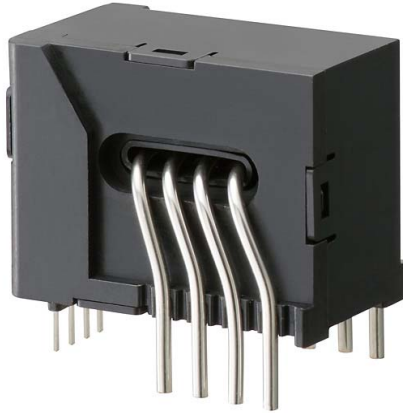




HF-A



- Rated current 6A ~ 50A
- High accuracy current sensor using fluxgate technology
- Handles 5V single power supply and reference voltage (Vref)
- Excellent temperature characteristics
- High speed response
- Over-current protection circuit built-in

Applications

Inverters, Servo drivers, Power supply equipment, Uninterruptible power supply (UPS), NC machine tools, Welders

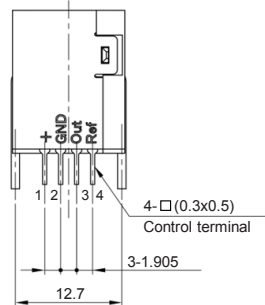
Dimensions

(mm)

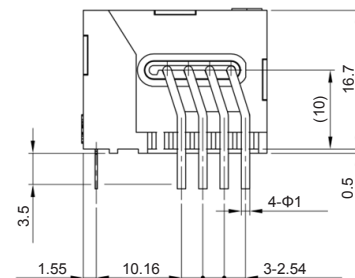
- Terminal No. 1 ... (+) terminal
 2 ... GND
 3 ... Output
 4 ... Reference voltage
 5 ... (+) input
 6 ... (+) input
 7 ... (+) input
 8 ... (+) input
 9 ... (-) input
 10 ... (-) input
 11 ... (-) input
 12 ... (-) input

Weight : 9g

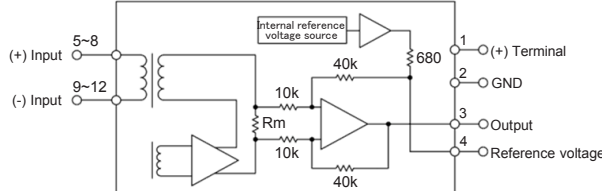
Current direction



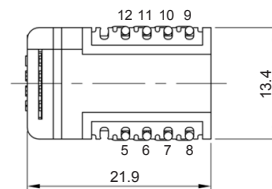
General tolerance: ±0.5



Circuit connection diagram



If (-)	12 11 10 9
If (+)	5 6 7 8
If/2 (-)	12 11 10 9
If/2 (+)	5 6 7 8
If/4 (-)	12 11 10 9
If/4 (+)	5 6 7 8



Specification

Ta=25°C

Type	HF-A06V0625PP5D	HF-A15V0625PP5D	HF-A25V0625PP5D	HF-A50V0625PP5D
Rated current [If]	±6A	±15A	±25A	±50A
Continuously flowing DC current	±20A	±51A	±55A	±55A
Saturation current [Is]	±20A	±51A	±85A	±150A
Linearity limits	0~±18A	0~±45A	0~±75A	0~±100A
Internal reference voltage [Vref] (I=0)	+2.5±5mV			
External reference voltage [Vref]	0~4V			
Rated output [Vh] (I=If, output-Vref)	±0.625V±0.7%			
Residual output [Vo] (I=0, output-Vref)	±5.3mV	±2.2mV	±1.35mV	±0.725mV
Output linearity	Within ±0.1%			
Response time	Within 0.3µs (at di/dt=If/µs)			
Response performance	Within 10%			
Hysteresis voltage range	Within 1mV			
Output Temp. Coef.	Within ±0.004%/°C			
Residual output Temp. Coef.	Within ±0.035mV/°C	Within ±0.015mV/°C	Within ±0.01mV/°C	Within ±0.0075mV/°C
Internal reference voltage Temp. Coef.	Within ±0.125mV/°C			
Control power supply	+5V±5%			
Consumption current	20mA+(Input current/1760)			20mA+(Input current/1768)
Operating Temp.	-40°C~+85°C			
Storage Temp.	-40°C~+105°C			
Dielectric withstand voltage	4000V AC 50/60Hz 1minute			
Insulation resistance	Not less than 500MΩ 500V DC			

