

DESCRIPTION

The CTA Signal Conditioner provides the excitation current (instrument power) that the CTL Hall effect sensor requires as well as amplifying the low level (mV) signal into a more typical signal. The CTA is calibrated to the output of the specific CTL selected for the application. Each CTA model has a specific input range (mV) which corresponds to the output of the CTL.



The CTA family has two different types, Direct and RMS. Direct models provide an isolated output that is directly proportional to the amplitude and frequency of the input signal. If the input signal is ac, then the output signal is ac. If the input signal is dc, then the output signal is dc. The RMS output models provide an output which is directly proportional to the RMS of the input signal. The output is dc regardless of whether the input is ac or dc. Each type has four output options: 1mA, 4-20mA, 10V or 5V.

DC instrument power options are available from 12 to 48Vdc, see specifications.

To select the proper CTA model you will need to refer to the chart on the following page. Locate the CTL model previously selected and move to the right selecting either Direct or RMS and the appropriate output signal.

SPECIFICATIONS

INPUT

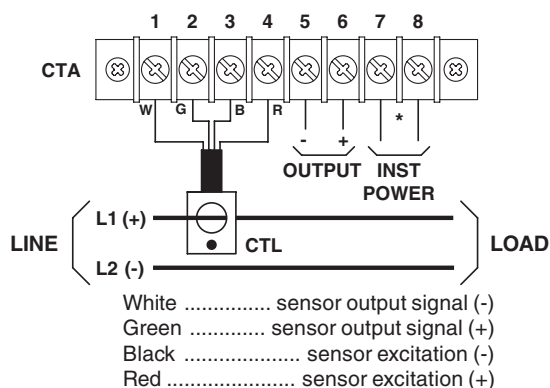
Standard	0-50mV
Option "R"	0-35mV
Option "H"	0-75mV
Option "P"	0-100mV
Frequency Range	dc - 5000 Hz
Instrument Power	115Vac, 50 - 400Hz, 2VA
Option "-22"	230Vac, 50/60Hz, ±15%
DC Instrument Power	
Option "-12"	9-18Vdc
Option "-24"	18-36Vdc
Option "-48"	36-60Vdc

OUTPUT

Linearity	± 0.1% F.S.
Output Ripple	Less than 0.25% F.S.
Field Adjustable Gain	25%
Output Loading (Ohms)	
1mA	0 - 10K
10V, 5V	2K min.
4 - 20mA	0 - 500
Response time (to 90%)	
Direct models	40 microseconds
RMS models	200 milliseconds
Temperature Effect	(0°C to +70°C) ±0.005%/°C

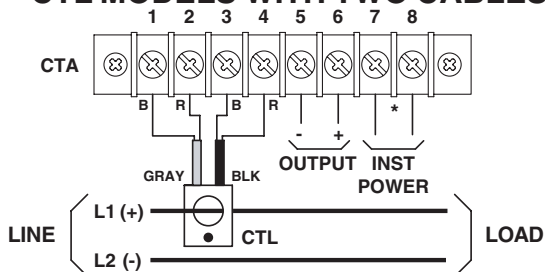
CONNECTIONS

CTL MODELS WITH ONE CABLE



*DC Inst. Pwr. positive on Term. 8 All shields tied to terminal 3

CTL MODELS WITH TWO CABLES



GRAY CABLE

Black sensor output signal (-)
 Red sensor output signal (+)

*DC Inst. Pwr. positive on Term. 8

BLACK CABLE

Black sensor excitation (-)
 Red sensor excitation (+)

All shields tied to terminal 3

OUTPUT CABLE DESIGNATIONS

SENSOR SIZE E, EE, F, G, H, HH

PINS	COLOR	SIGNAL
A	WHITE	OUTPUT (-)
B	GREEN	OUTPUT (+)
C	BLACK	EXCITATION (-)
D	RED	EXCITATION (+)
E	SHIELD	SHIELD

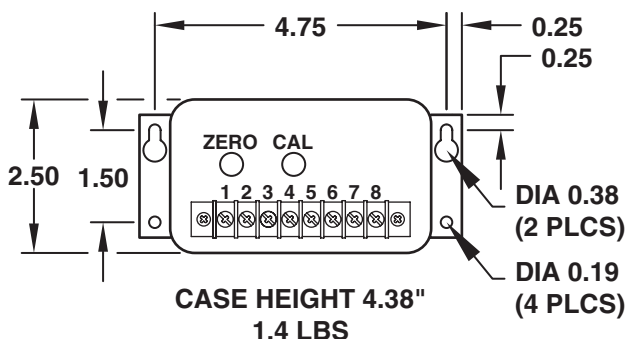
Red dot side of CTL must face positive supply.

