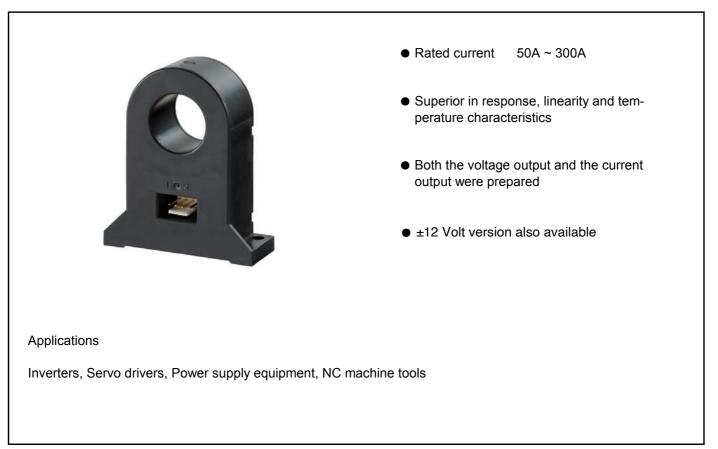


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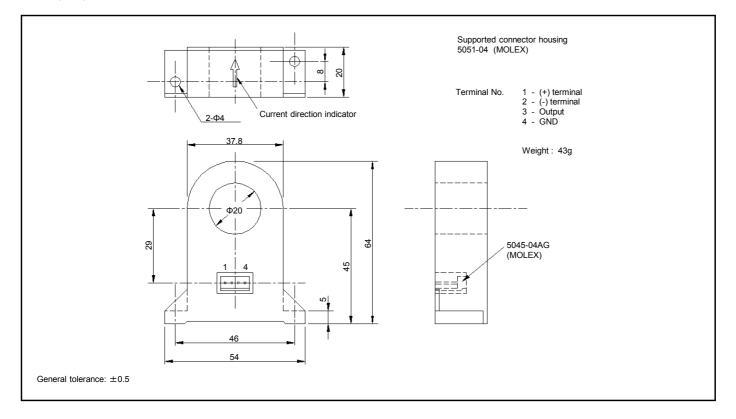






# Dimensions

(mm)





