AHBC-LF505
I_P=500A



Products Features

Excellent accuracy

Very good linearity

Wide frequency bandwidth

No insertion losses

High immunity to external interference

Applications

Static converters for DC motor drives

Battery supplied applications

Uninterruptible Power Supplies

SWITCHED Mode Power Supplies

Power supplies for welding applications

Remarks

The false wiring may result in the damage of the sensor.

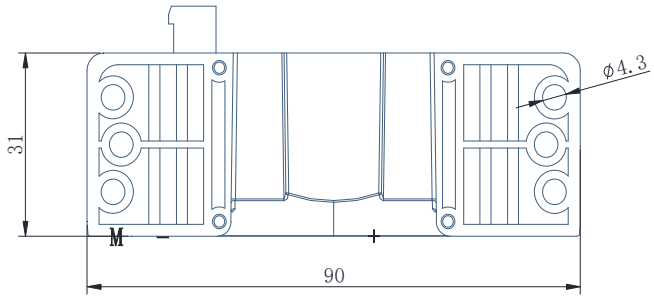
VOUT is positive when IP flows in the direction of the arrow.

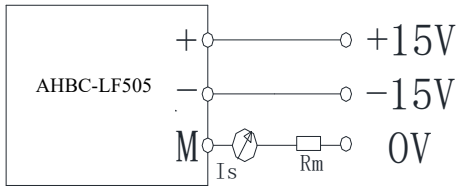
Dynamic performances (di/dt and response time) are best with a single bar completely filling the primary hole.

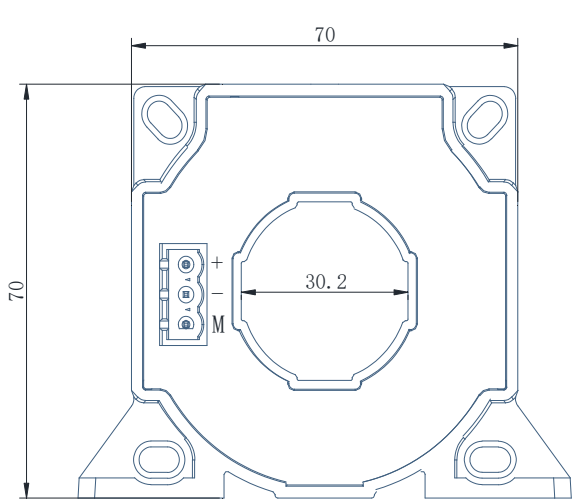
Temperature of the primary conductor should not exceed 100°C.

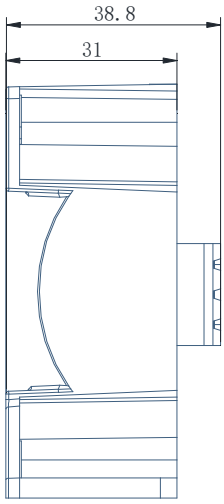
This is a standard model. For different versions (IP,supply voltages, output voltages,connection of secondary,turns ratios...),please contact us.

Mechanical dimension









Mechanical characteristics

General tolerance	± 0.5 mm
Recommended fastening torque	3.2 N·m
Vertical position	4 holes Φ4.2mm 4 M4 steel screws