SENSOR SIZE C, D, Z, & ZZ

PINS	COLOR	SIGNAL
1	WHITE	OUTPUT (-)
2	GREEN	OUTPUT (+)
6	BLACK	EXCITATION (-)
8	RED	EXCITATION (+)

Red dot side of CTL must face positive supply.

CASE DIMENSIONS



All dimensions in inches

CTL & CTA COMBINATIONS

CURRENT RANGE	MODEL CTL CURRENT TRANSDUCER	ACC. % of F.S.	WINDOW DIA. IN.	Sen. Dwg.	DC MODELS - OUTPUT PROPORTIONAL TO DC OR AC INPUT				RMS MODELS - DC OUTPUT PROPORTIONAL TO RMS OR DC INPUT			
					STANDARD OUTPUT MODEL CTA-				STANDARD OUTPUT MODEL CTA-			
					± 5V	± 10V	4-20mA	± 1mA	+5Vdc	+10Vdc	4-20mA	+1mAdc
0-35A	CTL-51/35	±0.5	3/8	A	201RX5	201R	212R	201RA	213RX5	213R	215R	214R
0-50A	CTL-51/50	±0.5	3/8	A	201X5	201	212	201A	213X5	213	215	214
0-50A	CTL-101/50	±0.5	3/4	C	201X5	201	212	201A	213X5	213	215	214
0-75A	CTL-101/75	±0.5	3/4	C	201HX5	201H	212H	201HA	213HX5	213H	215H	214H
0-100A	CTL-101/100	±0.5	3/4	C	201PX5	201P	212P	201PA	213PX5	213P	215P	214P
0-150A	CTL-201/150	±0.5	1 1/8	D	201HX5	201H	212H	201HA	213HX5	213H	215H	214H
0-200A	CTL-201/200	±0.5	1 1/8	D	201PX5	201P	212P	201PA	213PX5	213P	215P	214P
0-300A	CTL-401/300	±0.5	1 1/8	D	201HX5	201H	212H	201HA	213HX5	213H	215H	214H
0-400A	CTL-401/400	±0.5	1 1/8	D	201PX5	201P	212P	201PA	213PX5	213P	215P	214P
0-500A	CTL-601/500	±0.5	2 or 2 1/4	E/F	201X5	201	212	201A	213X5	213	215	214
0-500A	CTL-202H/500	±0.5	4 1/2 x 1 1/2	Z	201X5	201	212	201A	213X5	213	215	214
0-600A	CTL-601/600	±0.5	2 or 2 1/4	E/F	201X5	201	212	201A	213X5	213	215	214
0-800A	CTL-202/800	±0.5	2 or 2 1/4	E/F	201X5	201	212	201A	213X5	213	215	214
0-1000A	CTL-202/1000	±0.5	2 or 2 1/4	E/F	201X5	201	212	201A	213X5	213	215	214
0-1000A	CTL-202H/1000	±0.5	4 1/2 x 1 1/2	Z	201PX5	201P	212P	201PA	213PX5	213P	215P	214P
0-1000A	CTL-202EES/1000	±0.5	4 1/4	EE	201PX5	201P	212P	201PA	213PX5	213P	215P	214P
0-1000A	CTL-202ZS/1000	±1	4 1/2 x 2 2/5	ZZ	201PX5	201P	212P	201PA	213PX5	213P	215P	214P
0-1500A	CTL-202/1500	±0.5	2 or 2 1/4	E/F	201HX5	201H	212H	201HA	213HX5	213H	215H	214H
0-1500A	CTL-202EES/1500	±0.5	4 1/4	EE	201KX5	201K	212K	201KA	213KX5	213K	215K	214K
0-2000A	CTL-202/2000	±0.5	2 or 2 1/4	E/F	201PX5	201P	212P	201PA	213PX5	213P	215P	214P
0-2000A	CTL-202H/2000	±1	4 1/2 x 1 1/2	Z	201LX5	201L	212L	201LA	NA	NA	NA	NA
0-2000A	CTL-502H/2000	±1	4 1/2 x 1 1/2	Z	NA	NA	NA	NA	213X5	213	215	214
0-2000A	CTL-202ZS/2000	±1	4 1/2 x 2 2/5	ZZ	201LX5	201L	212L	201LA	NA	NA	NA	NA
0-2000A	CTL-202EES/2000	±0.5	4 1/4	EE	201LX5	201L	212L	201LA	NA	NA	NA	NA
