Current to Current Converter CYCCC

The signal converter is specifically designed to expand the application range and improve the measuring accuracy of closed loop Hall and fluxgate current sensors. It proportionally transforms the output current of closed-loop Hall and fluxgate current sensors into a standard current signal as the input signal required by downstream application systems. By adjusting the component parameters inside the converter and offset and gain potentiometers, the conversion ratio can be flexibly configured to meet the varying current range and high accuracy requirements of different backend acquisition devices.

Product Characteristics	Applications
• DC/AC current scaling conversion • High measuring accuracy and linearity • Analog current output signal (0-20mA, 0-40mA or custom-made) • Improvement of measuring accuracy of closed loop current sensors • Protection against overvoltage • Protection against reversed polarity • Output protection against electrical disturbances	• Power Electronics Equipment Testing • Inverter and Variable Frequency Drive (VFD) Monitoring • Switched-Mode Power Supply (SMPS) Development and Testing • Photovoltaic Systems • Energy Storage Systems • EV Charging Equipment • High-Dynamic Current Measurement Systems

Technical Data

Rated input current	0-600mA (max)
Rated output current	0-20mA, 0-40mA or custom-made
Load Resistance	20-120 Ω (with default 40mA output)
Power supply	±15V ~ ±24V DC
Measuring accuracy	±0.05% (converter together with current sensor)
Linearity (10% -100%), 25°C	±0.005% (converter together with current sensor)
Isolation	between input, output and power supply
Isolation withstanding voltage	2.5 kV DC, 1min, leakage current 1mA
Response time	≤ 3 μs
Frequency Bandwidth (-3dB)	DC – 200kHz
Thermal drift of offset current	±0.1mA (-20°C ~ +70°C)
Power consumption	Vc=±15VDC, ≤36mA + Output Current + consumption of the connected sensor Vc= ±24VDC, ≤40mA + Output Current + consumption of the connected sensor

Markt Schwabener Str. 8
85464 Finsing
Germany

Tel.: +49 (0)8121-2574100
Fax: +49 (0)8121-2574101
Email: info@chenyang-gmbh.com
http://www.chenyang-gmbh.com

General Data:

Operating temperature	-20°C ~ +70°C
Storage temperature	-25°C ~ +85°C
MTBF	≥ 100k hours

Definition of Part number

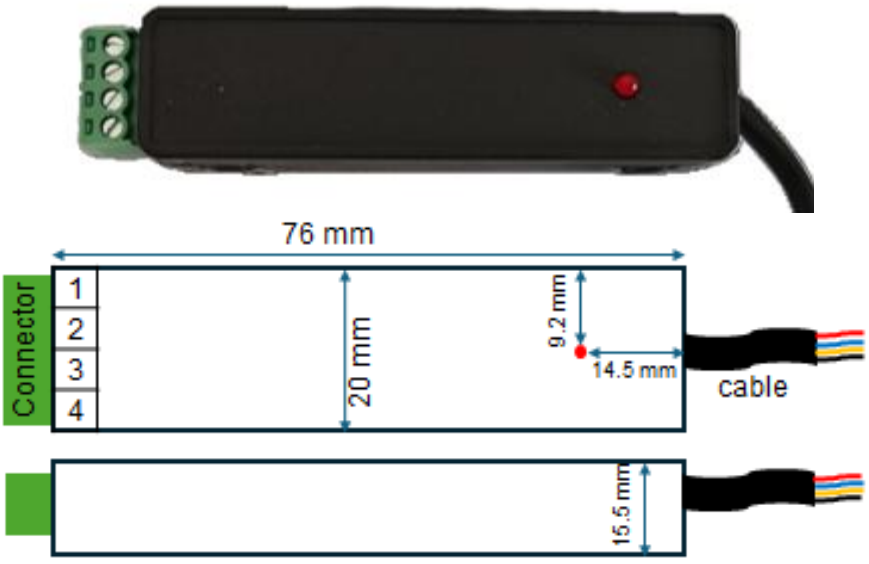
CYCCC		xxx	-	xxx
(1)		(2)		(3)

