onderhoud

Probeer deze meter niet te repareren. Het instrument mag alleen door geautoriseerde servicetechnici gerepareerd worden.

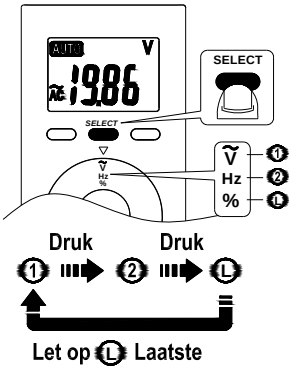
Reiniging

Reinig de behuizing periodiek met een droge doek en schoonmaakmiddel. Gebruik hiervoor nooit een agressief schoonmaak- of oplosmiddel.

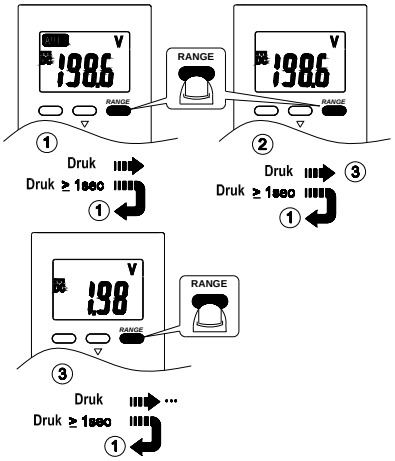
Vasthouden display



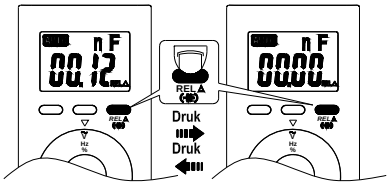
Selecteren functie



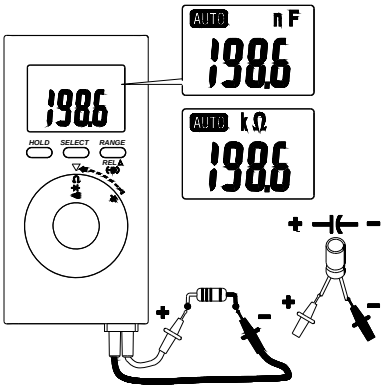
Handmatig Bereik Instellen En Automatisch Bereik Instellen



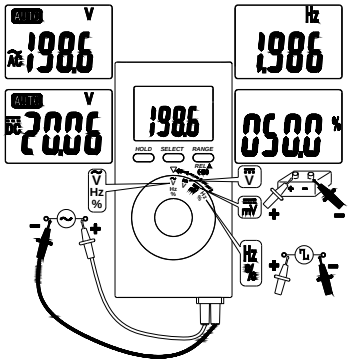
REL △ werking (Alleen voor ⊣⊢)



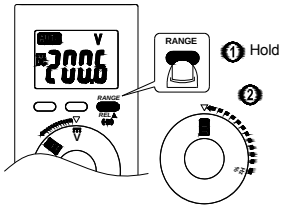
Meten van Weerstand En Capaciteit



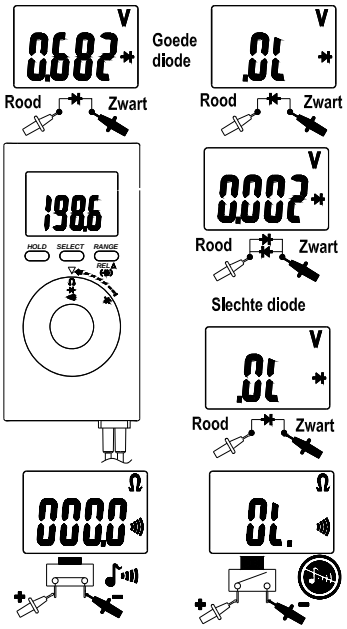
Meten AC, DC Spanning, Frequentie en Duty Cycle



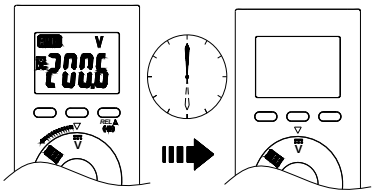
Uitschakelen van Automatische uitschakeling.



