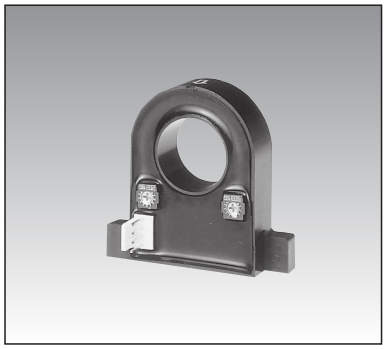
Generic DC current sensor, penetration type

Medium and large size for panel mounting corresponding to ± 15V power supply



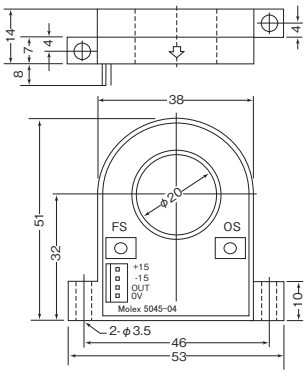
Model HCS-AP series

〔Features〕

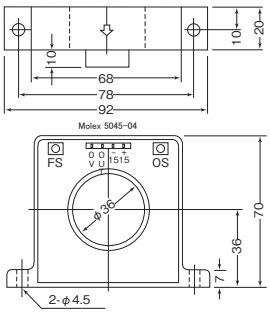
- Corresponding to ± 15V contol power supply
- Possible to discriminate the direction by 0 ± 4V output
- Possible to measure with isolation
- High reliability with sensor and amplifier integral structure
- Possible to measure until bandwidth of DC ～ 20kHz high frequency (In the case of use with high frequency, there is the case not to use until the rating current)
- High speed response within 3 μ s

〔Outline drawing〕

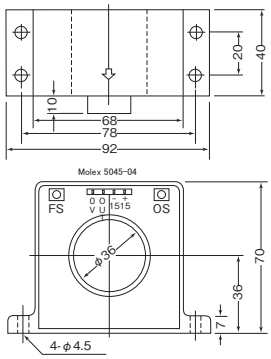
HCS-20 Series



HCS-36-200-AP
HCS-36-500-AP



HCS-36-800-AP



This product needs ±15V (+15V and −15V DC bi-polar power supply) as control power supply. Even though the case of current detection of only plus direction, ±15V needs. In any case, it is not operated with only +15V.

〔Specification〕

Model	HCS-20- (Rating current) -AP						HCS-36- (Rating current) -AP		
Rating current (FS)	± 10A	± 20A	± 50A	± 100A	± 150A	± 200A	± 200A	± 500A	± 800A
Maximum current	± 25A	± 50A	± 125A	± 250A	± 375A	± 500A	± 500A	± 1250A	± 2000A
Output voltage	± 4V／Rating current、± 10V／Maximum current (Recommended load resistor ≧ 10k Ω)								
Residual voltage	Within ± 100mV (no load)		Within ± 50mV (no load)		Within ± 20mV (no load)				
Noise level	Less than 10mVp-p (no load)								
Accuracy	Within ± 2%FS		Within ± 1%FS						
Linearity	Within ± 2%FS		Within ± 1%FS						
Hysteresis(FS→0)	Within ± 50mV		Within ± 25mV		Within ± 15mV				
Response time	Less than 3 μ s (at di/dt = FS/2 μ s)								
Output voltage temperature coefficient	± 0.4%／℃ typ		± 0.1%／℃ typ						
Residual voltage temperature coefficient	± 4mV ／℃ typ		± 2mV ／℃ typ		± 1mV ／℃ typ		± 0.5mV ／℃ typ		± 0.3mV ／℃ typ
Power supply	DC ± 15V ± 5% (25mA typ) bi-polar power supply								
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℃～ +60℃ , ≦ 85%RH, no condensation								
Storage temperature	−15℃～ +65℃ , ≦ 85%RH, no condensation								
Internal adjustment function	FS: Calibration for maximum output, OS: Calibration for zero point without load (Calibrated at the time of delivery)								
Output connector	5045-04 (Molex)								
Screw torque	0.3N・m						0.7N・m		
Mass	approximately 40g						approximately 120g	approximately 190g	approximately 500g

〔Remark〕 (1) After overcurrent more than rating current, offset drift occur by proportional to that current, with hysteresis of core.
(2) Recommend to use more than 5% of nominal for practical range, because output includes various variation factors.
(3) Do not beyond rating current for continuous use
(4) There is possibility of heating by core loss for the application of high frequency and high current. Please check by contacting us.