Electrical data AHBC-LF505

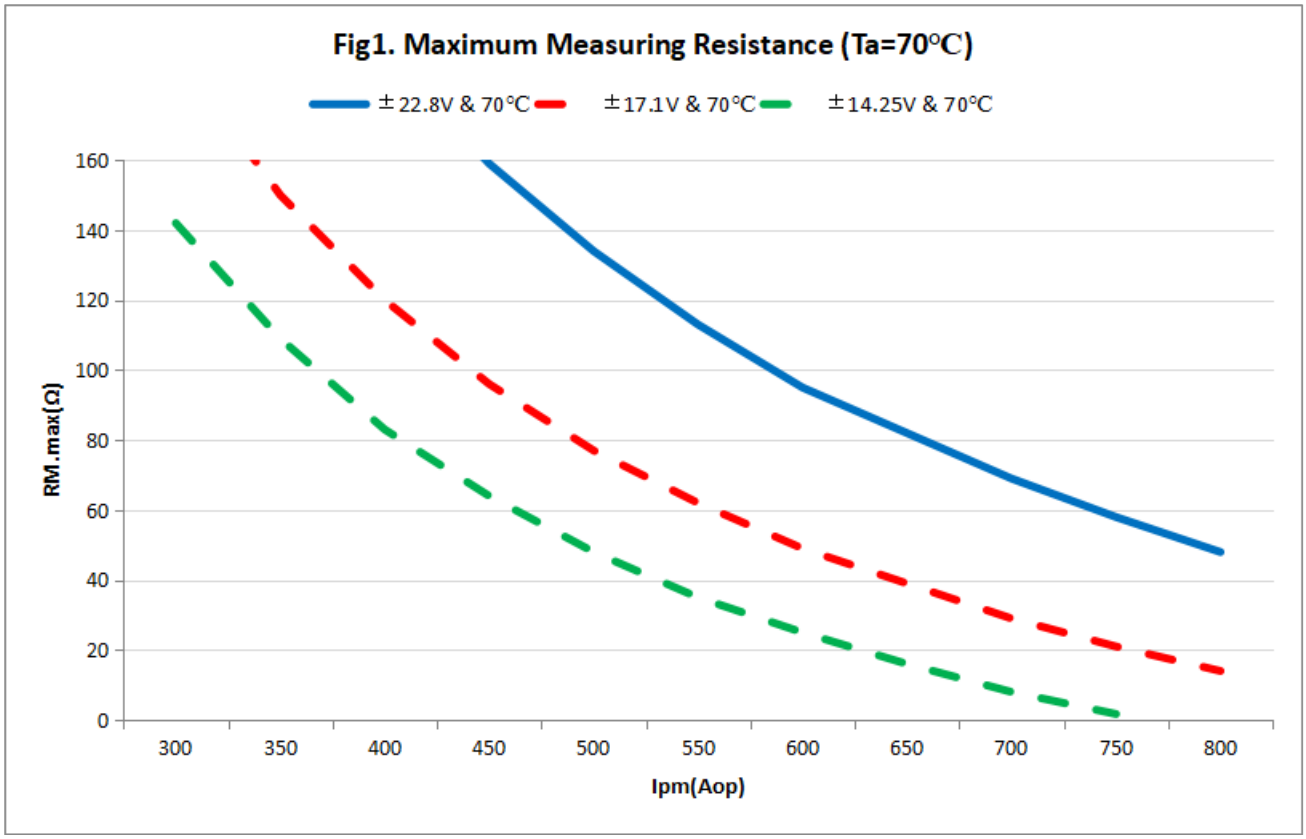
@ T_A = 25 °C

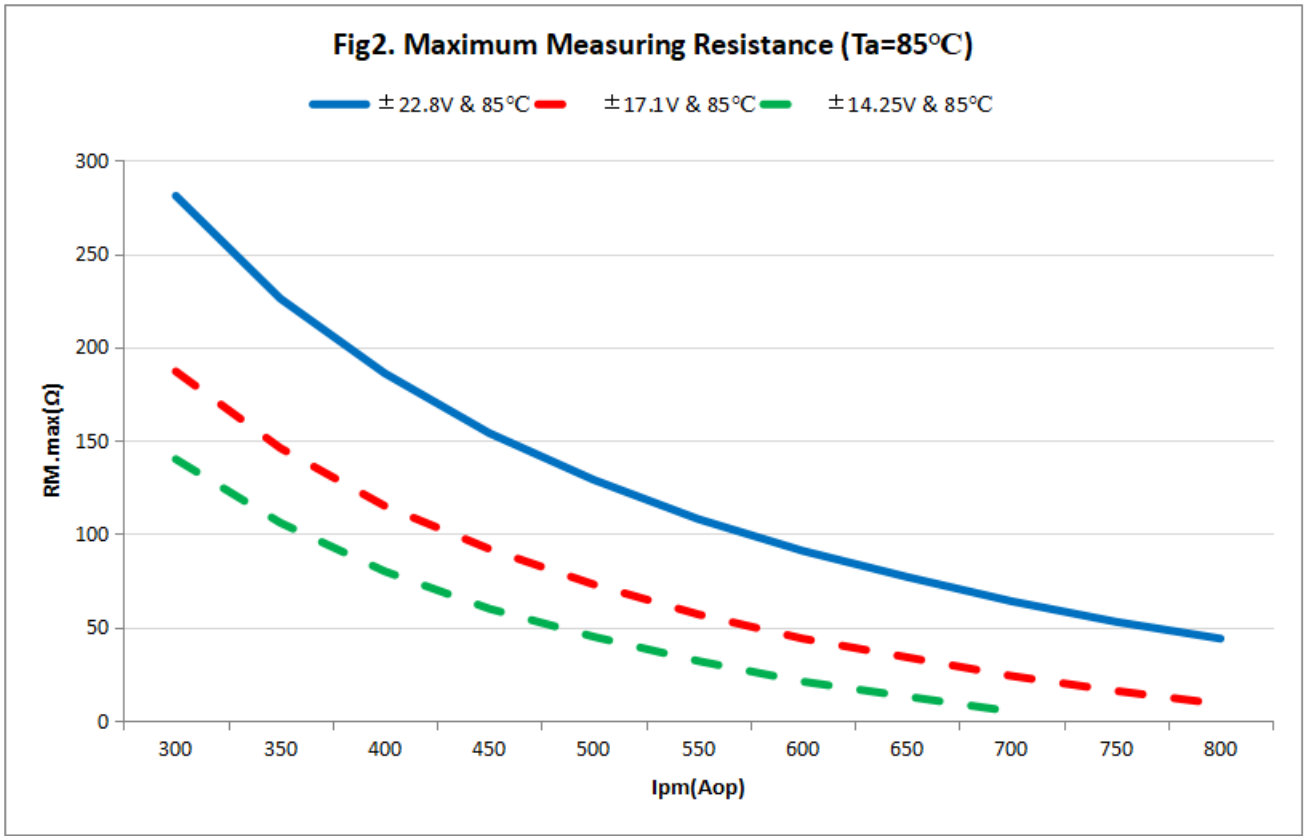
Type		AHBC-LF505
Rated input I_P		500A
Measure range I_{PM}		800A
Rated output current I_S		100mA
Conversion ratio K_N		1:5000
Coil internal resistance R_i		83 Ω
Measure resistance	±15V@500A，23℃	50 Ω (max)
	±15V@800A，23℃	6 Ω (max)
	±24V@500A，23℃	136 Ω (max)
	±24V@800A，23℃	49 Ω (max)
	±15V@500A，-40℃	58 Ω (max)
	±15V@800A，-40℃	10 Ω (max)
	±24V@500A，-40℃	143 Ω (max)
	±24V@800A，-40℃	53 Ω (max)
	±15V@500A，85℃	45 Ω (max)
	±15V@800A，85℃	1.1 Ω (max)
	±24V@500A，85℃	129 Ω (max)
	±24V@800A，85℃	44 Ω (max)

Electrical data AHBC-LF505

@ T_A = 25 °C

Type	AHBC-LF505
Supply voltage V_C	±14.3～±25.2VDC
Current consumption I_C	（17+Is）mA
Overall accuraty X	±0.5%FS
Linearity ε_L	≤0.1%FS
Offset current I_O	±0.2mA
Offset current drift I_{OT}	≤0.4mA
Galvanic isolation V_D	50Hz，1min，3.5KV
Response time T_R	<1μs
Frequency bandwidth-3db BW	DC～100KHz
Ambient operating temperature T_A	-40～+85℃
Ambient storage temperature T_S	-40～+125℃
Mass m	≈251g
Standards	JB/T 7490-2007


Fig1. Maximum Measuring Resistance (Ta=70°C)
±22.8V & 70°C
±17.1V & 70°C
±14.25V & 70°C
RM.max(Ω)
160
140
120
100
80
60
40
20
0
300
350
400
450
500
550
600
650
700
750
800
Ipm(Aop)


Fig2. Maximum Measuring Resistance (Ta=85°C)
±22.8V & 85°C
±17.1V & 85°C
±14.25V & 85°C
RM.max(Ω)
300
250
200
150
100
50
0
300
350
400
450
500
550
600
650
700
750
800
Ipm(Aop)