Meten Diode En Continuiteit

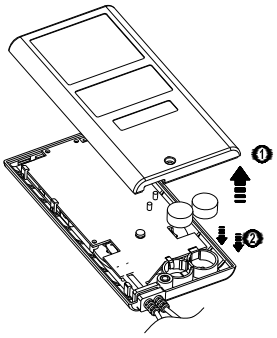


Automatische Uitschakeling (Batterijenspaarder)

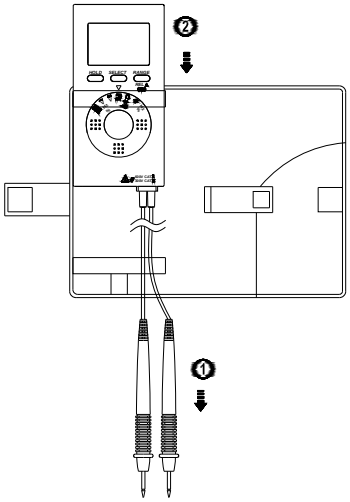


Vervanging Batterij

Zie de volgende afbeelding voor het vervangen van de Batterij



Montage Draagtas



Specificaties

1-1 Algemene Specificaties

LCD beeldscherm cijfers:
5000 telpulsen LCD weergave
Meetsnelheid : 3 tijden/sec.
Polariteit weergave :
automatisch, positief geïmpliceerd
Overbelasting display : “OL” of “-OL”
Eenheid symbool indicatie.
Tijd automatische uitschakeling :
Circa 30 minuten na het aanzetten
Indicatie lage batterijspanning :
🔋 verschijnt in het display.
Vereiste vermogen : 1.5V x 2 batterijen
Levensduur batterij : 100 uren (GPA76P)

1-2 Milieu Voorwaarden

Gebruik binnenshuis
Kalibratie : 1x per jaar
Werkingstemperatuur :
0 °C ~ 30 °C (≤ 80% relatieve vochtigheid)
30 °C ~ 40 °C (≤ 75% relatieve vochtigheid)
40 °C ~ 50 °C (≤ 45% relatieve vochtigheid)
Opslagtemperatuur :
-20 tot +60°C, 0 tot 80% relatieve
nvochtigheid (zonder batterijen)
Temperatuurcoëfficiënt :
tel op 0.2 x(gespecificeerde nauwkeurigheid)
/ °C, < 18 °C, > 28 °C.
Overspanningscategorie :
IEC 61010-1 300V CAT.III
600V CAT.II.

Cat	Toepassing veld
I	De circuits niet aangesloten op de netspanning
II	De circuits direct aangesloten op een laagspanningsinstallatie.
III	III De gebouwinstallatie (verdeelinrichting)
IV	De bron van de laagspanningsinstallatie

Werkhoogte : 2000m (6562ft)
Vervuilingsgraad : 2
EMC : EN 61326-1
Schok vibratie : sinusvormige vibratie per MIL-T-28800E (5~ 55Hz, 3g, maximum).
Valbescherming : 120cm val op een hardhouten of betonnen vloer.
Afmetingen: (BxHxD) : 56 x 12 x 112mm
Gewicht : 115 g
Accessoires : batterij (geïnstalleerd), draagtas en instructiekaart.

1-3 Electrische specificaties

Nauwkeurigheid is ± (% waarde + aantal cijfers) bij 23 °C ± 5 °C < 80% relatieve vochtigheid

Functie	Bereik	Resolutie	Nauwkeurigheid
ACV	400.0mV	0.1mV	±(1.5%+ 5 D)
	4.000V	0.001V	±(0.9%+ 5 D)
	40.00V	0.01V	
	400.0V	0.1V	
	600V	1V	

Responsfrequentie : 50 ~500Hz
AC Conversie Type : AC gekoppeld gemiddelde rms indicatie
Invoer impedantie : 10MΩ, <100pF.
Overbelastingsbescherming : 600V rms

