



OPEN FRAME 200W



eF175-103

100 Watt Open Frame Single Output AC/DC Switching power supply



Product description:

The Industry's smallest open frame single output AC/DC switcher delivering 100W continuous power with an option for built in "Oring" diodes. The unit is built in a 1U, 3" x 5" footprint.

Telkoor Part Number: 900-0103-0000

INPUT	
AC	85-264VAC Wide Range
DC	
Input Frequency Range	47-63Hz
Input Inrush Current	< 50Amp @ 220VAC Cold Start and < 25Amp@115VAC cold Start
Input Reflected Ripple	FCC 68 part 15 Class B
Active Power Factor Correction	0.98 typical at 110VAC input @ full load, 0.99 typical at 220VAC input @ full Load
Efficiency @ 230VAC Full Load	85% Typical
Efficiency @ 115VAC Full Load	82% Typical
Efficiency @ 48VDC Full Load	
Input Line Protection	Internal Line Fuse 5X20 type 6.3A 250Vac Normal Blow
Hold-up Time	20mSec minimum @ Full Load
OUTPUT	
V1/Current	+3.3V/30A
V2/Current	
V3/Current	
V4/Current	
Aux V/Current	
Total Output Power	100W
Line Regulation	+/- 0.2% for Vin (min.) to Vin (max.)
Oring Option	Optional internal O-Ring diode in eFS175-103 model
Load Regulation:	
V1&V2	0.5% for load changes from zero to full load
V3&V4	
Min. Load Requirement	None
Overshoot/Undershoot at Turn-On	< 1% at turn ON & OFF
Turn-On Delay	2 Sec. Maximum
Initial Setting Accuracy	Factory pre-set @ +/-0.4%
Voltage Set point (Internal trim-pot) V1/V2	+/- 5%
Ripple @ Noise with 20MHz Bandwidth and 10uF Load Capacitor:	
V1	98145.451
98145.451	
V3 & V4	
Hot-Swap	Optional internal O-Ring diode in eFS175-103 model
Current Share	Optional in eFS175-103 model, N+1 single wire
Remote Sense (Open sense lines protected)	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
Long Term Stability	
Transient Response	±5% Max. Deviation for load change of 25% to 75%, at slew rate of 1A/ μsec, recovery time less then 500Msec
Over-Voltage Protection	Output shuts down at 125% of nominal (latched shutdown) AC input must recycle to re-start
Overload Protection	
V1 & V2	120% to 130% of I Max, constant current limit, automatic recovery
V3	
V4	
Short Circuit Protection	Yes
Temperature Protection	Excess Temp. Shutdown When internal highest temperature exceeds >110Deg C +/- 5deg C. Auto recovery

