

# Power Transmitter



## CZDL Series

Model	Name	Input	Output	Power supply mode	Page
CZDL-IAC-10A	AC current transmitter	0-1A/5A/10A AC	4-20mA/0-20mA/1-5V/0-5V/0-10V	90-260V AC 120V-300V DC	23
CZDL-IAC-10T	AC current transmitter(true RMS)	0-1A/5A/10A AC	4-20mA/0-20mA/1-5V/0-5V/0-10V	20-30V DC	23
CZDL-IDC-10	DC current transmitter	0-1A/2A/5A/10A DC	4-20mA/0-20mA/1-5V/0-5V/0-10V 1-5V/0-5V/0-10V/-10-10V	20-30V DC	24
CZDL-VAC-370T	AC voltage transmitter(true RMS)	0-(30-500V) AC	4-20mA/0-20mA/1-5V/0-5V/0-10V	20-30V DC	25
CZDL-VDC-400	DC voltage transmitter	0-(10-100V DC), 0-(100-1000V DC)	4-20mA/0-20mA/1-5V/0-5V/0-10V	20-30V DC	26
CZDL-1PH	single-phase power transmitter	0-1A/5A/10A AC	4-20mA/0-20mA/1-5V/0-5V/0-10V	20-30V DC	27

## ESC Series

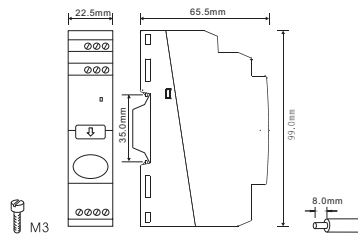
Model	Name	Input	Output	Power supply mode	Page
ESC-I-30	AC/DC current transmitter	0-20A/25A/30A AC/DC	4-20mA/0-20mA/0-5V/0-10V/±5V/±10V	20-30V DC	28
ESC-I-60	AC/DC current transmitter	0-40A/50A/60A AC/DC	4-20mA/0-20mA/0-5V/0-10V/±5V/±10V	20-30V DC	28

# AC current Transmitter

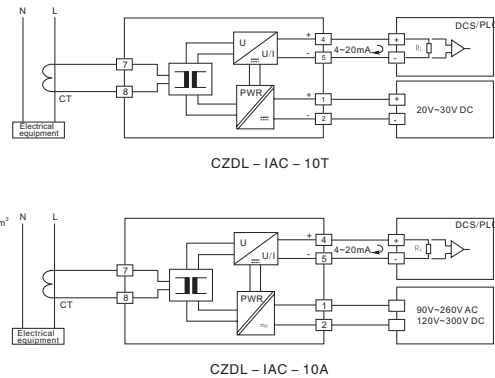
Specification  
 Compact shell structure  
 DIN35mm rail mounting  
 Variety current, voltage output selectable

	CZDL – IAC – 10T DC supply(True RMS)	CZDL–IAC–10A AC supply
<b>Input</b>		
Input current range(In)	0–1A/5A/10A AC	0–1A/5A/10A AC
Max. input current(I <sub>max</sub> )	1.2 × I <sub>n</sub> (continues), 2 × I <sub>n</sub> (1minute)	1.2 × I <sub>n</sub> (continues), 2 × I <sub>n</sub> (1minute)
Frequency range	40Hz–1kHz	40Hz–60Hz
<b>Output</b>		
Current output	4–20mA/0–20mA	4–20mA/0–20mA
Max. output current	30mA	30mA
Load resistance	≤550Ω	≤550Ω
Voltage output	0–5V/1–5V/0–10V	0–5V/1–5V/0–10V
Max. output voltage	15V	15V
Load resistance	≥300kΩ	≥100kΩ
<b>General parameters</b>		
Supply voltage	20V–30V DC	120V–300V DC/90V–260V AC
Rated power consumption	1W(40mA, 24V)	3VA(1.2W)
Response time	Reach 90% of final value in 330ms	Reach 90% of final value in 330ms
Transfer accuracy	0.5%F.S.	0.5%F.S.
Temperature drift	0.02%F.S./°C	0.02%F.S./°C
Operating temperature	–20°C – +60°C	–20°C – +60°C
Storage temperature	–40°C – +80°C	–40°C – +80°C
Relative humidity	15%–90%	15%–90%
Pollution degree	3	3
EMC	GB/T 18268(IEC 61326-1)	GB/T 18268(IEC 61326-1)
Dimensions	99.0mm × 65.5mm × 22.5mm	99.0mm × 65.5mm × 22.5mm
<b>Safety parameters</b>		
Insulation performance test standards	GB4793.1 (IEC 61010-1)	GB4793.1 (IEC 61010-1)
Dielectric strength (input–power, output)	4000V AC, 1min	4000V AC, 1min
Impulse voltage	4000V	4000V
Insulation resistance	100MΩ	100MΩ
IP degree (Comply with IEC60529)	IP20	IP20

