

Z-TRAUQ INC. compact CURRENT SENSORS

Switched out

Analog out

Current switch details

Application:

The current switch monitors all types of loads such as fans, pumps, heating elements and cables, motors, lamps, and relays.

Features:

- Auto-ranging
- Status LED's
- Self-powered
- Field adjustable
- Built-in mounting feet
- Input / Output isolation
- True digital switching
- UL, cUL, CE



Solid Core

Specifications:

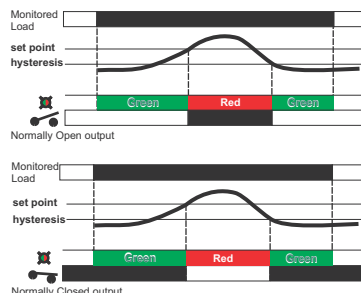
Control voltage: 0.3A out requires 1-135Vac/dc; 1A requires 36-240Vac
 Setpoint: fixed at 0.5A for ZSF model,
 adjustable from 1-200 Amps for ZSA models,
 adjustable from 1.5-200 Amps for ZJA models
 Hysteresis: < 2% FS max
 Frequency range: 10 - 400Hz
 Off-state leakage: <1mA
 Operating Temp.: -30 to 50°C (-22 to 122°F)
 Response Time: < 200 mS
 Housing: UL 94V-0
 Insulation Class: 600V
 Wiring Connections: Rising clamp screw terminals (14 to 22 AWG)

Operation:

Normally Open output - when the monitored current exceeds the trip value, the switch will make and the red LED will illuminate.

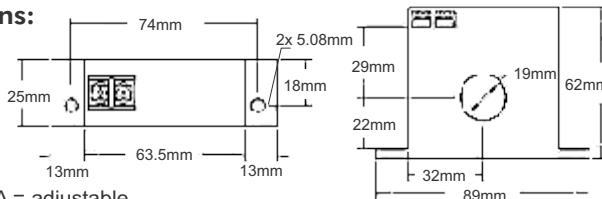
Normally Closed output - when the monitored current exceeds the trip value, the switch will break and the red LED will illuminate.

The green power LED, if fitted, will illuminate whenever there is sufficient current flowing in the conductor to operate the device circuitry, typically a minimum of 1 Amp for solid-core units and 1.5 Amp for split-core devices. Extinguishes when the output is energized.



Dimensions:

Solid core



*F = fixed A = adjustable

Model	Core type		Input range	Trip Point*	Output		LED Indicator (s)	
	Solid	Split			NO	NC	Red	Green
ZJA-NO3		✓	0-200 AAC	A	*		✓	✓
ZJA-NC3		✓		A		*	✓	✓
ZJA-NO1		✓		A	◆		✓	✓
ZJA-NC1		✓		A		◆	✓	✓
ZSA-NO3	✓			A	*		✓	✓
ZSA-NC3	✓			A		*	✓	✓
ZSA-NO1	✓			A	◆		✓	✓
ZSA-NC1	✓			A		◆	✓	✓
ZSF-NO3	✓			F	*		✓	

control voltages = * 0.3A@ 1 - 135vac/dc ◆ 1A @ 36 - 240vac

Analog output details

Application:

Current transducers provide an analog output relative to the current sensed on the input.

Features:

- Three ranges per unit.
- No field adjustment necessary
- Solid-state circuitry
- Input / Output isolation
- Reverse polarity protected
- UL, cUL, CE

Specifications:

Loop power: 12 to 40 Vdc for mAdc output
 Operating Temp.: -30 to 70°C (-22 to 158°F)
 Input Current Ranges (field selectable):
 0-10/0-20/0-50 Amps
 0-100/0-150/0-200 Amps
 Operating Humidity: 0 to 95% RH, non-condensing
 Maximum Continuous Input Current:
 10/20/50 Amp ranges – 80/120/200 respectively
 100/150/200 Amp ranges – 175/300/400 respectively
 Wiring Connections: Rising clamp screw terminals (14 to 22 AWG)
 Frequency range: 10 - 400Hz
 Response Time: 250 mS (0-90% step change)
 Housing: UL 94V-0



Split Core

Output Signal & Accuracy:

. 4 to 20 mA represents 0 to 100% of current span.
 Better than ±1% FS for all three ranges.