0403-DOC1-10-Rev-A

eF175-103

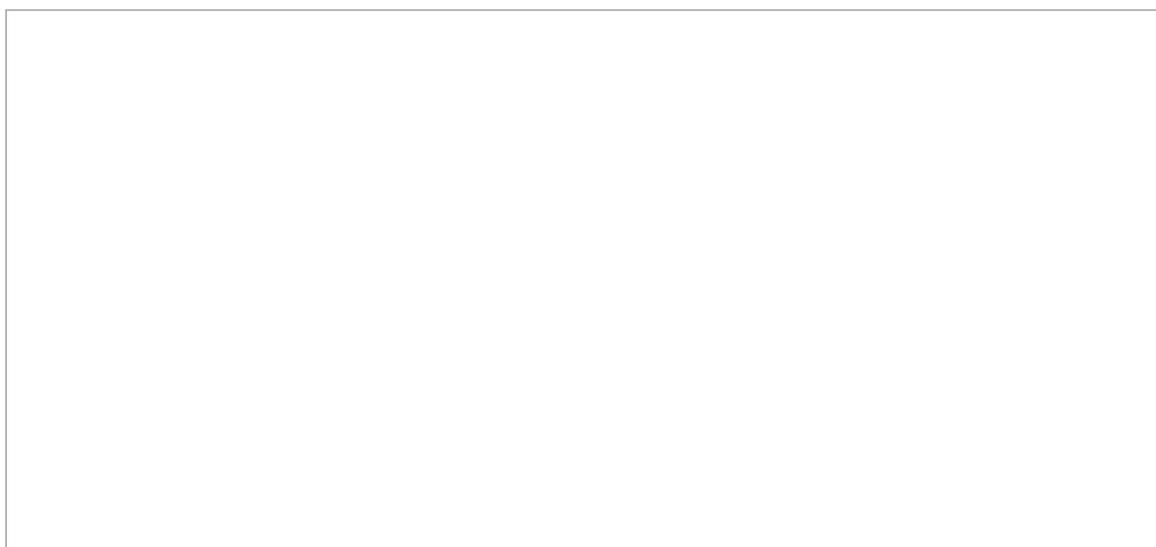
ENVIRONMENTAL	Temperature	
	Operation	-5C to +50C. Linear De-Rating of 2.5% per 1Deg. C up to +70C
	Storage	-25C to +85C
	Cooling	100W free air convection cooling (base plate cooling). 200W Forced Air Cooling 250LFM min.
	Humidity	Up to 95% RH Non-Condensing
	Shock & Vibration	Three orthogonal axis at 1 octave/min, 5 in dwell at four major resonances at 0.75G peak, 5Hz to 500Hz
	Conducted & Radiated Emission	EN55022 CLASS B with external line filter
	Surge, Spikes & Lightning Protection	EN61000-4-5
	Dielectric Isolation	
	Input to Case	> 1500VAC
	Input to Output	3000VAC
	Output to Case	250VDC
	MTBF	300,000 Hours minimum per BELCORE 332, issue 6 specification @ 30 Deg C

SAFETY REGULATIONS & EMI SPECIFICATIONS	Safety Approvals	EN-60950, UL-60950 & CE Marking
	Dielectric Withstand Voltage	
	ESD Susceptibility	Meets EN61000-4-2 8Kv Air, 4Kv contact
	Radiated Susceptibility	EN61000-4-3 30-1000MHz FCC Part 15, Subpart B CLASS B
	EFT/Burst	EN61000-4-4
	Input Surge	EN61000-4-5
	Conducted Disturbance	EN61000-4-6
	Power frequency magnetic field	EN61000-4-8
	Immunity for voltage Dips	EN61000-4-11

MONITORING COMMAND & CONTROL	Remote	
	Inhibit	Optional Active LOW, all outputs shut down in eFS175-103 Model
	Power OK	Optional Open collector active LOW when any of the outputs drop below 15% of its nominal value in eFS175-103model.
	Input AC Connector	Molex 3 Pin, 0.2" 41695 Series
	Input DC Connector	
	Current Share	Optional in eFS175-103 Model
	Remote Sense	Optional in eFS175-103 Model
	Output Connectors V1/V2	Tap M5x82 by Fujicon F4076DS
	Output Connectors V3/V4	
	Aux. Output	Optional +5V/5mA in eFS175-103Model

MECHANICAL DIMENSIONS	Size in cm (Inch)	127 X 84 X 38 (5" X 3.3" X 1.5")
	Weight in Grams (Oz)	450gr. Max
	Cover	

OUTLINE DRAWING



eF175-105

150 Watt Open Frame Single Output AC/DC Switching power supply



Product description:

The Industry's smallest open frame single output AC/DC switcher delivering 150W continuous power with an option for built in "Oring" diodes. The unit is built in a 1U, 3" x 5" footprint.