Functie	Bereik	Resolutie	Nauwkeurigheid
DCV	400.0mV	0.001V	±(0.7%+ 5 D)
	4.000V	0.001V	±(0.6%+ 2 D)
	40.00V	0.01V	
	400.0V	0.1V	
	600V	1V	±(0.7%+ 5 D)

Invoer impedantie : 10MΩ, <100pF.
Overbelastingsbescherming : 600V rms

Functie	Bereik	Resolutie	Nauwkeurigheid
Ohm	400.0	0.1	± (0.9%+5 D)
	4.000K	0.001K	± (0.9%+2 D)
	40.00K	0.01K	
	400.0K	0.1K	
	4.000M	0.001M	± (1.5%+5 D)
	40.00M	0.01M	

Open spanning : 0.4V
Overbelastingsbescherming : 600V rms
DOORGANGSTEST
Doorgangsdrempel : Approx. <50Ω
Doorgangsindicatie : 2KHz zoemertoon
Invoer bescherming : 600V rms

DIODE TEST
Stroomtest : 1.1mA (standaard)
Open spanning : 1.5V DC (max).
Invoer bescherming : 600V rms

Functie	Bereik	Resolutie	Nauwkeurigheid
Cap.	50.00nF	0.01nF	± (5%+0.2nF)*
	500.0nF	0.1nF	± (2,9%+5 D)
	5.000µF	0.001µF	
	50.00µF	0.01µF	
	100.0µF	0.1µF	

Let op : * Gebruik de △ functie voor betere meetresultaten. Nauwkeurigheid vanaf 10nF in het 50nF.
Overbelastingsbescherming : 600V rms.

Fiuncte	Bereik	Resolutie	Nauwkeurigheid
Hz	5.000Hz	0.001Hz	±(0.3%+ 5 D)
	50.00Hz	0.01Hz	
	500.0Hz	0.1Hz	
	5.000KHz	0.001KHz	
	50.00KHz	0.01KH	
	500.0KHz	0.1KH	
	5.000MHz	0.001MHz	

Gevoeligheid : 1.0Vp-p (blokgolf)
Overbelastingsbescherming : 600V rms.

Fiuncte	Bereik	Resolutie	Nauwkeurigheid
%	0.1 - 99.9%	0.1%	±(0.5%+ 3 D)

Gevoeligheid :
1.0Vp-p voor 30% ≤ inschakelduur ≤ 70%
(blokgolf : 5Hz ~ 5KHz)
Overbelastingsbescherming : 600Vrms.

Garantie

Nieaf Instruments producten ondergaan strenge kwaliteitscontroles. Mochten er desondanks tijdens normaal gebruik, gebreken ontstaan dan verlenen wij een garantie van 12 maanden. Productie- of materiaalfouten worden kosteloos door ons verholpen, indien het instrument zonder invloed van buitenaf en ongeopend aan ons retour wordt gestuurd. Beschadigingen voortkomend uit het laten vallen of incorrect gebruik, vallen buiten de garantie. Indien na het verstrijken van de garantietermijn functioneringsfouten optreden, dan kunnen die door onze service afdeling verholpen worden.
Wij behouden ons het recht voor technische aanpassingen door te voeren. Wijzigingen Voorbehouden.

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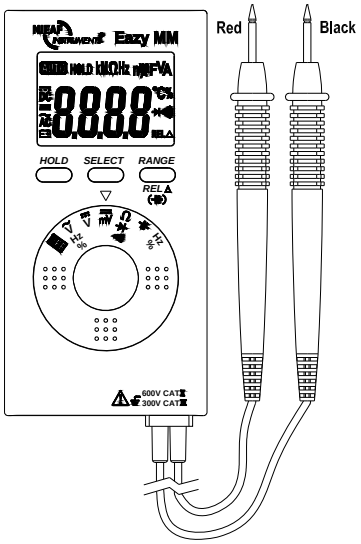
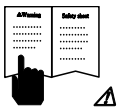
http://www.nieaf-smitt.nl
http://www.nieaf-instruments.com