## Dimensions



## Application

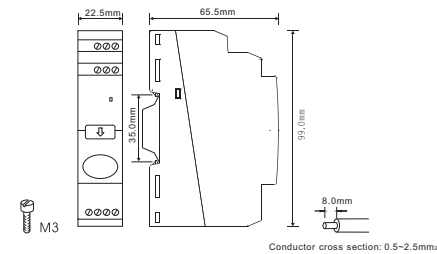


# DC current Transmitter

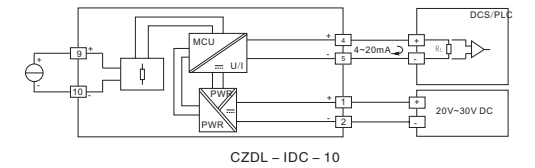
Specification  
 Compact shell structure  
 DIN35mm rail mounting  
 Variety current, voltage output selectable

	CZDL – IDC – 10 DC supply
<b>Input</b>	
Input current range(In)	0–1A/2A/5A/10A DC
Max. input current(I <sub>max</sub> )	1.2 × I <sub>n</sub> (continues), 2 × I <sub>n</sub> (1minute)
Current input impedance	5mΩ
<b>Output</b>	
Current output	0–20mA/4–20mA/–20–20mA
Max. output current	24mA
Load resistance	≤550Ω
Voltage output	0–10V/0–5V/1–5V/–10–10V
Max. output voltage	12V
Load resistance	≥300kΩ
<b>General parameters</b>	
Supply voltage	20V–30V DC
Rated power consumption	≤1W
Response time	Reach 90% of final value in 200ms
Transfer accuracy	0.5%F.S.
Temperature drift	0.02%F.S./°C
Operating temperature	–20°C – +60°C
Storage temperature	–40°C – +80°C
Relative humidity	15%–90%
Pollution degree	3
EMC	GB/T 18268(IEC 61326-1)
Dimensions	99.0mm × 65.5mm × 22.5mm
<b>Safety parameters</b>	
Insulation performance test standards	GB4793.1 (IEC 61010-1)
Dielectric strength (input–power, output)	2500V AC, 1min
Impulse voltage	4000V
Insulation resistance	100MΩ
IP degree (Comply with IEC60529)	IP20

## Dimensions



## Application



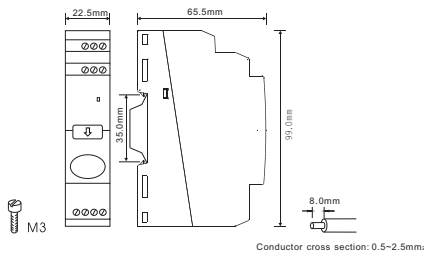
# AC voltage Transmitter

Specification  
 Compact shell structure  
 DIN35mm rail mounting  
 Variety current, voltage output selectable

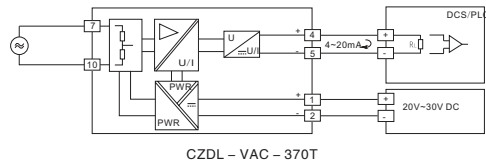
CZDL - VAC - 370T  
 DC supply(True RMS)

<b>Input</b>	
Input voltage range(Un)	0~(30~500V)AC
Max. input voltage(Umax)	1.2 × Un(continues), 2 × Un(1minute)
Voltage input impedance	800kΩ
Frequency range	40Hz~1kHz
<b>Output</b>	
Current output	4~20mA/0~20mA
Max. output current	25mA
Load resistance	≤ 550Ω
Voltage output	1~5V/0~5V/0~10V
Max. output voltage	12.5V
Load resistance	≥ 100kΩ
<b>General parameters</b>	
Supply voltage	20V~30V DC
Rated power consumption	≤ 1W
Response time	Reach 90% of final value in 330ms
Transfer accuracy	0.5%F.S.
Temperature drift	0.02%F.S./°C
Operating temperature	-20°C~+60°C
Storage temperature	-40°C~+80°C
Relative humidity	15%~90%
Pollution degree	3
EMC	GB/T 18268(IEC 61326-1)
Dimensions	99.0mm × 65.5mm × 22.5mm
<b>Safety parameters</b>	
Insulation performance test standards	GB4793.1 (IEC 61010-1)
Dielectric strength (input~power, output)	2500V AC, 1min
impulse voltage	4000V
insulation resistance	100MΩ
IP degree (Comply with IEC60529)	IP20

