

# Servo type DC current sensor

## Zero flux type for small current and precision measurement

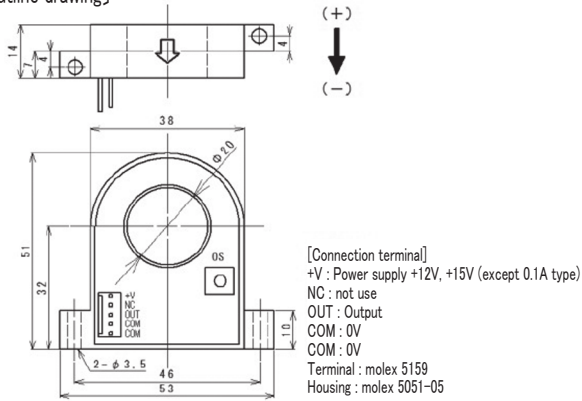


**Model** DCS-20-ASH series

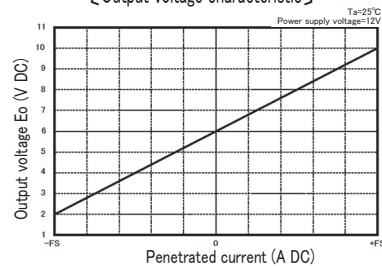
**[Features]**

- Possible to measure DC small current precisely even small and light weight
- Full scale 0.1A, 0.5A, 1A, 2A
- Excellent temperature stability for residual voltage and output voltage
- Stable operation after over current
- Unipolar power supply operation

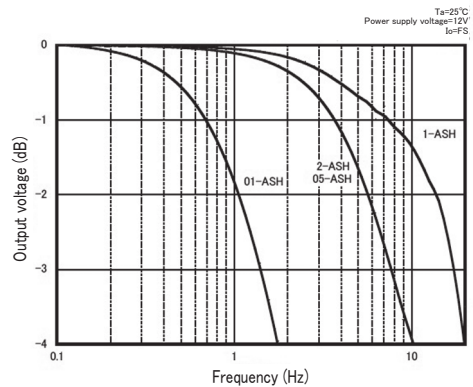
**[Outline drawing]**



**[Output voltage characteristic]**



**[Frequency characteristic]**



**[Specification] Ta=25°C**

Model	DCS-20- (電流表記) -ASH			
Current description	01	05	1	2
Rating current (FS)	± 0.1A <sub>DC</sub>	± 0.5A <sub>DC</sub>	± 1A <sub>DC</sub>	± 2A <sub>DC</sub>
Output voltage	1/2 of power supply voltage ± 4V/rating current (recommended load resistor >10k Ω)			
Residual voltage	± 20mV typ			
Noise level	20mV <sub>p-p</sub> typ			
Accuracy	Within ± 3%/FS	Within ± 1%/FS		
Linearity	Within ± 1%/FS			
Hysteresis(FS→0)	Within ± 10mV (FS→0)			
Response time	250ms typ	50ms typ	30ms typ	50ms typ
Output voltage temperature coefficient	± 0.1%/°C typ	± 0.05%/°C typ		
Residual voltage temperature coefficient	± 3mV/°C typ	± 1mV/°C typ		
Power supply	Voltage	DC+12V	DC+12, +15V	
	Current consumption	20mA typ	+12V: 35mA / +15V: 40mA typ	
Withstand voltage	AC2500V(50/60Hz), 1min (Aperture-output terminal in a lump)			
Insulation resistance	DC500V, ≥ 500M Ω (Aperture-output terminal in a lump)			
Operating temperature	-10°C ~ +60°C, ≤ 85%RH, no condensation			
Storage temperature	-15°C ~ +65°C, ≤ 85%RH, no condensation			
Output connector	5045-05 (Molex)			
Screw torque	0.3N · m			
Mass	approximately 38g			

- [Remark]**
- (1) This sensor is only for DC, and impossible to measure AC current precisely.
  - (2) Impossible to use in the condition of high current flowing with high frequency component
  - (3) It is affected by external magnetic field such as geomagnetism, close current wire, and so on. Please use shield case and so on as necessary.
  - (4) Impossible to use in outdoor exposure
  - (5) Please ask to consultation in case to use 0.1A rating type with power supply +15V

**[Output response]**