# Specification

Ta=25°C

Voltage output typeCurrent output typeTypeHS-U050V4B15HS-U100V4B15HS-U050A005B15HS-U100A005B15HS-U300A015B15Rated current[If] $\pm 50A$ $\pm 100A$ $\pm 300A$ $\pm 50A$ $\pm 100A$ $\pm 300A$ Continuously flowing DC current $\pm 50A$ $\pm 100A$ $\pm 300A$ $\pm 150A$ $\pm 100A$ $\pm 300A$ Saturation current[Is] $\pm 150A$ $\pm 100A$ $\pm 300A$ $\pm 300A$ $\pm 300A$ $\pm 300A$ $\pm 300A$ Linearity limits $0 \sim \pm 150A$ $0 \sim \pm 300A$ $\pm 300A$ $\pm 300A$ Rated output[Vh, $\pm 4V \pm 1\%$ (RL=10kΩ) $\pm 150M \pm 1\%$ $0 \sim \pm 300A$ <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>								
Rated current[If] $\pm 50A$ $\pm 100A$ $\pm 300A$ $\pm 50A$ $\pm 100A$ $\pm 300A$ Continuously flowing DC current $\pm 50A$ $\pm 100A$ $\pm 300A$ $\pm 150A$ $\pm 100A$ $\pm 300A$ Saturation current[Is] $\pm 150A$ $\pm 300A$ $\pm 150A$ $\pm 150A$ $\pm 300A$ $\pm 300A$ Linearity limits $0 \sim \pm 150A$ $0 \sim \pm 300A$ $0 \sim \pm 360A$ $\frac{0 \sim \pm 300A}{(RL = 500)}$ $\frac{0 \sim \pm 300A}{(RL = 500)}$ $\frac{0 \sim \pm 300A}{(RL = 500)}$ Residual output[Vh, $\pm 4V \pm 1\%$ (RL=10kΩ) $\pm 50mA \pm 1\%$ $\pm 150mA \pm 1$ Output linearity[V0,Within $\pm 20mV$ Within $\pm 0.2mA$ Output linearity[V0,Within $\pm 20mV$ Within $\pm 0.2mA$ Output linearity[V0,Within $\pm 20mV$ Within $\pm 0.2mA$ Response timeApprox. 25ΩApprox. 50ΩApprox. 25ΩResponse performanceWithin 1µs (The smaller one on either at di/dt = 100A/µs or 1f/µs.)Response performanceWithin 20mVWithin 0.2mAOutput Temp. Coef.Within 20mVWithin $\pm 0.02\%/°C$ Residual output Temp. Coef.Within $\pm 10V°C$ Within $\pm 0.01mA°C$ Consumption current $20mA+(Input current/2000)$ $20mA+(Input current/2000)$ Operating Temp. $-10°C \sim +80°C$ Storage Temp. $-10°C \sim +80°C$ Dielectric withstand voltage $2500V AC 50/60Hz$ 1minute			Voltage output type			Current output type		
$\begin{tabular}{ c c c c c c c } \hline Continuously flowing DC current $$\pm 50A$ $\pm 100A$ $\pm 150A$ $\pm 50A$ $\pm 100A$ $E 0 $= 100A$ $\end{tabular}$ $\e$	Туре		HS-U050V4B15	HS-U100V4B15	HS-U300V4B15	HS-U050A005B15	HS-U100A005B15	HS-U300A015B15
Saturation current[Is] $\pm 150A$ $\pm 300A$ $\pm 390A$ $\pm 150A$ $\pm 300A$ $\pm 300A$ Linearity limits $0 \sim \pm 150A$ $0 \sim \pm 150A$ $0 \sim \pm 300A$ $(RI = 200)$ $(RI $	Rated current	[ If ]	±50A	±100A	±300A	±50A	±100A	±300A
Linearity limits $0 \sim \pm 150A$ $0 \sim \pm 300A$ $0 \sim \pm 360A$ $0 \sim \pm 150A$ $0 \sim \pm 300A$ $0 \sim \pm 30$	Continuously flowing DC current		±50A	±100A	±150A	±50A	±100A	±300A
Rated output[ Vh, $\pm 4V \pm 1\%$ (RL=10kΩ) $\pm 50mA \pm 1\%$ $\pm 150mA \pm 1$ Residual output[ V0,Within $\pm 20mV$ Within $\pm 0.2mA$ Output linearityApprox. 25ΩApprox. 50ΩApprox. 25ΩApprox. 50ΩSecond coil resistanceApprox. 25ΩApprox. 50ΩApprox. 50ΩApprox. 50ΩResponse timeWithin 1µs (The smaller one on either at di/dt = 100A/µs or If/µs.)Within 0.2mAMithin 0.2mAResponse performanceWithin 20mVWithin 0.2mAOutput Temp. Coef.Within 20mVWithin ±0.01mA/°CConsumption current $20mA+(Input current/2000)$ $20mA+(Input current/2000)$ $20mA+(Input current/2000)$ Operating Temp. $20mA+(Input current/2000)$ $20mA+(Input current/2000)$ $20mA+(Input current/2000)$ Operating Temp. $-10°C \sim +80°C$ $-10°C \sim +85°C$ Dielectric withstand voltage $2500V AC 50/60Hz 1minute$	Saturation current	[ Is ]	±150A	±300A	±390A	±150A	±300A	±300A
Rated output[ Vh, $\pm 4V \pm 1\%$ (RL=10kΩ) $\pm 50mA \pm 1\%$ $\pm 150mA \pm 1$ Residual output[ V0,Within $\pm 20mV$ Within $\pm 0.2mA$ Output linearityApprox. 25ΩApprox. 50ΩApprox. 25ΩApprox. 50ΩSecond coil resistanceApprox. 25ΩApprox. 50ΩApprox. 50ΩApprox. 50ΩResponse timeWithin 1µs (The smaller one on either at di/dt = 100A/µs or If/µs.)Within 0.2mAMithin 0.2mAResponse performanceWithin 20mVWithin 0.2mAOutput Temp. Coef.Within 20mVWithin ±0.01mA/°CConsumption current $20mA+(Input current/2000)$ $20mA+(Input current/2000)$ $20mA+(Input current/2000)$ Operating Temp. $20mA+(Input current/2000)$ $20mA+(Input current/2000)$ $20mA+(Input current/2000)$ Operating Temp. $-10°C \sim +80°C$ $-10°C \sim +85°C$ Dielectric withstand voltage $2500V AC 50/60Hz 1minute$	Linearity limits		0~±150A	0~±300A	0~±360A	0~±150A (BL=500)	0~±300A (RL=200)	0~±300A (RL=200)
