

Single Phase AC Current Transducers CYIJ03

Sensors/Transducers of the **CYIJ03 and CYIJ03A Series** produce linear DC output voltage or current, which is proportional to the effective value (RMS) of a single phase input AC current.

The **CYIJ03 Series**, which measures the input average RMS, is suitable for long time monitoring of sinusoid currents. This series can be used to measure the true RMS of sinusoid current.

The **CYIJ03A Series** can be used to measure the true effective value RMS of any periodic currents. It is designed for applications to monitoring of single phase AC currents, the waveform of which is not ideal sinusoid. These transducers are accurate and ideal for monitoring of chopped waveform drivers and phase fired control systems.

Specifications:

| Series | Operating Principle | Isolation Voltage | Response Time Range 0 to 90% FS | Overload Capacity | Quiescent Power consumption (mW) | | Mounting |
|-------------------|---------------------------|-------------------|------------------------------------|----------------------------|-------------------------------------------|--------------------------------------------|---------------------|
| | | | | | Vz, Vd, Vg, Iz Output | Iy Output | |
| CYIJ03 CYIJ03A | Electromagnetic Induction | ≤2500VDC | ≤400mS | 20 times or <5/sec at 500A | 180 (class 0.2%) 50 (class 0.5%) | 300 (class 0.2%) 150 (class 0.5%) | Surface or Din Rail |

Part Number:

| Series | Output | Power Source | Window opening (mm) | Case Style | Accuracy | Rated Input (RMS) |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|---------------------------------|------------|--------------|------------------------------|
| CYIJ03 | 3: 0~5V DC (Vz) 8: 0~10V DC (Vd) | 2: 12V 3: 15V | A: Ø4 B: Ø 6.5 | H1 | 0.5% | 0.5A, 1A, 5A, 10A, 15A, 25A |
| CYIJ03 CYIJ03A | 9: 0~5V V _{p-p} (Vg)* 1: 0~5V RMS(Vg)* 3: 0~5V DC (Vz) 4: 0~20mA (Iz) 5: 4~20mA (Iy)** 7: 4~20mA (Id)*** 8: 0~10V DC (Vd) | 2: 12V 3: 15V 4: 24V | M: No Aperture | S2 | 0.2% 0.5% | 0.5A, 1A, 5A |
| | | | A: Ø 4 | | | 5A, 10A, 15A, 25A |
| | | | B: Ø 6.5 | S3 | 0.2%, 0.5% | 30A, 50A, 75A, 100A |
| | | | D: Ø 13 | | 0.5% | 120A, 150A, 200A, 250A, 300A |
| | | | E: Ø 20 | | | |

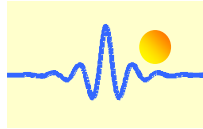
* Tracking output (Vg) type not available in series CYIJ31A.

** Loop resistance from 0 to 250Ω. Contact factory for loop resistance above 250 Ω

*** Please select 24V power source for 2-line 4~20mA. 2-line Output (Id) type not available in series CYVJ03.

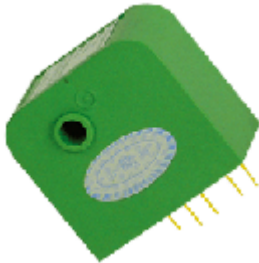
Applications:

| CYIJ03 | CYIJ03 A |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> Multi-point current sensing and control panels Monitor lighting elements Monitor heating elements Remote current sensing Monitor motor faults | <ul style="list-style-type: none"> Chopped waveform drivers Phase fired controlled devices Quickly varying voltage supplies Harmonic voltages |

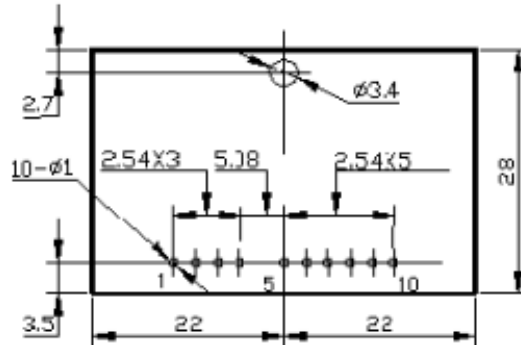


Case style

Case Style H1 (only for CYIJ03)



