

EPOS CV ■ SPECIFICATIONS



Single-phase and three-phase motor-controlled AC/DC power sources for reliable supply to the load applications.

The output voltage is set either manually or automatically using the ACTAS software with the aid of variable voltage transformers controlled by servomotors. Output values and operating statuses are clearly displayed on status displays.

The power source is short-circuit proof and protected against overload conditions.

System concept		EPOS CV 821	EPOS CV 831	EPOS CV 753
		single-phase	single-phase	three-phase
Source	Voltage	1 x 15...270 VAC 1 x 15...300 VDC	1 x 15...270 VAC 1 x 15...300 VDC	3 x 15...300 VAC _{PN} 3 x 15...520 VAC _{PP} 1 x 15...300 VDC
	Step value	1 V	1 V	1 V
	Accuracy	± 1%	± 1%	± 1%
	Current			
	Rated current	1 x 30 A AC/DC 1 x 20 ADC	1 x 40 AAC 1 x 30 ADC	3 x 25 AAC 1 x 32 ADC
	Type of load	30 A across the entire stroke range	40 A across the entire stroke range	8 A for max. 9 minutes 25 A for max. 1 minute across the entire stroke range
The operating conditions are detailed in the appendix!				
	Specifications Transformer	8.1 kVA	11.5 kVA	22.5 kVA
	Frequency	DC, 50 or 60 Hz ¹⁾		
	Rectification	Two-pulse bridge circuit ³⁾		Six-pulse bridge circuit ²⁾
	Isolation	No galvanic isolation		Integrated isolating transformer
	Protection	Electronic fuses for measuring and evaluating overcurrent, short-circuit and overload		
	Regulation	Motor-controlled		
	Settling time	No separate control of the individual phases, control phase U _{xPN} can be selected		
	DC mode	up: 6 ms/V down: 19 ms/V	up: 7 ms/V down: 42 ms/V	3 ms/V
	AC mode	8 ms/V		7 ms/V
Measurement	Voltage			
	Range	0...540 VAC		
	Accuracy	< 0.2% ⁴⁾		
	Current			
	Range	0...110 AAC		
	Accuracy	< 0.1% ⁴⁾		
	Sampling rate	500 Hz up to 10 kHz		

¹⁾ Depending on the mains connection

²⁾ Without smoothing capacitor

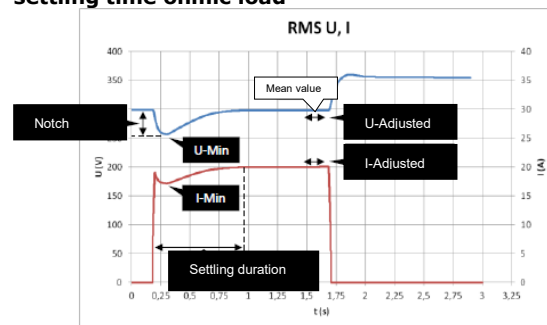
³⁾ With smoothing capacitor

⁴⁾ Of range

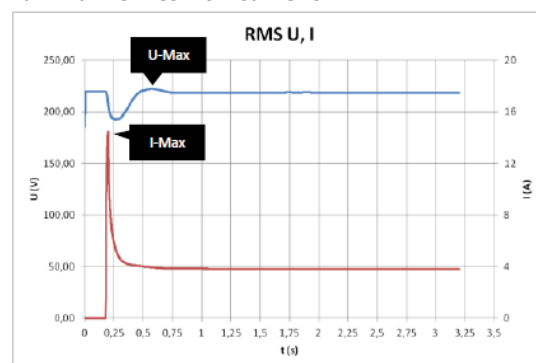
	EPOS CV 821	EPOS CV 831	EPOS CV 753
Complete system	Power supply	230 VAC ±10%, 50/60 Hz	3 x 400 VAC ±10%, 50/60 Hz
	Discrete connections for supplying power to the control electronics and the power module separately		
Connections	Industrial plug connectors		
Housing	19" housing 4 U	19" housing 8 U	19" housing 18 U
Dimensions (W x H x D) mm	450 x 177 x 460	450 x 350 x 555	450 x 800 x 430
Mounting depth	Depth + 100 mm for connection plug	Depth + 50 mm for connection plug	430 mm
Weight	39 kg	70 kg	130 kg
Screen	High-resolution 3.5" screen		
Operation	Jog dial and six function keys		
Display elements	6 status LEDs Screen status indication Illuminated ring on the jog dial		
Interfaces	RJ 45 (Ethernet) USB-B		
Control	RJ45		
Environment	Operating temperature: 0...50°C Storage temperature: -20...60°C Relative humidity: 5...90%, non-condensing Protection: Installed IP20		
CE conformity	EN 61010-1: 2011 Safety requirements for electrical equipment for measurement, control, and laboratory use EN 61326-1: 2013 Electrical equipment for measurement, control and laboratory use - EMC requirements		