Telkoor Part Number: 900-0405-0000

INPUT	
AC	85-264VAC Wide Range
DC	
Input Frequency Range	47-63Hz
Input Inrush Current	< 50Amp @ 220VAC Cold Start and < 25Amp@115VAC cold Start
Input Reflected Ripple	FCC 68 part 15 Class B with an external line filter
Active Power Factor Correction	0.90 typical at 110VAC input @ full load, 0.95 typical at 220VAC input @ full Load
Efficiency @ 230VAC Full Load	85% Typical
Efficiency @ 115VAC Full Load	82% Typical
Efficiency @ 48VDC Full Load	
Input Line Protection	Internal Line Fuse 5X20 type 6.3A 250Vac Normal Blow
Hold-up Time	16mSec minimum @ Full Load
OUTPUT	
V1/Current	+5VDC / 30A
V2/Current	
V3/Current	
V4/Current	
Aux V/Current	
Total Output Power	150 Watt
Line Regulation	+/- 0.2% for Vin (min.) to Vin (max.)
Oring Option	Optional internal O-Ring diode in eFS175-105 model
Load Regulation:	
V1&V2	0.5% for load changes from zero to full load
V3&V4	
Min. Load Requirement	None
Overshoot/Undershoot at Turn-On	< 1% at turn ON & OFF
Turn-On Delay	2 Sec. Maximum
Initial Setting Accuracy	Factory pre-set @ +/-0.4%
Voltage Set point (Internal trim-pot) V1/V2	+/- 5%
Ripple @ Noise with 20MHz Bandwidth and 10uF Load Capacitor:	
V1	1% Max
V2	
V3 & V4	
Hot-Swap	Optional internal O-Ring diode in eFS175-105 model
Current Share	Optional in eFS175-105 model
Remote Sense (Open sense lines protected)	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
Long Term Stability	
Transient Response	±5% Max. Deviation for load change of 25% to 75%, at slew rate of 1A/ μsec, recovery time less then 500Msec
Over-Voltage Protection	Output shuts down at 125% of nominal (latched shutdown) AC input must recycle to re-start
Overload Protection	
V1 & V2	120% to 130% of I Max, constant current limit, automatic recovery
V3	
V4	
Short Circuit Protection	Yes
Temperature Protection	Excess Temp. Shutdown When internal highest temperature exceeds >110Deg C +/- 5deg C. Auto recovery

0405-DOC1-10-Rev-A

eF175-105

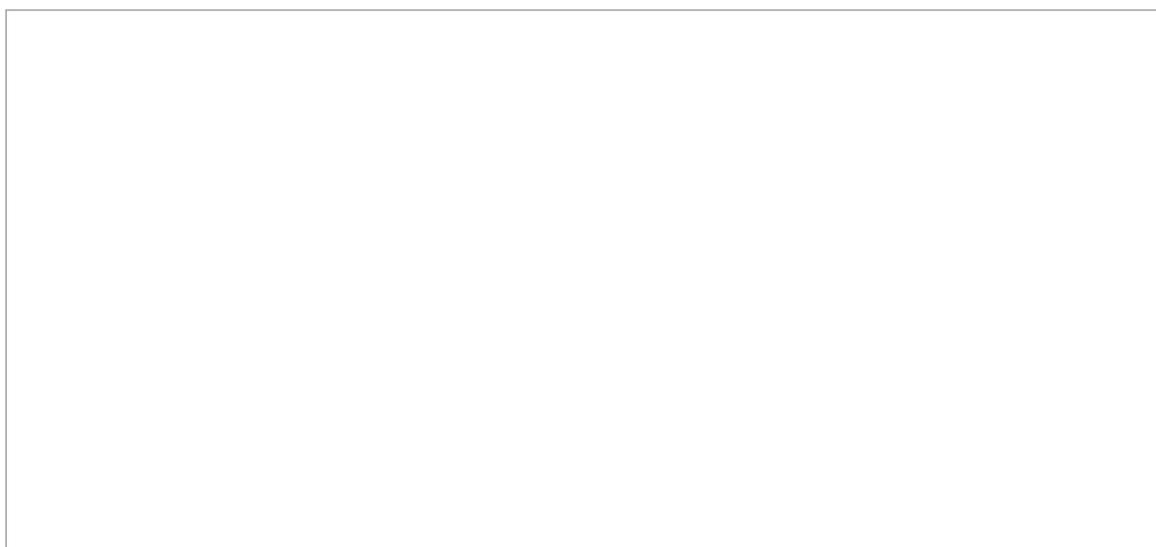
ENVIRONMENTAL	Temperature	
	Operation	-5C to +50C. Linear De-Rating of 2.5% per 1Deg. C up to +70C
	Storage	-25C to +85C
	Cooling	100W free air convection cooling (base plate cooling). 200W Forced Air Cooling 250LFM min.
	Humidity	Up to 95% RH Non-Condensing
	Shock & Vibration	Three orthogonal axis at 1 octave/min, 5 in dwell at four major resonances at 0.75G peak, 5Hz to 500Hz
	Conducted & Radiated Emission	EN55022 CLASS B with external line filter
	Surge, Spikes & Lightning Protection	EN61000-4-5
	Dielectric Isolation	
	Input to Case	1500VAC
	Input to Output	3000VAC
Output to Case	250VDC	
MTBF	300,000 Hours minimum per BELCORE 332, issue 6 specification @ 30 Deg C	