Eazy MM





⚠ *Read First*

⚠ Safety Information

- Use the Meter only as specified in this Manual or the protection by the Meter might be impaired.
- Always use proper terminals, switch position , and range for measurements.
- Do not apply more than the rated voltage, as marked on Meter, between terminals or between any terminal and earth ground.
- To avoid false readings that can lead to electric shock and injury, replace battery as soon as low battery indicator appears.
- Disconnect circuit power and discharge all high-voltage capacitors before testing resistance, continuity, diodes, or capacitance.
- Do not use Meter around explosive gas or vapor.
- To reduce the risk of fire or electric shock do not expose this product to rain or moisture.

Symbols as marked on the meter and Instruction manual

	Risk of electric shock
	See instruction card
	Equipment protected by double or reinforced insulation
	Battery
	Earth
CE	Conforms to EU directives
	Application around and removal from hazardous live conductors is permitted

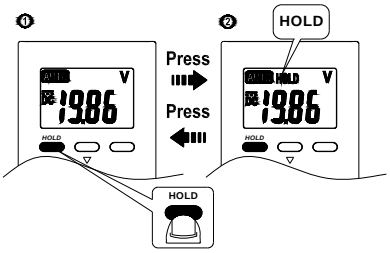
Maintenance

Do not attempt to repair this meter. It contains no user-serviceable parts. Repair or servicing should only be performed by qualified personnel Nieaf –Smitt BV.

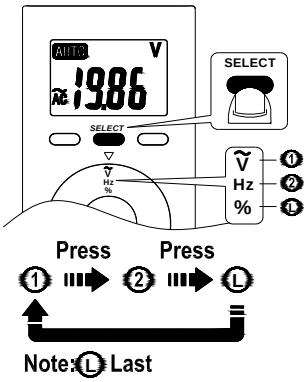
Cleaning

Periodically wipe the case with a dry cloth and detergent. Do not use abrasives or solvents.

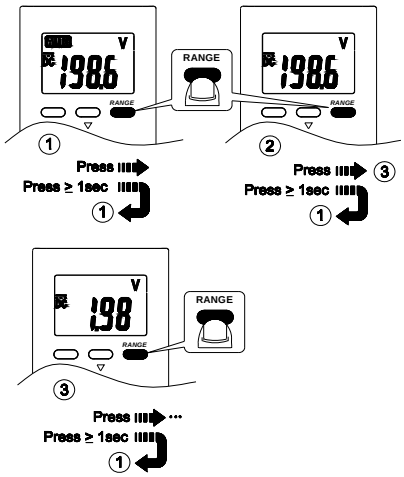
Display Hold



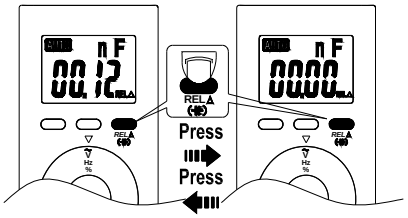
Selecting Function



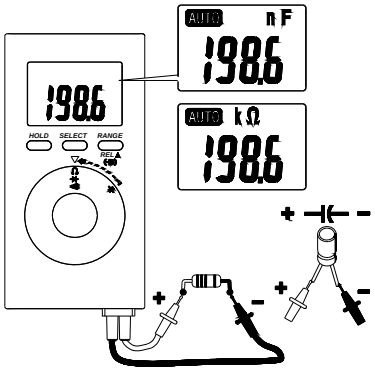
Manual Ranging And Auto Ranging



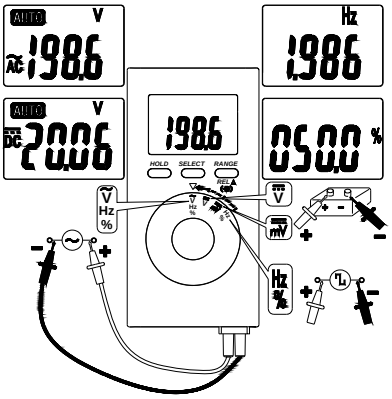
REL △ Operating (For ⊣⊢ only)



