

## Weschler Transducers

CLD001J ▶



### AC & DC Transducers—Metal Case

- Accuracy:  $\pm 0.2\%$  or  $0.5\%$
- Wide Variety of Input and Output Options
- Rugged Metal Can Construction
- 5 kV Transient Protection
- Sizes:
  - Can size 1: 3.976" L x 2.012" W x 4.096" H
  - Can size 2: 5.236" L x 3.769" W x 4.717" H

#### AC CURRENT TRANSDUCER

Transducer Type	Input	Output	Aux. Power	Can Size	Part # $\pm 0.5\%$	Part # $\pm 0.2\%$
Single (average sensing)	0-1 AAC	0-1 mADC	None	1	CTA100JA	CTA100ZA
Single (average sensing)	0-1 AAC	4 mA-20 mADC	120 VAC	2	CTD100JA	CTD100ZA
Single (TRMS sensing)	0-1 AAC	0-1 mADC	120 VAC	2	CTA100JT	CTA100ZT
Single (TRMS sensing)	0-1 AAC	4 mA-20 mADC	120 VAC	2	CTD100JT	CTD100ZT
Single (average sensing)	0-5 AAC	0-1 mADC	None	1	CTA500JA	CTA500ZA
Single (average sensing)	0-5 AAC	4 mA-20 mADC	120 VAC	2	CTD500JA	CTD500ZA
Triple (average sensing)	0-5 AAC	0-1 mADC	None	2	CTA503JA	CTA503ZA
Single (TRMS sensing)	0-5 AAC	0-1 mADC	120 VAC	2	CTA500JT	CTA500ZT
Single (TRMS sensing)	0-5 AAC	4 mA-20 mADC	120 VAC	2	CTD500JT	CTD500ZT

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#### AC VOLTAGE TRANSDUCER

Transducer Type	Input	Output	Aux. Power	Can Size	Part # $\pm 0.5\%$	Part # $\pm 0.2\%$
Single (average sensing)	0-150 VAC	0-1 mADC	None	1	ETA150JA	ETA150ZA
Single (average sensing)	0-300 VAC	0-1 mADC	None	1	ETA300JA	ETA300ZA
Single (average sensing)	0-600 VAC	0-1 mADC	None	1	ETA600JA	ETA600ZA
Single (average sensing)	0-150 VAC	4 mA-20 mADC	120 VAC	2	ETD150JA	ETD150ZA
Single (average sensing)	0-300 VAC	4 mA-20 mADC	120 VAC	2	ETD300JA	ETD300ZA
Single (average sensing)	0-600 VAC	4 mA-20 mADC	120 VAC	2	ETD600JA	ETD600ZA
3 Inputs (average sensing)	0-150 VAC	0-1 mADC	None	2	ETA153JA	ETA153ZA
3 Inputs (average sensing)	0-300 VAC	0-1 mADC	None	2	ETA303JA	ETA303ZA
Single (TRMS sensing)	0-150 VAC	0-1 mADC	120 VAC	2	ETA150JT	ETA150ZT
Single (TRMS sensing)	0-300 VAC	0-1 mADC	120 VAC	2	ETA300JT	ETA300ZT
Single (TRMS sensing)	0-150 VAC	4 mA-20 mADC	120 VAC	2	ETD150JT	ETD150ZT
Single (TRMS sensing)	0-300 VAC	4 mA-20 mADC	120 VAC	2	ETD300JT	ETD300ZT

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#### AC FREQUENCY TRANSDUCER—CAN SIZE "2"

Frequency	Input	Output	Part # $\pm 1.0\%$	Part # $\pm 0.1\%$
45-55 Hz	120V	0-1 mA	FQA050J	FQA050Z
45-65 Hz	120V	0-1 mA	FQA055J	FQA055Z
55-65 Hz	120V	0-1 mA	FQA060J	FQA060Z
375-425 Hz	120V	0-1 mA	FQA400J	FQA400Z
45-55 Hz	120V	4-12-20 mADC	FQD050J	FQD050Z*
45-65 Hz	120V	4-12-20 mADC	FQD055J	FQD055Z*
55-65 Hz	120V	4-12-20 mADC	FQD060J	FQD060Z*
375-425 Hz	120V	4-12-20 mADC	FQD400J	FQD400Z*