SAFETY REGULATIONS & EMI SPECIFICATIONS	Safety Approvals	EN-60950, UL-60950 & CE Marking
	Dielectric Withstand Voltage	
	ESD Susceptibility	Meets EN61000-4-2 8Kv Air, 4Kv contact
	Radiated Susceptibility	EN61000-4-3 30-1000MHz FCC Part 15, Subpart B CLASS B
	EFT/Burst	EN61000-4-4
	Input Surge	EN61000-4-5
	Conducted Disturbance	EN61000-4-6
	Power frequency magnetic field	EN61000-4-8
Immunity for voltage Dips	EN61000-4-11	

MONITORING COMMAND & CONTROL	Remote	
	Inhibit	Optional Active LOW, all outputs shut down in eFS175-105 Model
	Power OK	Optional Open collector active LOW when any of the outputs drop below 15% of its nominal value in eFS175-105 model.
	Input AC Connector	Molex 3 Pin, 0.2" 41695 Series
	Input DC Connector	
	Current Share	Optional in eFS175-105 Model
	Remote Sense	Optional in eFS175-105 Model
	Output Connectors V1/V2	Tap M5x82 by Fujicon F4076DS
	Output Connectors V3/V4	
	Aux. Output	Optional +5V/5mA in eFS175-105 Model

MECHANICAL DIMENSIONS	Size in cm (Inch)	127 X 84 X 38 (5" X 3.3" X 1.5")
	Weight in Grams (Oz)	450gr. Max
	Cover	

OUTLINE DRAWING



eF175-112

200 Watt Open Frame Dual Output AC/DC Switching power supply



Product description:

The Industry's smallest open frame dual output AC/DC switcher delivering 200W continuous power with an option for built in "Oring" diodes. The unit is built in a 1U, 3" x 5" footprint.

Telkoor Part Number: 900-0436-0000

INPUT	
AC	85-264VAC Wide Range
DC	
Input Frequency Range	47-63Hz
Input Inrush Current	< 50Amp @ 220VAC Cold Start and < 25Amp@115VAC cold Start
Input Reflected Ripple	FCC 68 part 15 Class B with an external line filter
Active Power Factor Correction	0.90 typical at 110VAC input @ full load, 0.95 typical at 220VAC input @ full Load
Efficiency @ 230VAC Full Load	85% Typical
Efficiency @ 115VAC Full Load	82% Typical
Efficiency @ 48VDC Full Load	
Input Line Protection	Internal Line Fuse 5X20 type 6.3A 250Vac Normal Blow
Hold-up Time	16mSec minimum @ Full Load
OUTPUT	
V1/Current	+12VDC / 16.6A
V2/Current	
V3/Current	
V4/Current	
Aux V/Current	
Total Output Power	200 Watt
Line Regulation	+/- 0.2% for Vin (min.) to Vin (max.)
Oring Option	Optional internal O-Ring diode in eFS175-112 model
Load Regulation:	
V1&V2	0.5% for load changes from zero to full load
V3&V4	
Min. Load Requirement	None
Overshoot/Undershoot at Turn-On	< 1% at turn ON & OFF
Turn-On Delay	2 Sec. Maximum
Initial Setting Accuracy	Factory pre-set @ +/-0.4%
Voltage Set point (Internal trim-pot) V1/V2	+/- 5%
Ripple @ Noise with 20MHz Bandwidth and 10uF Load Capacitor:	
V1	1% Max
V2	
V3 & V4	
Hot-Swap	Optional internal O-Ring diode in eFS175-112 model
Current Share	
Remote Sense (Open sense lines protected)	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
Long Term Stability	
Transient Response	±5% Max. Deviation for load change of 25% to 75%, at slew rate of 1A/ μsec, recovery time less then 500Msec
Over-Voltage Protection	Output shuts down at 125% of nominal (latched shutdown) AC input must recycle to re-start
Overload Protection	
V1 & V2	120% to 130% of I Max, constant current limit, automatic recovery
V3	
V4	
Short Circuit Protection	Yes
Temperature Protection	Excess Temp. Shutdown When internal highest temperature exceeds >110Deg C +/- 5deg C. Auto recovery