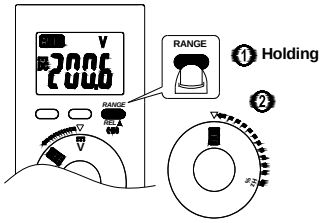
Measuring Resistance And Capacitance



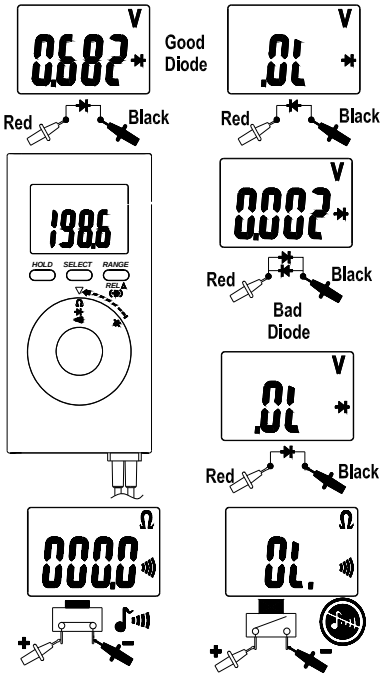
Measuring AC,DC and Voltage, Frequency And Duty Factor



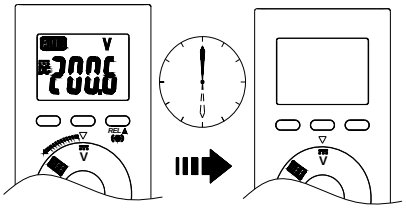
Disable Auto Power Off



Measuring Diode And Continuity

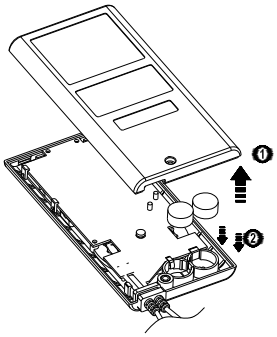


Auto Power Off (Battery Saver)

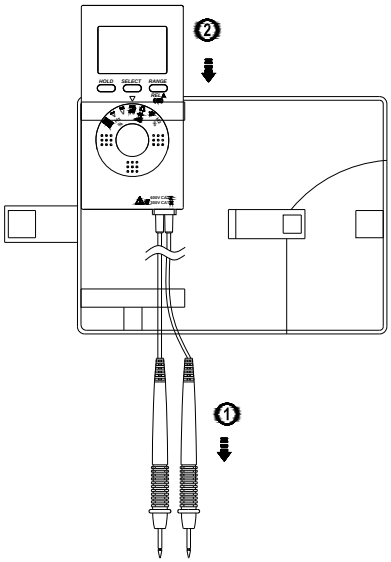


Battery Replacement

Refer to the following figure to replace the Battery :



Carry Case Assembling



Specifications

1-1 General Specifications

LCD display digits :
5000 counts digit large scale LCD readout.
Measuring rate : 3 times / sec.
Polarity Indication :
Automatic, positive implied.
Overrange display : “OL” or “-OL”
Unit symbol indication.
Automatic power off time :
Approximately 30 minutes after power on.
Low battery indicator : is displayed.
Power requirement : 1.5V x 2 batteries.
Battery life : 100 hours (GPA76P)

1-2 Environmental Conditions

Indoor Use.
Calibration : One year calibration cycle.
Operating temperature :
0°C ~ 30°C (≦80% RH)
30°C ~ 40°C (≦75% RH)
40°C ~ 50°C (≦45%RH)
Storage temperature : -20 to +60°C, 0 to 80% RH (batteries not fitted).
Temperature coefficient : Add 0.2 x (Specified accuracy) / °C, < 18°C, > 28°C .
Overvoltage category :
IEC 61010-1 300V CAT.Ⅲ.
600V CAT.II.