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\*Accuracy is 0.2%

## Weschler Transducers

### AC WATT TRANSDUCER—CAN SIZE "2"

Connection	No. of Elements	Rating	Output	Aux. Power	Part # ±0.5%	Part # ±0.2%
1 $\emptyset$ 2-wire	1 element	120V/5A	0–1 mADC	None	WTB010J	WTB010Z
3 $\emptyset$ 3-wire	2 element	120V/5A	0–1 mADC	None	WTB020J	WTB020Z
3 $\emptyset$ 4-wire	2 <sup>1</sup> / <sub>2</sub> element	120V/5A	0–1 mADC	None	WTB025J	WTB025Z
3 $\emptyset$ 4-wire	3 element	120V/5A	0–1 mADC	None	WTB030J	WTB030Z
1 $\emptyset$ 2-wire	1 element	120V/5A	4 mA–20 mADC	None	WTD010J	WTD010Z
3 $\emptyset$ 3-wire	2 element	120V/5A	4 mA–20 mADC	None	WTD020J	WTD020Z
3 $\emptyset$ 4-wire	2 <sup>1</sup> / <sub>2</sub> element	120V/5A	4 mA–20 mADC	None	WTD025J	WTD025Z
3 $\emptyset$ 4-wire	3 element	120V/5A	4 mA–20 mADC	None	WTD030J	WTD030Z

### AC VAR TRANSDUCER—CAN SIZE "2"

Connection	No. of Elements	Rating	Output	Aux. Power	Part # ±0.5%	Part # ±0.2%
1 $\emptyset$ 2-wire	1 element	120V/5A	±1 mADC	None	VTB010J	VTB010Z
3 $\emptyset$ 3-wire	2 element	120V/5A	±1 mADC	None	VTB020J	VTB020Z
3 $\emptyset$ 4-wire	2 <sup>1</sup> / <sub>2</sub> element	120V/5A	±1 mADC	None	VTB025J	VTB025Z
3 $\emptyset$ 4-wire	3 element	120V/5A	±1 mADC	None	VTB030J	VTB030Z
1 $\emptyset$ 2-wire	1 element	120V/5A	4–12–20 mADC	None	VTD010J	VTD010Z
3 $\emptyset$ 3-wire	2 element	120V/5A	4–12–20 mADC	None	VTD020J	VTD020Z
3 $\emptyset$ 4-wire	2 <sup>1</sup> / <sub>2</sub> element	120V/5A	4–12–20 mADC	None	VTD025J	VTD025Z
3 $\emptyset$ 4-wire	3 element	120V/5A	4–12–20 mADC	None	VTD030J	VTD030Z

### AC WATT/VAR TRANSDUCER—CAN SIZE "2"

Connection	No. of Elements	Rating	Output	Part # ±0.5%	Part # ±0.2%
1 $\emptyset$ 2-wire	1 element	120V/5A	±1 mADC x 2	WVB010J	WVB010Z
3 $\emptyset$ 3-wire	2 element	120V/5A	±1 mADC x 2	WVB020J	WVB020Z
3 $\emptyset$ 4-wire	2 <sup>1</sup> / <sub>2</sub> element	120V/5A	±1 mADC x 2	WVB025J	WVB025Z
3 $\emptyset$ 4-wire	3 element	120V/5A	±1 mADC x 2	WVB030J	WVB030Z
1 $\emptyset$ 2-wire	1 element	120V/5A	W: 4–20mA, VAR: 4–12–20 mA	WVD010J	WVD010Z
3 $\emptyset$ 3-wire	2 element	120V/5A	W: 4–20mA, VAR: 4–12–20 mA	WVD020J	WVD020Z
3 $\emptyset$ 4-wire	2 <sup>1</sup> / <sub>2</sub> element	120V/5A	W: 4–20mA, VAR: 4–12–20 mA	WVD025J	WVD025Z
3 $\emptyset$ 4-wire	3 element	120V/5A	W: 4–20mA, VAR: 4–12–20 mA	WVD030J	WVD030Z