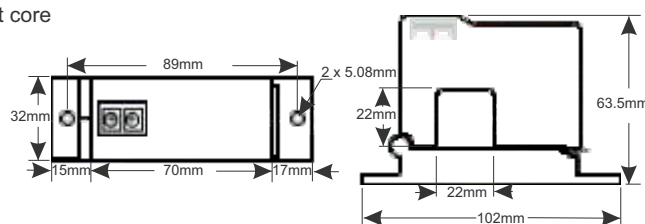
Loading: 1mΩ

Operation:

Average measurement is equivalent to True RMS for pure sine waves. No loop power is required for the 0-5 or 0-10V analog output versions. Loop power for those having a 4-20mA output can be from 12 to 40vdc. Use the JHZ models True RMS measurement for choppy sine waves like those produced by variable frequency drives.

Dimensions:

Split core



Model	AC Input Range		DC Output			Core Type	
	10/20/50	100/150/200	0-5v	0-10v	4-20mA	Solid	Split
Z50J5	✓		✓				✓
Z50S5	✓		✓			✓	
Z50J10	✓			✓			✓
Z50S10	✓			✓		✓	
Z50J20	✓				✓		✓
Z50S20	✓				✓	✓	
Z50JHZ20	✓				✓		✓
Z200J5		✓	✓				✓
Z200S5		✓	✓			✓	
Z200J10		✓		✓			✓
Z200S10		✓		✓		✓	
Z200J20		✓			✓		✓
Z200S20		✓			✓	✓	
Z200JHZ20		✓			✓		✓

loop powered CURRENT TRANSDUCERS analog output

0.1 to
8000 AMPS

Any Primary Current Value!

Z-TRAUQ current transducers are used in conjunction with our exhaustive array of current transformers both solid and split core. We have the style, size, accuracy and amperage rating to fit any application.

Find the complete list at:

www.z-trauq.com/ctpg.html

Select the model whose physical dimensions, mounting style and accuracy suits the application followed by the primary amps then 20mA.

eg. CT4FSH800:20mA

This example details a flexible split core CT that has a 106.7mm (4.2 in.) window for an 800 amp circuit with a 4 - 20 mA output.

Solid Core



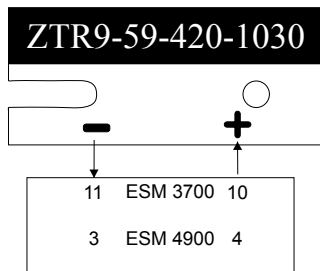
Typical W/D

All of our ESM process indicators have integrated DC power supplies that develop the necessary loop power. The auxiliary power can be 24Vac/dc or 100 to 240Vac (must be specified when placing order).

ESM 3700



Use only with original Z-TRAUQ INC.
current transformers



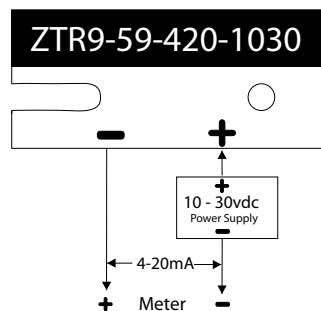
ESM 4900

No Aux Power? No Problem!

In cases where only the loop powered 4-20mA dc is available, our S315 uses it as the signal to interpret as well as to light up the display. Same wiring as an analog meter. Of course we have a huge range of those, too. Please visit:

<http://www.z-trauq.com/panelmeters.html>

Use only with original Z-TRAUQ INC.
current transformers



S 315

Common Uses

Secondary outputs from current transformers are weak; hence, the distance between it and the meter should be kept as short as possible, typically less than 60 cm (24 in).

Using a Z-TRAUQ current transformer having a 4-20mA DC output insures accuracy over much greater distances. These transducers can be used to send a signal to an analog meter,

PLC, SCADA system or any other device requiring a 4-20mA reference.

Acceptable loop power is 10 to 30VDC.

Our ESM displays can be scaled and the SPDT output can be used either as an alarm or part of the control circuit either stopping, inhibiting or starting another piece of equipment.

The ESM 4900 (48H x 96W mm)

is part of a series of indicators offered in several DIN sizes including 1/16 (48 x 48), 1/8 (72 x 72) and 1/4 (96 x 96) mm. All have the expansibility of the ESM 4900. So, if you require additional outputs, whether relay, SSR, transistor or analog, this is the ideal series. These can also be connected to our data logging software via the standard RS 232 or optional RS 485 com port.