Ta=25℃

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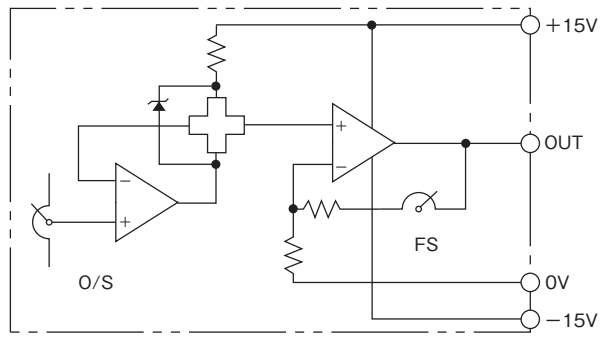
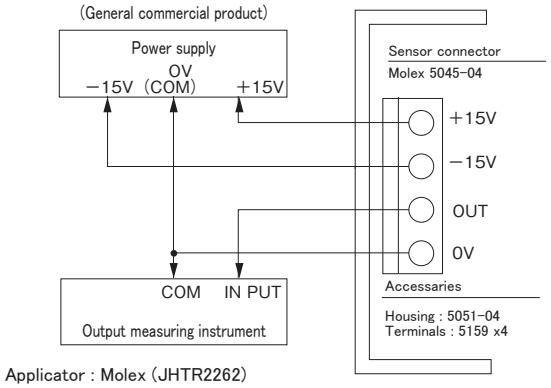
HCS-AP series typical characteristic (HCS-20-20-AP)

〔Circuit diagram〕

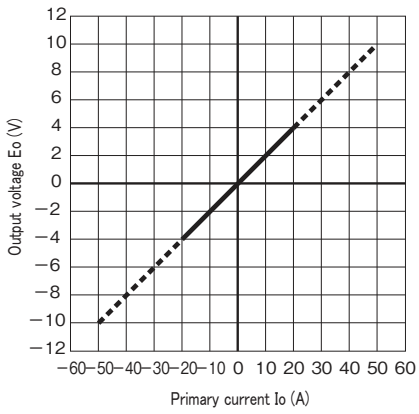


〔Connection〕

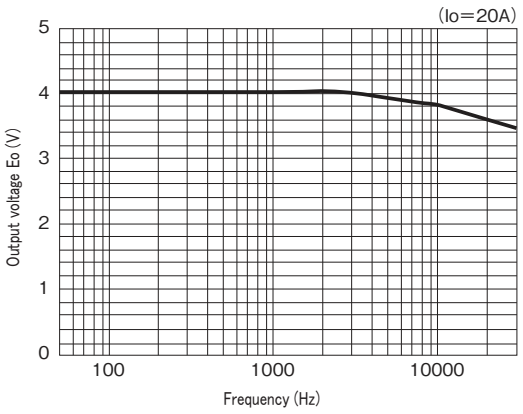


Applicator : Molex (JHTR2262)

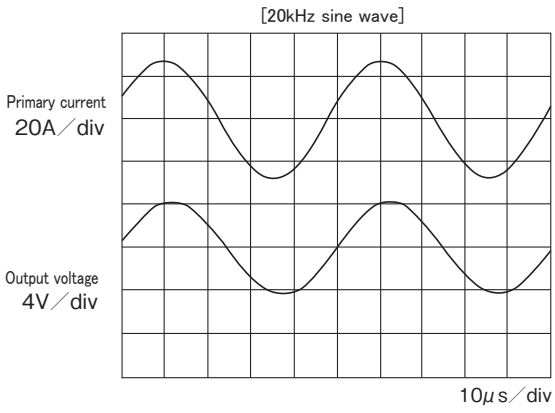
〔Output voltage characteristic〕



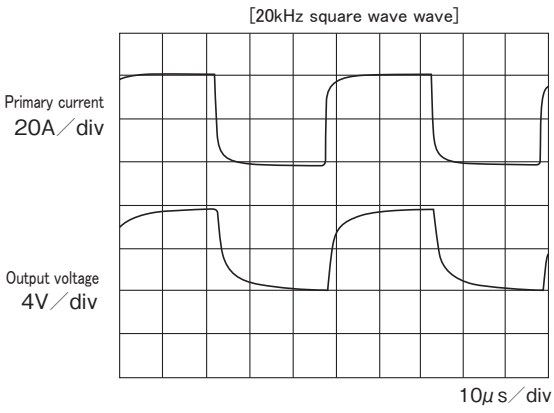
〔Frequency characteristic〕



〔Output waveform〕 −1



〔Output waveform〕 −2



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★ Applicator is not handled