

The ACCS-420 split core current transmitter converts an AC current signal into an industry standard 4–20mA signal.

It offers a low cost alternative for measuring power and monitoring the operation of fans, pumps, and other equipment.

- › Split core allows easy installation without disconnecting cables
- › Three jumper selectable ranges, for measuring up to 200A
- › 4–20mA loop powered output



Contents

1 - Specifications	1
2 - Installation & Setup	2
3 - Troubleshooting	4

1

SPECIFICATIONS

Sensor type Current transformer

AC to DC conversion technique Averaging scaled in RMS

Header selectable amperage range ACCS-420: 100/150/200A,
ACCS-420-L: 10/20/50A

Overload (continuous) ACCS-420: 100A= 175A, 150A= 300A, 200A= 400A
ACCS-420-L: 10A= 80A, 20A= 120A, 50A= 200A

Output 4–20mA loop powered, representing 0–100% of full scale input range

Power supply 15–36V DC

Accuracy 1% of full scale

Operating temperature -10 to 50°C (14 to 122°F)

Operating humidity 10–90% (non-condensing)

Response time 250ms (10–90%)

Isolation voltage 2000V

Frequency 50–60Hz

Casing Split core hinged type, screw mounting case, ABS material

Dimensions (H x W x D) 66 x 100 x 32mm (2.6 x 3.9 x 1.3")

2

INSTALLATION & SETUP



RISK OF SHOCK!

DISCONNECT POWER SUPPLY BEFORE MAKING ELECTRICAL CONNECTIONS.



Contact with components carrying hazardous voltage can cause electrical shock and may result in severe personal injury or death.

2.1 - Installation

Run the wire that you wish to monitor through the hole in the sensor.

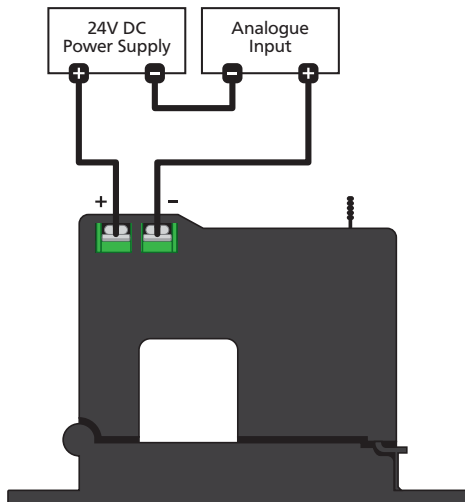
- › Press the tab toward the sensor to open.
 - › After placing the wire in the opening, press the hinged portion down firmly until a definite click is heard and the tab pops out fully.
 - › The sensor can be mounted using screw holes in any position, or hung directly on wires with wire ties.
-

Keep split core sensors clean. Be careful not to allow grit or dirt to build up on contacts. Operation can be impaired if the mating surfaces do not have a connection. **Always check visually before closing.**

2.2 - Output wiring

Connect the 4–20mA control or monitoring wires to the sensor using 14 to 22 AWG copper wire.

- › Tighten the terminals securely.
- › Be sure the output load or loop requirements are met.
- › The 4–20mA signal cable must be screened, with the screened earth at one end only.



2.3 - Range selection

Select the correct range by placing the jumper in the appropriate position.

- › Determine the normal operating amperage of the monitored circuit.
- › Select the range that is equal to or slightly higher than the normal operating amperage.

Jump Range

ACCS-420:	0–100A	0–150A	0–200A
ACCS-420-L:	0–10A	0–20A	0–50A

High



Mid



2.4 - Usage notes

The ACCS-420 is intended to provide a 4–20mA input to monitoring equipment under normal operating conditions.

Where failure or malfunction of the ACCS-420 could lead to personal injury or damage to control equipment or other property, additional precautions must be designed into the control system. Incorporate and maintain other devices such as supervisory or alarm systems, or safety or limit controls intended to warn of, or protect against, failure or malfunction of the ACCS-420.

2.5 - Maintenance

Upon final inspection of the ACCS-420, no routine maintenance is required. A periodic check of system calibration is recommended.

The ACCS-420 is not field serviceable and should be returned if faulty. **Field repair should not be attempted and will void warranty.**

3

TROUBLESHOOTING

- | | |
|--|--|
| Sensor has no output | <ul style="list-style-type: none"> › The polarity may not be properly matched. Check and correct wiring polarity. › The monitored load may be either not AC, or not on. Check that the monitored AC load is on. › Check the power supply current and voltage rating. |
| Output signal is too low | <ul style="list-style-type: none"> › The jumper may be set in a range that is too high for the current being monitored. Move the jumper to the correct range. › The monitored current may be below the minimal current required. Loop the monitored wire several times through the opening until the sensed current rises above the minimum. <i>Sensed Amps = Actual Amps x Number of Loops</i>. Count the loops on the inside of the opening. › The load current must be sinusoidal. |
| Sensor is always at 4mA | <ul style="list-style-type: none"> › The monitored load may be either not AC, or not on. Check that the monitored AC load is on. |
| Output signal is always at maximum (20mA) | <ul style="list-style-type: none"> › The jumper may be set in a range that is too low for the current being monitored. Move the jumper to the correct range. |



New Zealand (Head Office)

Ph: +64 (9) 835-1550

Aus: 1800 810-820

rolla@defineinstruments.com

www.defineinstruments.com

South Africa (Johannesburg)

Ph: 011 792 1210

charlene@defineinstruments.co.za

dylan.swartz@defineinstruments.co.za

www.defineinstruments.co.za