Split Core

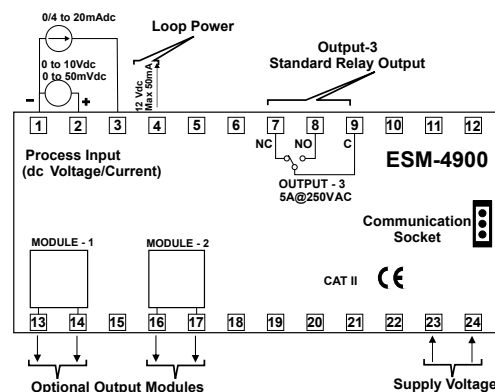
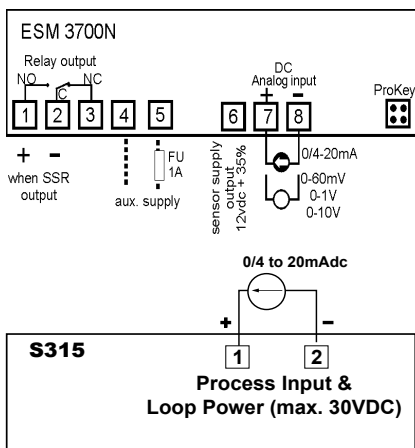


DIGITAL AC/DC AMMETERS

Features

- Large 4 digits display
- Scale from -1999 to 9999
- Moveable decimal point
- SPDT relay output (ESM 3700 & 4900)
- Additional outputs for ESM 4900
- Manual or Automatic reset from fault
- User adjustable Low & High limits
- Password protection
- LED status indicators
- Dual and multi-point scaling (ESM 4900)
- Teach function (ESM 3700)
- Display last measurement or average of last 2, 4, 8 or 16 measurements (ESM 3700)

Terminal Layout



Specifications

ESM 3700N

Dimensions:..... 35H x 77W x 62.5D mm
 1.4H x 3.0W x 2.5D in
 Display:..... 4 LED, 10mm (0.4 in) tall
 Humidity:..... 0 to 90% RH non condensing
 Operating Temp.:..... 0 to 50°C
 Consumption:..... 1.5VA
 Protection:..... Nema 1; NEMA 4X with optional gasket # SG77

ESM 4900

Dimensions:..... 48H x 96W x 76D mm
 (1.9H x 3.8W x 3.0D in)
 Display:..... 4 LED, 20.3mm (0.8 in) tall
 Humidity:..... 0 to 90% RH non condensing
 Operating Temp.:..... 0 to 50°C
 Consumption:..... 6VA
 Protection:..... Nema 4X
 Communication:..... RS232 Modbus/RTU or optional RS485

S 315

Dimensions:..... 48H x 96W x 40D mm
 (1.9H x 3.8W x 1.6D in)
 Display:..... 4 LED, 20.3mm (0.8 in) tall
 Humidity:..... 0 to 90% RH non condensing
 Operating Temp.:..... -10 to 65°C
 Voltage Drop:..... 7V
 Protection:..... Nema 4X

Ordering Information

Complete the model number with the appropriate suffix.

eg. ESM 3700-42001 for a process indicator requiring 120vac supply voltage and having a SPDT relay output.

ESM 3700N

A	BC	D	E
	20	0	1

 For SSR output max 28mA, 15vdc E=2

A	Supply Voltage
2	24 Vac/dc (-15% +10%) 50/60 Hz
4	115 Vac (±15%) 50/60 Hz
5	230 vac (±15%) 50/60 Hz

S 315

You need only specify the catalogue number S315.

Distributed by:

Complete the model number with the appropriate suffix.

eg. ESM 4900-12011/02.04 for a process indicator requiring 120vac supply voltage and having a SPDT relay, a SSR and analog output.
 For RS485 change D to 2.

ESM 4900

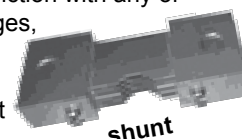
A	BC	D	E	FG	HI
	20	1	1		

A	Supply Voltage
1	100 - 240 Vac (-15% +10%) 50/60 Hz
2	24 Vac/dc (-15% +10%) 50/60 Hz

FG & HI	Description	Product code when ordered separately
00	None	
01	Relay 3A@250vac	EMO 400
02	SSR 15-18vdc 50mA	EMO 410
03	Transistor 24vdc 50mA	EMO 420
04	volt/current 0/4-20mA, 0-5/10vdc	EMO 430

For DC applications

Use one of our T201-100 for DC loads up to 100 amps that can be used with any of the indicators cited above. Our T201DCH300 can be used on circuits up to 300ADC in conjunction with any of the ESM indicators. For higher amperages, we offer shunts that can also be used with all of our ESM products. Specify the primary current rating for your Shunt and whether base mounted or not.



Please visit www.z-trauq.com/shunts.html

The ESM 4900 can be fitted with two additional outputs: dry contact, SSR, transistor and analog.