0-2500A	CTL-502H/2500	±1	4 1/2 x 1 1/2	Z	201HX5	201H	212H	201HA	213HX5	213H	215H	214H
0-2500A	CTL-302EES/2500	±0.5	4 1/4	EE	201HX5	201H	212H	201HA	NA	NA	NA	NA
0-2500A	CTL-502/2500	±0.5	3 x 6 1/2	G	201HX5	201H	212H	201HA	213HX5	213H	215H	214H
0-3000A	CTL-502H/3000	±1	4 1/2 x 1 1/2	Z	201PX5	201P	212P	201PA	213PX5	213P	215P	214P
0-3000A	CTL-302ZS/3000	±1	4 1/2 x 2 2/5	ZZ	201KX5	201K	212K	201KA	NA	NA	NA	NA
0-3000A	CTL-302EES/3000	±0.5	4 1/4	EE	201PX5	201P	212P	201PA	NA	NA	NA	NA
0-3000A	CTL-502/3000	±1	3 x 6 1/2	G	201PX5	201P	212P	201PA	213PX5	213P	215P	214P
0-4000A	CTL-502H/4000	±1	4 1/2 x 1 1/2	Z	201NX5	201N	212N	201NA	NA	NA	NA	NA
0-4000A	CTL-502/4000	±1	3 x 6 1/2	G	201NX5	201N	212N	201NA	NA	NA	NA	NA
0-5000A	CTL-502H/5000	±1	4 1/2 x 1 1/2	Z	201KX5	201K	212K	201KA	NA	NA	NA	NA
0-5000A	CTL-502/5000	±1	3 x 6 1/2	G	201KX5	201K	212K	201KA	NA	NA	NA	NA
0-5000A	CTL-103/5000	±1	5 1/2 x 8	H	201PX5	201P	212P	201PA	213PX5	213P	215P	214P
0-6000A	CTL-103/6000	±1	5 1/2 x 8	H	201PX5	201P	212P	201PA	213PX5	213P	215P	214P
0-7000A	CTL-103/7000	±1	5 1/2 x 8	H	201HX5	201H	212H	201HA	213HX5	213H	215H	214H
0-8000A	CTL-103/8000	±1	5 1/2 x 8	H	201HX5	201H	212H	201HA	213HX5	213H	215H	214H
0-9000A	CTL-103/9000	±1	5 1/2 x 8	H	201PX5	201P	212P	201PA	NA	NA	NA	NA
0-10000A	CTL-103/10000	±1	5 1/2 x 8	H	201PX5	201P	212P	201PA	NA	NA	NA	NA
0-12000A	CTL-203/12000	±2	5 1/2 x 8	H	201X5	201	212	201A	213X5	213	215	214
0-15000A	CTL-203/15000	±2	5 1/2 x 8	H	201HX5	201H	212H	201HA	NA	NA	NA	NA
0-18000A	CTL-203/18000	±2	5 1/2 x 8	H	201PX5	201P	212P	201PA	NA	NA	NA	NA
0-20000A	CTL-203/20000	±2	5 1/2 x 8	H	201PX5	201P	212P	201PA	NA	NA	NA	NA
0-25000A	CTL-303/25000	±2	13 x 13	HH	201HX5	201H	212H	201HA	NA	NA	NA	NA
0-30000A	CTL-303/30000	±2	13 x 13	HH	201PX5	201P	212P	201PA	NA	NA	NA	NA
0-35000A	CTL-403/35000	±2	13 x 13	HH	201HX5	201H	212H	201HA	NA	NA	NA	NA
0-40000A	CTL-403/40000	±2	13 x 13	HH	201PX5	201P	212P	201PA	NA	NA	NA	NA

The above table provides a selection of CTL current transducers and CTA signal conditioners which are setup to provide a selection of outputs for the current ranges shown. Each CTL and CTA are calibrated as a set.

Standard temperature range 0°C to +40°C
 Option "S" Split-Core (except Model 51 series)
 DC Instrument Power Option "-12" 9-18Vdc
 Option "-24" 18-36Vdc
 Option "-48" 36-60Vdc
 CTA212 Option "Y42" 4-12-20mA output

ORDERING INFORMATION

Example: 0-2000Amp dc,
 2" Window, 4-20mA Output,
 ±0.5% Accuracy and Linearity,
 Split-Core

CTL-202S/2000 and CTA212P