## Dimensions



## Application



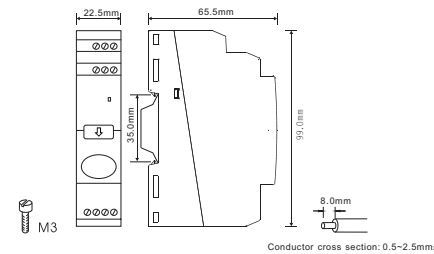
# DC voltage Transmitter

Specification  
 Compact shell structure  
 DIN35mm rail mounting  
 Variety current, voltage output selectable

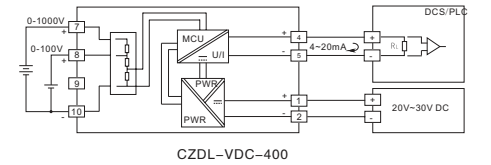
CZDL - VDC - 400  
 DC supply

<b>Input</b>	
Input voltage range(Un)	0~(10~100V) DC, 0~(100~1000V) DC
Max. input voltage(Umax)	1.2 × Un(continues), 2 × Un(1minute)
Voltage input impedance	≥ 200kΩ(10V ≤ input ≤ 100V) ≥ 2MΩ(100V < input ≤ 1000V)
<b>Output</b>	
Current output	0~20mA/4~20mA
Max. output current	24mA
Load resistance	≤ 550Ω
Voltage output	0~10V/0~5V/1~5V
Max. output voltage	12V
Load resistance	≥ 300kΩ
<b>General parameters</b>	
Supply voltage	20V~30V DC
Rated power consumption	≤ 1W
Response time	Reach 90% of final value in 200ms
Transfer accuracy	0.1%F.S.(0~100V); 0.2%F.S.(0~1000V)
Temperature drift	0.01%F.S./°C
Operating temperature	-20°C~+60°C
Storage temperature	-40°C~+80°C
Relative humidity	15%~90%
Pollution degree	3
EMC	GB/T 18268(IEC 61326-1)
Dimensions	99.0mm × 65.5mm × 22.5mm
<b>Safety parameters</b>	
Insulation performance test standards	GB4793.1 (IEC 61010-1)
Dielectric strength (input~power, output)	2500V AC, 1min
impulse voltage	4000V
insulation resistance	100MΩ
IP degree (Comply with IEC60529)	IP20

## Dimensions



## Application



# Single-phase power transmitter

## Specification

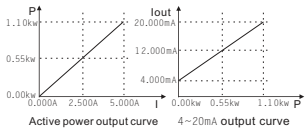
Independent power supply, realize measurement of active power, reactive power, power factor and current  
 DIN35mm rail mounting  
 Variety current, voltage output selectable

CZDL - 1PH  
 Single-phase power

Input	
Input current range(In)	0-1A/5A/10A AC
Max. input current(I <sub>max</sub> )	1.2×In(continues), 2×In(1minute)
Rated voltage(Un)	100V/220V/380V AC
Max. input voltage(U <sub>max</sub> )	1.2×Un(continues), 2×Un(1minute)
Voltage input impedance	>800kΩ
Frequency range	45Hz-65Hz
Current input impedance	<50mΩ
Output	
Current output	0-20mA/4-20mA
Max. output current	25mA
Load resistance	≤550 Ω
Voltage output	0-10V/0-5V/1-5V
Max. output voltage	12.5V
Load resistance	≥300k Ω
General parameters	
Supply voltage(U <sub>e</sub> )	20-30V DC
Rated power consumption	<50mA
Power factor PF-cos φ	0.000 ≤ PF ≤ 1.000
Response time	Reach 90% of final value in 330ms
Transfer accuracy	0.5%F.S.(sinusoidal 50Hz, 23℃)
Temperature drift	0.02%F.S./℃
Operating temperature	-20℃ ~ +60℃
Storage temperature	-40℃ ~ +80℃
Relative humidity	10%-90%
Pollution degree	3
EMC	GB/T 18268(IEC 61326-1)
Dimensions(L×H×W)	99.0mm×65.5mm×22.5mm
Safety parameters	
Insulation performance test standards	GB4793.1 (IEC 61010-1)
Dielectric strength (input-power, output)	Input-Output, power 2500V AC, 50Hz, 1min Power-Output 1500V AC, 50Hz, 1min
Impulse voltage	4000V
Insulation resistance	100MΩ
IP degree (Comply with IEC60529)	IP20