Z-TRAUQ INC. compact Bi-Polar DC CURRENT SENSORS AC or DC trms

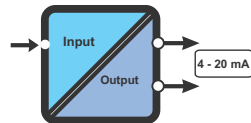
SERIES T201

4 - 20mA DC output

T201

T201DC

T201DC100

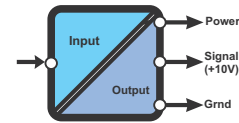


0 - 10Vdc output

T201DCH

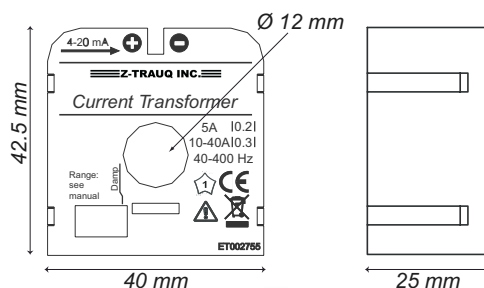
T201DCH100

T201DCH300

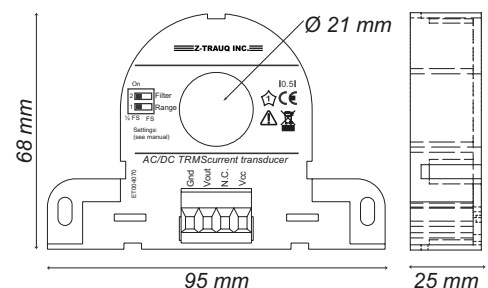


Specifications	T201	T201DC	T201DC100	T201DCH	T201DCH100	T201DCH300
Accuracy Class	0.2% f.s.			0.5 % f.s.	0.5% f.s. AC, 1 % f.s. DC bipolar	
Weight (g.)	47		120	47	120	
Connectors	Removable terminals (5 poles), pitch 5 mm for cable up to 2.5 mm ²			Removable terminals (5 poles), pitch 5 mm for cable up to 2.5 mm ²		
Consumption	< 21 mA			< 25 mA		
Mounting	Stand Alone or on DIN rail (35 mm) with clip model A-DIN-T201			Stand Alone or on DIN rail (35 mm) with clip model A-DIN-T201		
Operating Temperature	-20 to +65°C		-10 to +65°C	-10 to +65°C		-20 to +70°C
Isolation	3 kVdc on bare conductor			3 kVdc on bare conductor		
Protection Degree	IP20			IP20		
Response Time (via DIP switches)	100 ms w/o filter 2.5s with filter	100 ms w/o filter, 600 ms with filter		Fast filter: 800 ms, Slow filter: 2 s		
Supply	Loop 5 - 28 Vdc	Loop 6 - 100 Vdc		10 to 28 Vdc	12 to 28 Vdc	
Thermal Drift	< 150 ppm/K			< 200 ppm/K		
INPUT						
Crest Factor	2	1.2		1.2	2	
Bandwidth / Frequency	20Hz -1 kHz	-		1 kHz		
Hysteresis				0.15 % f.s.		
Max Overcurrent	800 A		2000 A pulsed	2000 A pulsed		
Measuring Type	Average Adjusted	Magnetic Balance		AC/DC TRMS	AC/DC TRMS or DC Bipolar	
Range selected via DIP switches	0-to: 5, 10, 15, 20, 25, 30,35, 40 Aac	0 to: 5, 10, 20, 40/ ±5, ±10,-5 to 20, -10 to 40A	0 to:10, 25, 50, 100A ±10, ±25,-10 to 50, -25 to 100 A	0-25, 0-50A	Mono: 0-50, 0-100 A Bipolar: ±50, ±100 A	Mono: 0-150, 0-300 A Bipolar: ±150, ±300 A
OUTPUT						
Range	4 - 20 mA (2 wires)			0 - 10 V		
Resolution	12 bit			12 bit		
Approvals	CE, cULus Listed					

T201 - T201DC - T201DCH



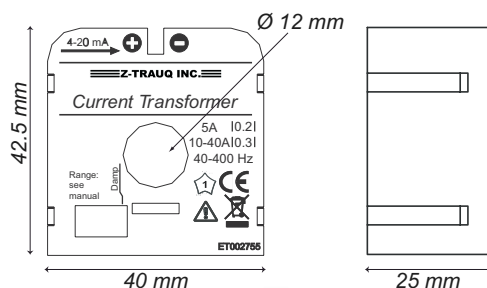
T201DC100 - T201DCH100 - T201DCH300



Technical data, diagrams and drawings are subject to change without notice.

SERIES
T201

T201 - T201DC - T201DCH - T201DCHLP



T201DCH100LP - T201DCH300LP
T201DC100 - T201DCH100 - T201DCH300
T201DCH50M - T201DCH100M - T201DCH300M