### AC POWER FACTOR—CAN SIZE "2"

Connection	Lag—Lead	Output	Part # STD TC	Part # Low TC
1 $\emptyset$ 2-wire	-0.5 to 1.0 to +0.5	1–0–1 mADC	PFB010J	PFB010Z
3 $\emptyset$ 3-wire	-0.5 to 1.0 to +0.5	1–0–1 mADC	PFB020J	PFB020Z
3 $\emptyset$ 4-wire	-0.5 to 1.0 to +0.5	1–0–1 mADC	PFB030J	PFB030Z
1 $\emptyset$ 2-wire	-0.5 to 1.0 to +0.5	4–12–20 mADC	PFF010J	PFF010Z
3 $\emptyset$ 3-wire	-0.5 to 1.0 to +0.5	4–12–20 mADC	PFF020J	PFF020Z
3 $\emptyset$ 4-wire	-0.5 to 1.0 to +0.5	4–12–20 mADC	PFF030J	PFF030Z

### AC PHASE ANGLE—CAN SIZE "2"

Connection	Phase Angle	Output	Part # ±2°	Part # ±1°
1 $\emptyset$ 2-wire	60°–0–60°	1–0–1 mADC	PAB010J	PAB010Z
3 $\emptyset$ 3-wire	60°–0–60°	1–0–1 mADC	PAB020J	PAB020Z
3 $\emptyset$ 4-wire	60°–0–60°	1–0–1 mADC	PAB030J	PAB030Z
1 $\emptyset$ 2-wire	60°–0–60°	4–12–20 mADC	PAF010J	PAF010Z
3 $\emptyset$ 3-wire	60°–0–60°	4–12–20 mADC	PAF020J	PAF020Z
3 $\emptyset$ 4-wire	60°–0–60°	4–12–20 mADC	PAF030J	PAF030Z

NOTE: Also available in plastic foot-mounted or DIN rail.  
For ranges not listed, contact Weschler.

## Weschler Transducers

### SPECIFICATIONS - ALL AC MODELS

Output	0-1 or ±1mADC into 10kΩ max., 10VDC compliance 4-20mADC into 750Ω max., 15VDC compliance
Response Time	<400ms (0-99% of output)
Output Ripple	0.5% of span, peak-to-peak max
Isolation	2500VAC input to output, power & case 2000VAC aux. power to output & case 500VAC output to case
External Span Adjustment	Zero: ±1% min; Span: ±2% min
Surge Withstand	IEEE472/ANSI C37.90.1-1989, JIS C111 (5kV, 1.2 x 50μs)
Insulation Resistance	>10MΩ@500VDC input/output/power/case
Operating Temperature	-20°C to 60°C; 0-90% RH non-condensing

### AC CURRENT & VOLTAGE TRANSDUCERS

#### Current Models

Input Burden	<0.2VA
Ovrange	200% of rated input continuous; 1000% of rated input for 5 sec

#### Voltage Models

Input Burden	150VAC: <0.8VA; 300 VAC: <1.6VA (TRMS) 150VAC: <1.8VA; 300 VAC: <3.6VA (Avg. Sensing)
Ovrange	120% of rated input continuous
Temperature Drift	±250ppm/°C of span, 0.5% models ±140ppm/°C of span, 0.2% models

#### Options (specify when ordering)

50Hz, 50/60Hz or 400Hz operation (60Hz standard)  
230VAC, 24VDC\* or 48VDC\* Auxiliary Power (\*average sensing models only)

