

SERIES: CSXX120B | **DESCRIPTION:** CURRENT SENSOR

FEATURES

- open loop
- bipolar
- detects current direction
- single channel


MODEL

MODEL	rated current (If)	linearity range ¹ (Im)
	[A _{RMS}]	[A _{PEAK}]
CS03120B	±3	±6
CS05120B	±5	±10
CS10120B	±10	±20
CS15120B	±15	±30
CS20120B	±20	±40

Notes: 1. Im is the maximum peak current for which the output voltage specifications are guaranteed, however the If RMS rating must not be exceeded.
 2. All specifications measured at 25°C, RI=10 kΩ, unless otherwise noted.
 3. It is recommended to add a 1 μF capacitor connected between the common terminal 4 and the +12 V and -12 V terminals, 1 and 2, to avoid noise problems.

SPECIFICATIONS

parameter	conditions/description	min	typ	max	units
supply voltage (Vcc)		±11.4	±12.0	±12.6	V
max current consumption (Ic)				25	mA
output voltage (Vo)	at +If	±3.96	±4.00	±4.04	V
zero current offset voltage (Vr)	after demagnetization	-0.03	0	+0.03	V
output voltage linearity ⁴ (ΔKo)				±0.5	%
response (tr)	at di/dt = If/μs		3		μs
output voltage temperature characteristics				±0.1	%/°C
zero current offset voltage characteristics				±1.5	mV/°C
hysteresis (Vh)	at +If to zero current			15	mV
primary over current	for maximum 50 ms, no damage			10*If	A
withstand voltage	between coil and each terminal for 1 minute		2,000		Vac
insulation resistance	between coil and each terminal at 500 Vdc		500		MΩ
operating temperature		-10		75	°C
storage temperature		-30		90	°C
safety approvals	UL 508				
flammability rating	UL94V-0				
RoHS	yes				

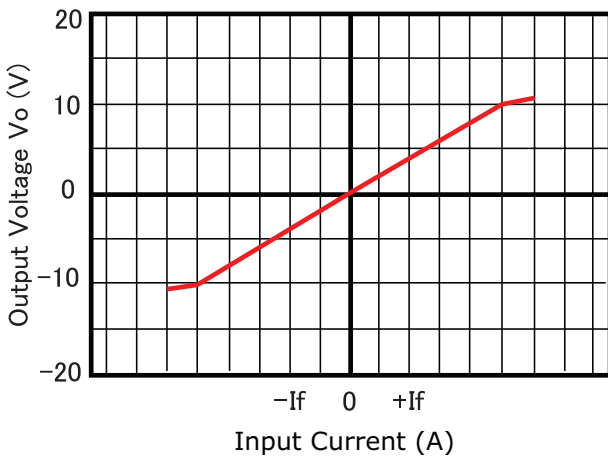
Notes: 4. Deducing the value of hysteresis and offset voltage, calculated by (V/Vo)/(IfxI-1)x100%.

DERATING CURVE

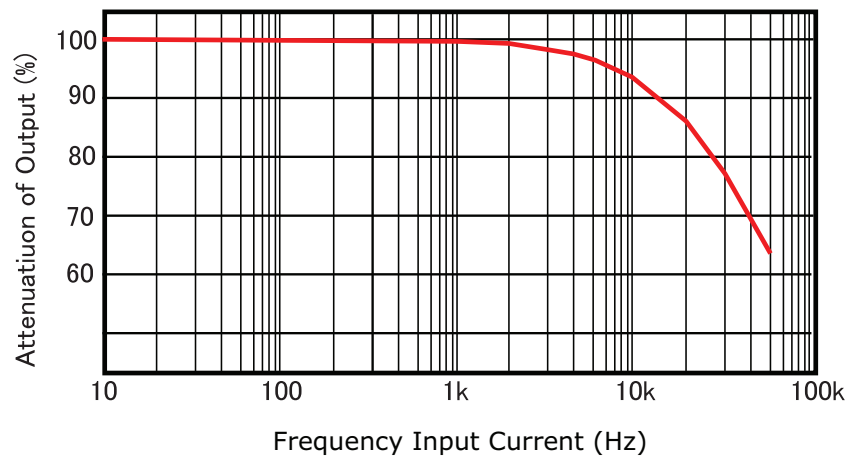


PERFORMANCE CURVES

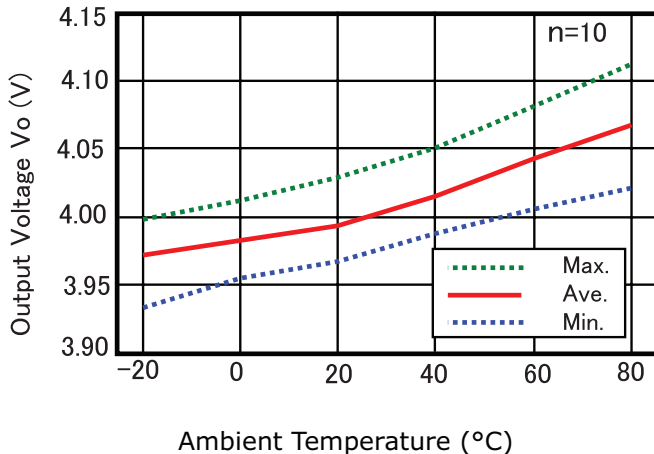
Output Voltage vs. Input Current



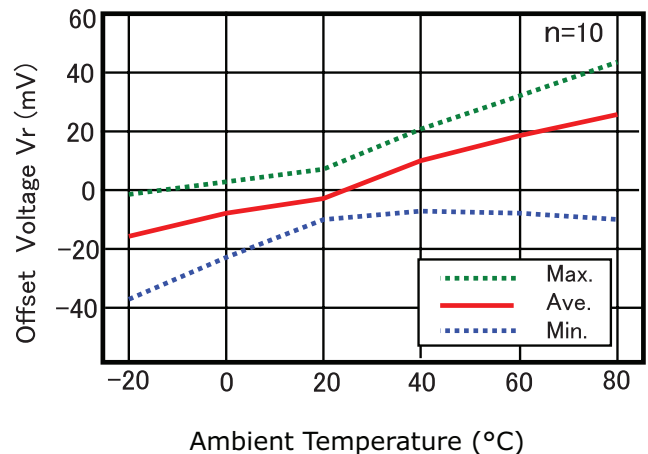
Input Current Frequency vs. Output Attenuation



Output Voltage vs. Ambient Temperature
[at +If]



Offset Voltage vs. Ambient Temperature
[at Zero Current]



REVISION HISTORY

rev.	description	date
1.0	initial release	09/03/2019
1.01	brand update	02/19/2020
1.02	logo, datasheet style update	08/05/2022

The revision history provided is for informational purposes only and is believed to be accurate.



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