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
- True digital switching
- Field adjustable
- Built-in mounting feet
- UL, cUL, CE

Specifications:
- Power Supply: None – self-powered
- Setpoint: fixed at 0.5A for ZSF model, adjustable from 1-200 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
- Maximum Continuous Input Current: 63.5mm
- Dimensions: 87mm x 74mm x 32mm
- Maximum Current: 100 Amps
- LED Indicator: Green
- Input Signal & Accuracy: Better than ±1% FS for all three ranges.
- Output Signal & Accuracy: 4 to 20 mA represents 0 to 100% of current span.
- Loading: 1mΩ

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

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 mA output
- Operating Temp.: -30 to 70°C (-22 to 158°F)
- Input Current Ranges (field selectable):
  - 0-10/0-20/0-50 Amps
  - 0-50/0-100/0-200 Amps
- Operating Humidity: 0 to 95% RH, non-condensing
- Maximum Continuous Input Current:
  - 0-10/0-20/0-50 Amp ranges – 80/120/200 respectively
  - 0-50/0-100/0-200 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
- Output Signal & Accuracy: 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
--- | --- | --- | ---
Z50J5 | 10/20/50 | 0-5v | Split
Z50S5 | 100/150/200 | 0-10v | Split
Z50J10 | 100/150/200 | 4-20mA | Solid
Z50S10 | 100/150/200 | 4-20mA | Split
Z50J20 | 200/300/400 | 4-20mA | Split
Z50S20 | 200/300/400 | 4-20mA | Solid
Z50JHZ20 | 200/300/400 | 4-20mA | Split
Z200J5 | 0-5v | Split
Z200S5 | 0-10v | Split
Z200J10 | 4-20mA | Solid
Z200S10 | 4-20mA | Split
Z200J20 | 4-20mA | Split
Z200S20 | 4-20mA | Solid
Z200JHZ20 | 4-20mA | Split

*F = fixed  A = adjustable  * 0.3A@135vac/dc  ◆ 1A @ 240vac

877-798-7287 www.z-traqu.com MCS110712R0
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.

e.g. 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).

No Aux Power?
No Problem!
In cases where only the loop powered 4-20mAdc 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

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 x96) 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
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)

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
- 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
- Display: 4 LED, 20.3mm (0.8 in) tall
- Operating Temp.: 0 to 50°C
- Consumption: 6VA
- Protection: Nema 4X

S 315
- Dimensions: 48H x 96W x 40D mm
- Display: 4 LED, 20.3mm (0.8 in) tall
- Operating Temp.: -10 to 65°C
- Consumption: 6VA
- 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

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<thead>
<tr>
<th>A</th>
<th>Supply Voltage</th>
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<tbody>
<tr>
<td>2</td>
<td>24 Vac/dc (-15% +10%) 50/60 Hz</td>
</tr>
<tr>
<td>4</td>
<td>115 Vac (+15%) 50/60 Hz</td>
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<tr>
<td>5</td>
<td>230 vac (+15%) 50/60 Hz</td>
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ESM 4900

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<tr>
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<th>Supply Voltage</th>
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<tbody>
<tr>
<td>1</td>
<td>100 - 240 Vac (-15% +10%) 50/60 Hz</td>
</tr>
<tr>
<td>2</td>
<td>24 Vac/dc (-15% +10%) 50/60 Hz</td>
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FG & HI Description

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<th>Description</th>
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<tr>
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<tr>
<td>01</td>
<td>Relay 3A@250vac</td>
<td>EMO 400</td>
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<tr>
<td>02</td>
<td>SSR 15-18vdc 50mA</td>
<td>EMO 410</td>
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<tr>
<td>03</td>
<td>Transistor 24vdc 50mA</td>
<td>EMO 420</td>
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<tr>
<td>04</td>
<td>volt/current 0/4-20mA, 0-5/10vdc</td>
<td>EMO 430</td>
</tr>
</tbody>
</table>

ESM 4900

Complete the model number with the appropriate suffix.

eg. ESM 4900-120111/02.04 for a process indicator requiring 120vac supply voltage and having a SPDT relay, a SSR and analog output.

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-traq.com/shunts.html