### AC WATT & VAR TRANSDUCERS

Input Burden	Voltage: <0.5VA per element @120V Current: <0.2VA per element
Voltage Input Range	100-135VAC, input powered 0.5% models 85-135VAC, input powered 0.2% models 0-120% of rated input, auxiliary powered models
Voltage Ovrange	150% of rated input continuous (aux. powered only)
Current Input Range	10-200% of rated input with accuracy
Current Ovrange	200% continuous, 1000% for 5 seconds
Output Calibration	120VAC/1A = 0-100 watts/element 120VAC/5A = 0-500 watts/element
Temperature Drift	±250ppm/°C of span, 0.5% models ±80ppm/°C of span, 0.2% models
Influences (% of span)	<0.5% for PF, phase interaction or current imbalance

### COMBINED AC WATT/VAR TRANSDUCERS

Input Burden	Voltage: <0.5VA per element Current: <0.2VA per element
Voltage Input Range	100-135VAC, input powered 0.5% models 85-135VAC, input powered 0.2% models 0-120% of rated input, auxiliary powered models
Voltage Ovrange	150% of rated input continuous (aux. powered only)
Current Input Range	10-200% of rated input with accuracy
Current Ovrange	200% continuous, 1000% for 5 seconds
Temperature Drift	±250ppm/°C of span, 0.5% models ±80ppm/°C of span, 0.2% models
Influences (% of span)	<0.5% for PF, phase interaction or current imbalance

#### Options for Watt, VAR & Watt/VAR Models

50Hz or 400Hz operation (60Hz standard)  
1AAC Current Rated  
240VAC Voltage Rated  
480 VAC Voltage Rated (not available on 0.2% units)  
120VAC, 240VAC, 24VDC or 48VDC Auxiliary Power  
Special Calibration to Customer PT & CT

### POWER FACTOR TRANSDUCERS

Specifications same as Combined Watt/VAR Models except:	
Accuracy	±0.01 power factor
Temperature Drift	±500ppm/°C of span, suffix J models ±150ppm/°C of span, suffix Z models
Low Current Detect	<4%
Influences (% of span)	<1% for voltage, <2% for current

#### Options for PF Models

1 AAC Current Rated  
120VAC, 240VAC, 24VDC or 48VDC Auxiliary Power

### AC PHASE ANGLE TRANSDUCERS

Specifications same as Combined Watt/VAR Models except:	
Temperature Drift	±500ppm/°C of span, suffix J models ±80ppm/°C of span, suffix Z models
Influences	<0.5° for voltage, <1° for current

#### Options for Phase Angle Models

50Hz or 400Hz operation (60Hz standard)  
1AAC Current Rated  
120VAC, 240VAC, 24VDC or 48VDC Auxiliary Power  
Full Scale = Lagging Phase Angle  
±90° Phase Angle

### FREQUENCY TRANSDUCER

Input Burden	<0.1VA @120V
Voltage Input Range	100-135VAC, input powered models ±20% of rated voltage, aux. powered models
Temperature Drift	±250ppm/°C of span, suffix J models ±50ppm/°C of span, suffix Z models
Harmonics	Fundamental through 9th harmonic

#### Options for Frequency Models

240 Volt Input  
24VDC or 48VDC Aux. Power (0.2% models only)  
1-0-1 mADC Output

### DC TO DC ISOLATION TRANSDUCERS

Input Burden	<1 mA
Output Compliance	10VDC
Accuracy (<10% of range)	±0.5% of FS
Response Time	500ms (0-99%)
Calibration Adjustments	±5% (zero & FS)
Temperature Range	0-40°C, 20-90% RH non-condensing
Isolation	2600VAC input to output, power & case 1000VAC aux power to output & case 1000VAC output to case
Surge Withstand	IEEE472/ANSI C37.90.1-1989 SWC
Auxiliary Power	120VAC ±10%, 2VA

### DC TO DC ORDERING INFO

Input	Output	Aux. Power	Case Size	Part #
0-1mADC	4-20mADC	120VAC	2	CLD001J
0-1mADC	0-1mADC	120VAC	2	CLD002J
0-1mADC	0-10VDC	120VAC	2	CLD003J
0-50mVDC	4-20mADC	120VAC	2	CLD101J
0-50mVDC	0-1mADC	120VAC	2	CLD102J
0-50mVDC	0-10VDC	120VAC	2	CLD103J