CAT.	Application field
Ⅰ	The circuits not connected to mains.
Ⅱ	The circuits directly connected to Low-voltage installation.
Ⅲ	The building installation.
Ⅳ	The source of the Low-voltage installation.

Operating altitude : 2000m (6562 ft)
Pollution degree : 2
EMC : EN 61326-1
Shock vibration : Sinusoidal vibration per MIL-T-28800E (5 ~ 55 Hz, 3g maximum).
Drop Protection :
4 feet drop to hardwood on concrete floor.
Dimensions (WxHxD) : 56 x 12 x 112mm
Weight : 115g
Accessories : Battery (installed), carry case and Instruction manual.

1-3 Electrical Specifications

Accuracy is ±(% reading + number of digits) at 23°C ± 5°C < 80%RH.

Function	Range	Resolution	Accuracy
ACV	400.0mV	0.1mV	±(1.5%+ 5 D)
	4.000V	0.001V	±(0.9%+ 5 D)
	40.00V	0.01V	
	400.0V	0.1V	
	600V	1V	

Frequency Response : 50 ~ 500Hz
AC Conversion Type :
AC Coupled Average sensing rms indication.
Input Impedance : 10MΩ, <100pF.
Overload protection : 600V rms.

Function	Range	Resolution	Accuracy
DCV	400.0mV	0.1mV	±(0.7%+ 5 D)
	4.000V	0.001V	±(0.6%+ 2 D)
	40.00V	0.01V	
	400.0V	0.1V	
	600V	1V	±(0.7%+ 5 D)

Input Impedance : 10MΩ, <100pF.
Overload protection : 600V rms.

Function	Range	Resolution	Accuracy
ohm	400.0	0.1	±(0.9%+5 D)
	4.000K	0.001K	±(0.9%+2 D)
	40.00K	0.01K	
	400.0K	0.1K	
	4.000M	0.001M	±(1.5%+5 D)
	40.00M	0.01M	

Open Circuit Voltage : 0.4V
Overload protection : 600V rms.

CONTINUITY CHECK

Continuity Threshold : Approx. <50Ω
Continuity Indicator : 2KHz Tone Buzzer.
Input Protection : 600V rms.

DIODE TEST

Test Current : 1.1mA (Typical)
Open Circuit Voltage : 1.5V DC (max).
Input Protection : 600V rms.

Function	Range	Resolution	Accuracy
Cap	50.00nF	0.01nF	±(5%+ 0.2nF)*
	500.0nF	0.1nF	±(2.9%+ 5 D)
	5.000μF	0.001μF	
	50.00μF	0.01μF	
	100.0μF	0.1μF	

Note : * For best measurements, with △ mode on nF ranges. Accuracys provide readings above 10nF at 50nF range.
Overload protection : 600V rms.

Function	Range	Resolution	Accuracy
Hz	5.000Hz	0.001Hz	±(0.3%+5 D)
	50.00Hz	0.01Hz	
	500.0Hz	0.1Hz	
	5.000KHz	0.001KHz	
	50.00KHz	0.01KH	
	500.0KHz	0.1KH	
	5.000MHz	0.001MHz	

Sensitivity : 1.0Vp-p (Square Wave)
Overload protection : 600V rms.

Function	Range	Resolution	Accuracy
%	0.1 - 99.9%	0.1%	± (0.5%+ 3 D)

Sensitivity : 1.0Vp-p for 30% ≤ Duty ≤ 70% (Square Wave : 5 Hz ~ 5KHz)
Overload protection : 600V rms.

Limited Warranty

Nieaf Instruments are subject to strict quality control. However, should the instrument function improperly during normal use, you are protected by our 12 months warranty.
We will repair or replace free of charge any defects in workmanship material, provided the instrument is returned unopened and unhampered with.
Damage due to dropping or incorrect handling is not covered by the warranty.
If the instrument shows failure following expiry of warranty, our service department can offer you a quick and economical repair.

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