Output linearityWithin ±0.5%Second coil resistanceApprox. 25ΩApprox. 50ΩApprox. 25ΩApprox. 50ΩResponse timeWithin 1µs (The smaller one on either at di/dt = 100A/µs or If/µs.)Response performanceWithin 10%Hysteresis voltage rangeWithin 20mVWithin 0.2mAOutput Temp. Coef.Within ±0.02%/°CResidual output Temp. Coef.Within ±1mV/°CWithin ±0.01mA/°CControl power supply±15V±5%Consumption current20mA+(Input current/2000)20mA+(Input current/2000)Operating Temp10°C~+80°CStorage Temp15°C~+85°CDielectric withstand voltage2500V AC 50/60Hz 1minute	Rated output	[ Vh,	±4V±1% (RL=10kΩ)		· · · · · · · · · · · · · · · · · · ·			
Second coil resistanceApprox. 25ΩApprox. 50ΩApprox. 25ΩApprox. 50ΩResponse timeWithin 1µs (The smaller one on either at di/dt = 100A/µs or If/µs.)Response performanceWithin 10%Hysteresis voltage rangeWithin 20mVWithin 0.2mAOutput Temp. Coef.Within ± 0.02%/°CResidual output Temp. Coef.Within ± 1mV/°CWithin ± 0.01mA/°CControl power supply±15V±5%Consumption current20mA+(Input current/1000)20mA+(Input current/1000)20mA+(Input current/2000)Operating Temp10°C~+80°CStorage Temp15°C~+85°CDielectric withstand voltage2500V AC 50/60Hz 1minute	Residual output	[ V0,	Within ±20mV			Within ±0.2mA		
Response timeWithin 1µs (The smaller one on either at di/dt = 100A/µs or lf/µs.)Response performanceWithin 1µs (The smaller one on either at di/dt = 100A/µs or lf/µs.)Hysteresis voltage rangeWithin 20mVWithin 10%Output Temp. Coef.Within 20mVWithin ±0.02%/°CResidual output Temp. Coef.Within ±1mV/°CWithin ±0.01mA/°CControl power supply±15V±5%ZomA+(Input current/2000)20mA+(Input current/2000)Operating Temp.20mA+(Input current/1000)20mA+(Input current/2000)20mA+(Input current/2000)Operating Temp10°C~+80°C-15°C~+85°CDielectric withstand voltage2500V AC 50/60Hz 1minute	Output linearity		Within			±0.5%		
Response performanceWithin 10%Hysteresis voltage rangeWithin 20mVWithin 0.2mAOutput Temp. Coef.Within ±0.02%/°CWithin ±0.01mA/°CResidual output Temp. Coef.Within ±1mV/°CWithin ±0.01mA/°CControl power supply±15V±5%20mA+(Input current/2000)Consumption current20mA+(Input current/2000)20mA+(Input current/2000)Operating Temp10°C~+80°CStorage Temp15°C~+85°CDielectric withstand voltage2500V AC 50/60Hz 1minute	Second coil resistance		Approx. 25Ω	Approx. 50Ω A		Approx. 25Ω	Approx. 50Ω	
Hysteresis voltage rangeWithin 20mVWithin 0.2mAOutput Temp. Coef.Within ±0.02%/°CResidual output Temp. Coef.Within ±1mV/°CControl power supply±15V±5%Consumption current20mA+(Input current/1000)Operating Temp10°C~+80°CStorage Temp115°C~+85°CDielectric withstand voltage2500V AC 50/60Hz 1minute	Response time		Within 1µs (The smaller one on either at di/dt = 100A/µs or If/µs.)					
Output Temp. Coef.Within ± 0.02%/°CResidual output Temp. Coef.Within ± 1mV/°CWithin ± 0.01mA/°CControl power supply± 15V±5%Consumption current20mA+(Input current/1000)20mA+(Input current/1000)20mA+(Input current/2000)Operating Temp10°C~+80°CStorage Temp15°C~+85°CDielectric withstand voltage2500V AC 50/60Hz 1minute	Response performance		Within 10%					
Residual output Temp. Coef.   Within ± 1mV/°C   Within ± 0.01mA/°C     Control power supply   ±15V±5%     Consumption current   20mA+(Input current/2000)   20mA+(Input current/2000)   20mA+(Input current/2000)     Operating Temp.   -10°C~+80°C     Storage Temp.   -15°C~+85°C     Dielectric withstand voltage   2500V AC 50/60Hz 1minute	Hysteresis voltage range		Within 20mV			Within 0.2mA		
Control power supply   ±15V±5%     Consumption current   20mA+(Input current/1000)   20mA+(Input current/2000)   20mA+(Input current/2000)     Operating Temp.   -10°C~+80°C     Storage Temp.   -15°C~+85°C     Dielectric withstand voltage   2500V AC 50/60Hz 1minute	Output Temp. Coef.		Within ±0.02%/°C					
Consumption current20mA+(Input current/1000)20mA+(Input current/1000)20mA+(Input current/1000)Operating Temp10°C~+80°CStorage Temp15°C~+85°CDielectric withstand voltage2500V AC 50/60Hz 1minute	Residual output Temp. Coef.		Within ±1mV/°C			Within ±0.01mA/°C		
Consumption current/1000) ZonnA+(input current/2000) current/1000) ZonnA+(input current/2000)   Operating Temp. -10°C~+80°C   Storage Temp. -15°C~+85°C   Dielectric withstand voltage 2500V AC 50/60Hz 1minute	Control power supply		±15V±5%					
Storage Temp. -15°C~+85°C   Dielectric withstand voltage 2500V AC 50/60Hz 1minute	Consumption current		20mA+(Input current/1000)	20mA+(Input	current/2000)	20mA+(Input current/1000)	20mA+(Input	current/2000)
Dielectric withstand voltage     2500V AC 50/60Hz 1minute	Operating Temp.		-10°C~+80°C					
	Storage Temp.		-15°C~+85°C					
	Dielectric withstand voltage		2500V AC 50/60Hz 1minute					
Insulation resistance Not less than 500MO 500V DC	Insulation resistance		Not less than 500MΩ 500V DC					