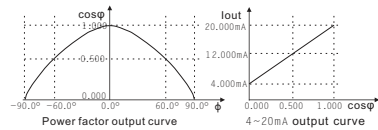
## Output curve(active power)

1/Active power transfer into 4~20mA, rated voltage 220V, when φ=0° (resistive load), as following curve:



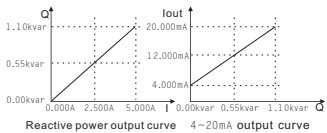
## Output curve(power factor)

3/Power factor transfer into 4~20mA, according to PF=cosp(φ is current leads voltage phase angle), when -90° ≤ φ ≤ 90°, as following curve:

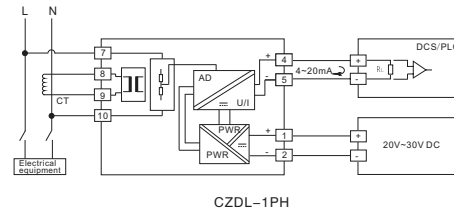


## Output curve(reactive power)

2/Reactive power transfer into 4~20mA, rated voltage 220V, when φ=90° / -90° (capacitive/inductive load), as following curve:



## Application



CZDL-1PH

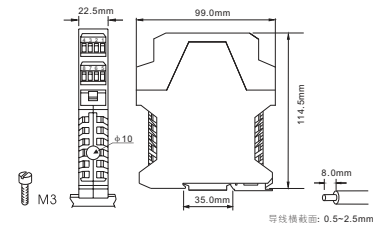
# AC/DC current transmitter

## Specification

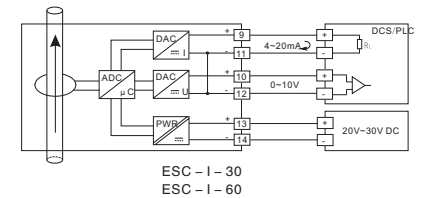
Variety voltage, current output selectable  
 Output signal can be characterized by direction of DC current  
 Measurement range is selectable

Input		
Input current range(In)	0A-20A/25A/30A AC/DC	0A-40A/50A/60A AC/DC
Max. input current(I <sub>max</sub> )	Depend on current carrying capacity of wire	Depend on current carrying capacity of wire
Frequency range	15Hz-400Hz	15Hz-400Hz
Output		
Current output	4-20mA/0-20mA	4-20mA/0-20mA
Max. output current	22mA	22mA
Load resistance	≤550Ω	≤550Ω
Voltage output	0-5V/0-10V/±5V/±10V	0-5V/0-10V/±5V/±10V
Max. output voltage	±12V	±12V
Load resistance	≥10kΩ	≥10kΩ
General parameters		
Supply voltage	20V-30V DC	20V-30V DC
Rated power consumption	1.2W(50mA, 24V)	1.2W(50mA, 24V)
Response time	Reach 90% of final value in 330ms	Reach 90% of final value in 330ms
Transfer accuracy	0.5%F.S.(sinusoidal 50Hz/True RMS/23℃)	0.5%F.S.(sinusoidal 50Hz/True RMS/23℃)
Temperature drift	0.03%F.S./℃	0.03%F.S./℃
Operating temperature	-20℃ ~ +60℃	-20℃ ~ +60℃
Storage temperature	-40℃ ~ +80℃	-40℃ ~ +80℃
Relative humidity	15%-90%	15%-90%
Pollution degree	3	3
EMC	GB/T 18268 (IEC 61326-1)	GB/T 18268 (IEC 61326-1)
Dimensions	114.5mm × 99.0mm × 22.5mm	114.5mm × 99.0mm × 22.5mm
Safety parameters		
Insulation performance test standards	GB4793.1 (IEC 61010-1)	GB4793.1 (IEC 61010-1)
Dielectric strength (input-power, output)	4000V AC, 1min	4000V AC, 1min
Impulse voltage	4000V	4000V
Insulation resistance	≥100MΩ; 500V DC	≥100MΩ; 500V DC
IP degree (Comply with IEC60529)	IP20	IP20

## Dimensions



## Application



ESC - I - 30  
 ESC - I - 60