

# HT77N - HT78

## AC AMPEROMETRIC CLAMPS FOR MEASUREMENT OF LEAKAGE CURRENTS

HT77N and HT78 are amperometric clamps designed for accurate measurements of very low values of AC currents and, therefore, they are mainly used in searching and determining leakage currents which typically cause the tripping of differential devices in civil and industrial electric systems. These models are also provided with a built-in low-pass filter to eliminate the harmonic components and with an analogue output with DC voltage for connection of any external data loggers (HT78 only). HT78, thanks to an internal, big-sized clamp (108mm), allows easy measurement of leakage currents even on (single-phase and/or three-phase, 4-wire) installations with big cross-section cables.

FUNCTIONS	HT77N	HT78
Measurement in TRMS	•	•
AC Current	•100A	•3000A
Low-pass filter	• (100Hz)	• (150Hz)
Analogue DC output		•
Data HOLD	•	•
Auto HOLD	•	
Peak HOLD	•	
Autorange	•	
Bargraph	•	
Backlight	•	
Auto Power OFF	•	•

TECHNICAL SPECIFICATIONS	HT77N	HT78
<b>AC TRMS current</b>		
Measuring range:	0.001mA ÷ 100A	0.1mA ÷ 3000A
Resolution:	0.001mA ÷ 0.1A	0.1mA ÷ 1A
Basic accuracy:	±(1.0%rdg + 8dgt)	±(1.5%rdg + 8dgt)
Protection:	max 120Arms	3000Arms
<b>Analogue DC output (HT78 only)</b>		
Conversion ratio:		1mV/1mA ÷ 1mV/10A
Full scale for each conversion ratio:		300mV
Basic accuracy:		±(1.5%FS)

GENERAL SPECIFICATIONS	
Display:	LCD, 4 digits, 6000 dots (HT77N) LCD, 4 digits, 3200 dots (HT78)
Conversion type:	TRMS
Power supply:	2x1.5V battery type AAA LR03
AutoPowerOFF:	after 20 minutes of idleness (HT77N) after 10 minutes of idleness (HT78)
Safety:	IEC/EN 61010-1
Measurement category:	CAT III 300V (HT77N) CAT II 600V, CAT III 300V (HT78)
Insulation:	double insulation
Pollution degree:	2
Max altitude:	2000m
Clamp inner diameter:	40mm (HT77), 108mm (HT78)
Dimensions (LxWxH):	202x75x42mm (HT77N) 341x194x52mm (HT78)
Weight (with batteries):	265g (HT77N) 1.9kg (HT78)

ACCESSORIES	
<b>Standard</b>	
Carrying bag	
Batteries	
Wrist belt (HT78 only)	
User manual	



**HT77N**  
HP00077N

**HT78**  
HP000078



## 1. ELECTRICAL SPECIFICATIONS

Accuracy is gives as [% readings + (number of digits) \* resolution] at 23°C ± 5°C ; <80%HR

### AC TRMS Current

Range	Resolution	Accuracy	Bandwidth	Max input current
300mA	0.1mA	±(1.5%rdg + 8dgt)	50 ÷ 60Hz	3Arms
3A	0.001A			30Arms
30A	0.01A			300Arms
300A	0.1A			3000Arms
3000A	1A	±(2.0%rdg + 8dgt)		

### DC analogical output

Range	Ratio	Accuracy (50 ÷ 60Hz)	Bandwidth	Max input current
300mA	1mV/1mA	±(1.5%FS)	50 ÷ 60Hz	3Arms
3A	1mV/0.01A			30Arms
30A	1mV/0.1A			300Arms
300A	1mV/1A			3000Arms
3000A	1mV/10A			

FS = full scale of meter

### Internal Filter

Type of filter	Cut off frequency
Low-pass	150Hz



## 2. GENERAL SPECIFICATIONS


### Features

Block of readings at display:	Data HOLD
Low pass filter:	150Hz to erase harmonic components
DC analogical output:	to connection with external data loggers

### Mechanical specifications

Dimensions:	341(L) x 194(W) x 52(H)mm
Weight (including batteries):	1.9kg
Max conductor size:	108mm

### Power supply

Power supply:	2x1.5V batteries type AAA LR03
Low battery indications:	symbol “  ” at display
Life battery:	about 200 hours of continuous operation
AutoPowerOFF:	after 10 minutes of idleness

### Display

Features:	LCD, 4 dgt, 3200 points + decimal point
Sampling rate:	2 times/s
Overrange indication:	“OL” message at display
Conversion mode:	TRMS

### Climatic conditions

Reference temperature:	23° ± 5°C
Operating temperature:	0 ÷ 40 °C
Operating humidity:	<80%RH
Storage temperature:	-10 ÷ 60 °C
Storage humidity:	<80%RH

### Reference standards

Safety:	IEC/EN61010-1 ; IEC/EN61010-2-032
Insulation:	double insulation
Pollution level:	2
Max height of use:	2000m
Category of measure:	CAT II 600V – CAT III 300V

**This product conforms to the prescriptions of the European directive on low voltage 2006/95/EEC and to EMC directive 2004/108/EEC**