(1)	(2)	(3)
Series name	Rated input current	Output current
CYCCC	0-600mA	0-20mA 0-40mA Custom-made

Example 1:

Part number:	CYCCC400mA-20mA
Rated Input Current:	400mA
Rated Output Current:	20mA
Power supply:	±15V ~ ±24V DC

Dimension



Markt Schwabener Str. 8
85464 Finsing
Germany

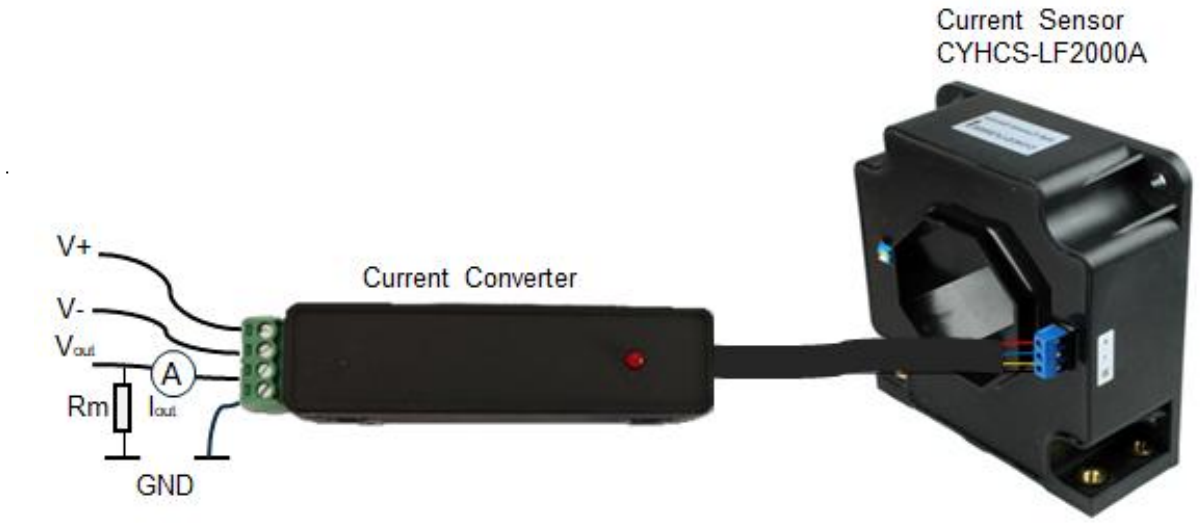
Tel.: +49 (0)8121-2574100
Fax: +49 (0)8121-2574101
Email: info@chenyang-gmbh.com
http://www.chenyang-gmbh.com

Connection

Pin Definition

Phoenix Connector		4 cores cable	
Pin1:	V+	Red:	V+
Pin2:	V-	Blue:	V-
Pin3:	Output	Yellow:	Input
Pin4:	GND	Black:	GND

Connection between converter and sensor



To ensure linearity and measuring accuracy in accordance with the specified technical parameters given the data sheet, this current measuring system must be calibrated using high-precision current sources and measuring instruments.

The converter can be used together with the following current sensors:

Compatible current sensors for use with the CYCCC converter

Closed Loop Hall Current Sensors	Closed Loop Fluxgate current Sensors
CYHCS-LTF (1000A, 2000A, 3000A)	CYFGCS3000AIT (Custom-made)
CYHCS-LF (1000A, 2000A)	CYFGCS1000LFAH
CYHCS-SH (500A, 1000A)	CYFGCS1000HIT
CYHCS-LFA1000A	CYFGCS600HIT
CYHCS-D8 (500A, 1000A)	CYFGCS500HIT
CYHCS-D6 (300A, 500A)	CYFGCS300HIT
CYHCS-LTHB (300A, 500A)	CYFGCS300LDGH
CYHCS-D5 (100A, 300A)	CYFGCS200EIH
CYHCS-LTHA (100A, 300A)	CYFGCS100LRCH

Markt Schwabener Str. 8
85464 Finsing
Germany

Tel.: +49 (0)8121-2574100
Fax: +49 (0)8121-2574101
Email: info@chenyang-gmbh.com
http://www.chenyang-gmbh.com