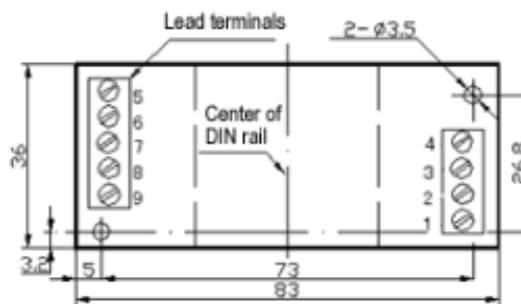
Installation



Case Style S2 with Single Aperture



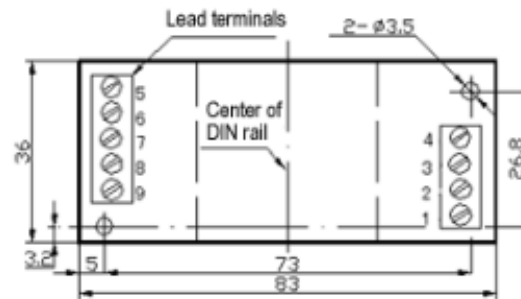
Installation



Case Style S3 with Single Aperture



Installation



Case Style S2 without Aperture



Installation

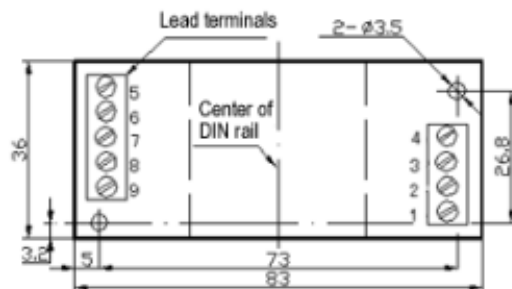
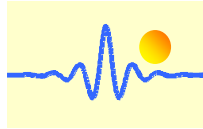


Fig. 1 Case Style for CYIJ03 and CYIJ03A



Connection

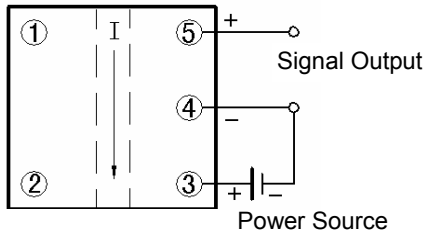


Fig. 2 Case Style H1 for CYIJ03

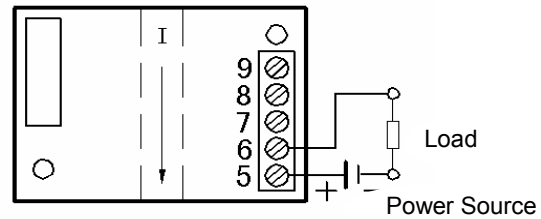


Fig.3 Case Style S for CYIJ03 2-line Output

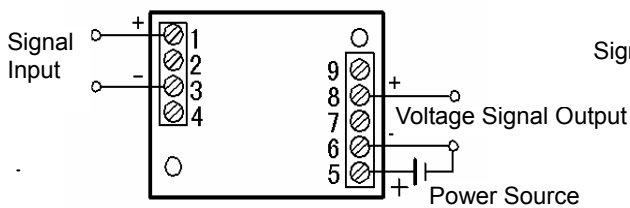


Fig. 4 Case Style for CYIJ03/IJ03A
Terminal Input, Voltage Output

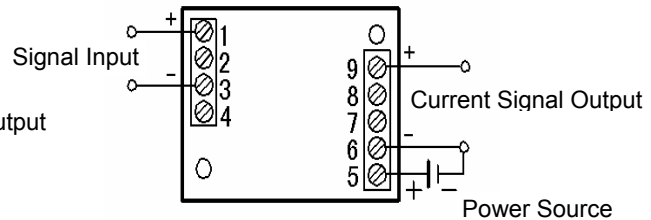


Fig. 5 Case Style for CYIJ03/IJ03A
Terminal Input, Current Output

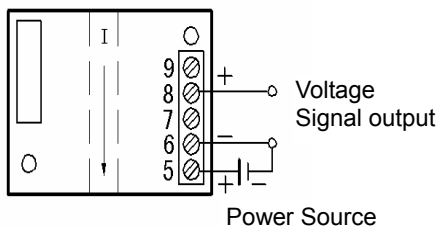


Fig. 6 Case Style S for CYIJ03/IJ03A
Aperture Input, Voltage Output

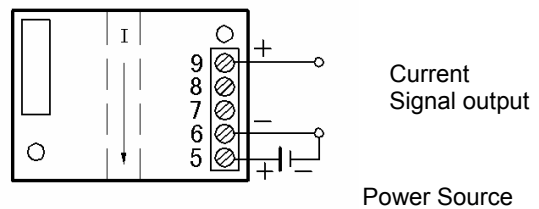


Fig. 7 Case Style for CYIJ03/IJ03A
Aperture Input, Current Output

Notice:

1. The size of window opening must be fit for the conducting wire to pass through. When the rated current $\leq 5A$, you can use terminal input.
2. In connection, put anode and cathode in right set. The output signal and the power source must be common.
3. Viewed connection diagram from the top looking down. The following is same.