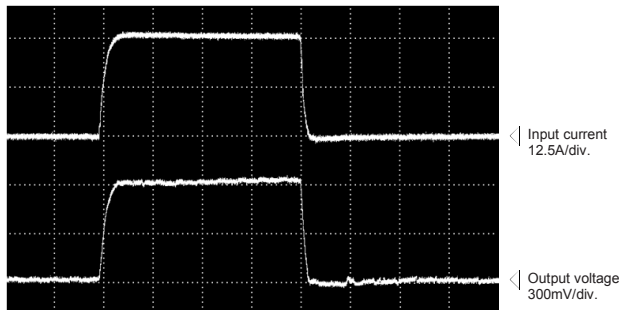
- Note1) The indicated residual output is the one after the core hysteresis is removed.
- Note2) Energization time of saturation current shall be within 1 second.
- Note3) Energization time of continuous live DC current x150% shall be within 1 minute.
- Note4) In this specification, accuracy was determined with reference to the reference voltage (Vref).
- Note5) For the reference voltage, there are 2 types of modes of internal reference output and external reference input.

Characteristics chart

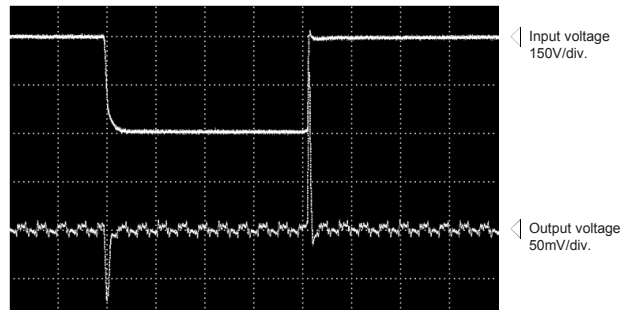
HF-A25V0625PP5D

Time base: 5µs/div.

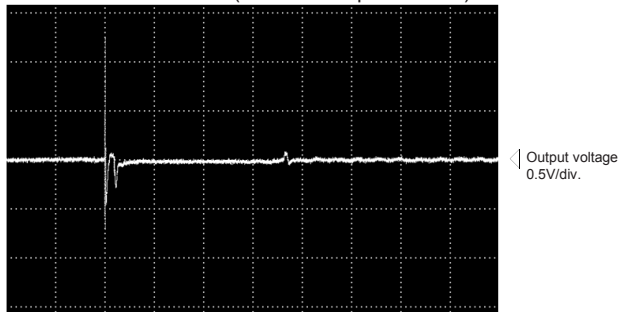
Pulse current response characteristic



Noise characteristics (Effects of dv/dt)

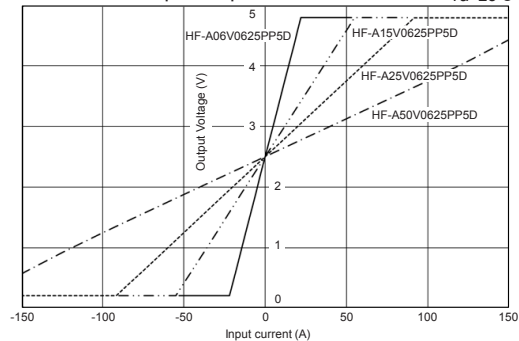


Noise characteristics (Effects of impulse noise)



Input/output characteristics

Ta=25°C



Note: The marks "◁" means 0V or 0A.