Note1) The indicated residual output is the one after the core hysteresis is removed.

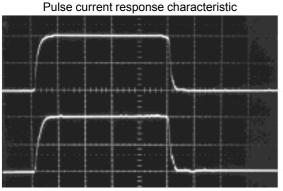
Note2) Energization time of saturation current shall be within 1 second.

Note3) Energization time of continuous live DC current x150% shall be within 1 minute.

### **Characteristics chart**

## HS-U100A005B15 (RL=20Ω)

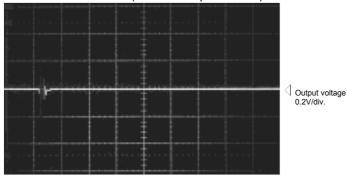
Time base: 5µs/div.

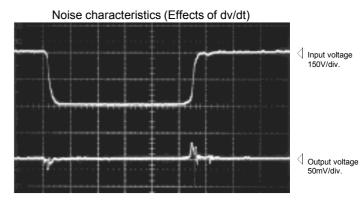


Input current
SOA/div.

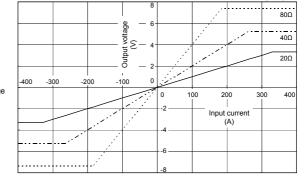
Output voltage 0.5V/div.

## Noise characteristics (Effects of impulse noise)





Load resistance-output characteristics (Current output type)  $T_{a=25^{\circ}C}$ 



Note: The marks "  $\triangleleft$  " means 0V or 0A.