Appendix

Operating current, voltage drop, settling time ohmic load



Maximum switch-on current



EPOS CV 821**Operating current, voltage drop, settling time ohmic load**

U	DC		tc _{ST}	AC		tc _{ST}
	I _{OPR}	U _{NTC}		I _{OPR}	U _{NTC}	
24 V	29.3 A	5.8 V	< 0.6 s	30.3 A	2.7 V	< 0.3 s
60 V	30.3 A	14.3 V		30.6 A	6.8 V	
110 V	30.0 A	26.4 V		29.7 A	11.1 V	
220 V	24.4 A	47.5 V		29.6 A	18.8 V	

I_{OPR} : Operating current, adjusted
tc_{ST} : Control Settling Time
U_{NTC} : Notch

Maximum switch-on current

U	I _{PK}	
	DC	AC
24 V	33.8 A	42.8 A
60 V	58.2 A	64.1 A
110 V	76.3 A	52.1 A
220 V	71.8 A	15.8 A

I_{PK} : maximum switch-on current

EPOS CV 831**Operating current, voltage drop, settling time ohmic load**

U	DC		tc _{ST}	AC		tc _{ST}
	I _{OPR}	U _{NTC}		I _{OPR}	U _{NTC}	
24 V	30.2 A	7.4 V	< 0.7 s	29.4 A	2.3 V	< 0.3 s
60 V	30.3 A	13.2 V		29.8 A	3.4 V	
110 V	31.5 A	20.0 V		28.0 A	6.4 V	
220 V	26.7 A	35.4 V		29.3 A	10.7 V	

I_{OPR} : Operating current, adjusted
tc_{ST} : Control Settling Time
U_{NTC} : Notch

Maximum switch-on current

U	I _{PK}	
	DC	AC
24 V	48 A	64 A
60 V	77 A	75 A
110 V	110 A	66 A
220 V	93 A	73 A

I_{PK} : maximum switch-on current

EPOS CV 753**Operating current, voltage drop, settling time ohmic load**

U	DC		tc _{ST}	AC		tc _{ST}
	I _{OPR}	U _{NTC}		I _{OPR}	U _{NTC}	
24 V	30.8 A	6.3 V	< 0.3 s	30.3 A	3.2 V	< 0.4 s
60 V	29.7 A	9.0 V		30.9 A	8.0 V	
110 V	29.9 A	13.8 V		29.4 A	13.8 V	
220 V	29.6 A	26.9 V		29.5 A	34.5 V	

I_{OPR} : Operating current, adjusted
tc_{ST} : Control Settling Time
U_{NTC} : Notch

Maximum switch-on current

U	I _{PK}	
	DC	AC
24 V	43.8 A	34.3 A
60 V	49.0 A	60.0 A
110 V	67.8 A	58.0 A
220 V	74.3 A	72.8 A

I_{PK} : maximum switch-on current

**EPOS CV
821/831/753****Settling time**

	tc _{ST}	
	DC	AC
CV 821	< 0.6 s	< 0.3 s
CV 831	< 0.7 s	< 0.3 s
CV 753	< 0.3 s	< 0.4 s

tc_{ST} : Control Settling Time

Ripple

	for I _{LOAD}	U _{RPL}	I _{RPL}
		DC	DC
CV 821	30 A	< 14 V	< 13 A
CV 831	30 A	< 6 V	< 7 A
CV 753	30 A	< 56 V	< 7 A

U/I_{RPL} : Ripple