0436-DOC1-10-Rev-A

eF175-112

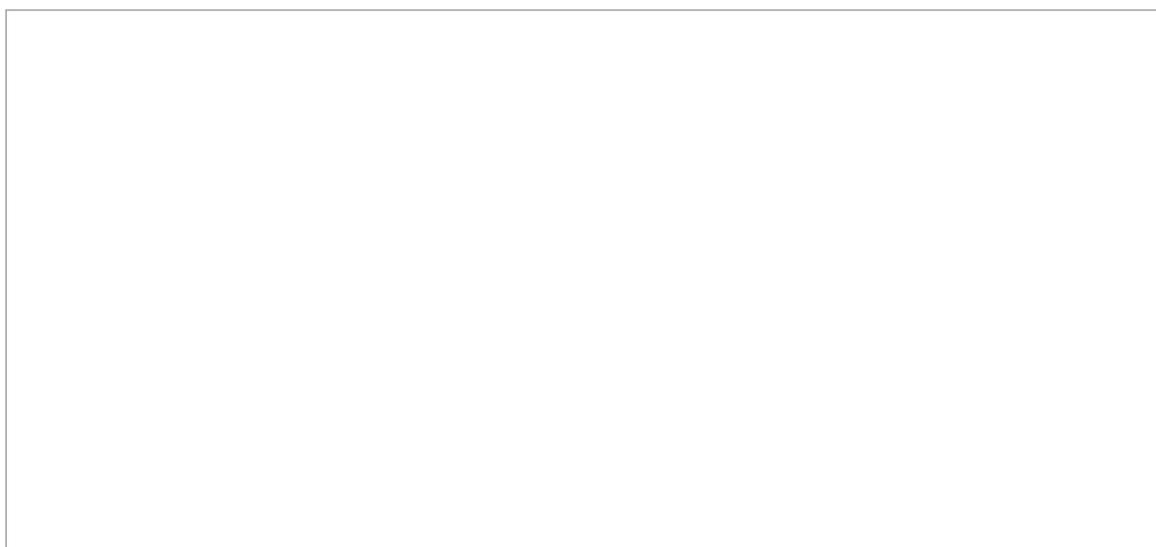
ENVIRONMENTAL	Temperature	
	Operation	-5C to +50C. Linear De-Rating of 2.5% per 1Deg. C up to +70C
	Storage	-25C to +85C
	Cooling	100W free air convection cooling (base plate cooling). 200W Forced Air Cooling 250LFM min.
	Humidity	Up to 95% RH Non-Condensing
	Shock & Vibration	Three orthogonal axis at 1 octave/min, 5 in dwell at four major resonances at 0.75G peak, 5Hz to 500Hz
	Conducted & Radiated Emission	EN55022 CLASS B with external line filter
	Surge, Spikes & Lightning Protection	EN61000-4-5
	Dielectric Isolation	
	Input to Case	1500VAC
	Input to Output	3000VAC
Output to Case	250VDC	
MTBF	300,000 Hours minimum per BELCORE 332, issue 6 specification @ 30 Deg C	

SAFETY REGULATIONS & EMI SPECIFICATIONS	Safety Approvals	EN-60950, UL-60950 & CE Marking
	Dielectric Withstand Voltage	
	ESD Susceptibility	Meets EN61000-4-2 8Kv Air, 4Kv contact
	Radiated Susceptibility	EN61000-4-3 30-1000MHz FCC Part 15, Subpart B CLASS B
	EFT/Burst	EN61000-4-4
	Input Surge	EN61000-4-5
	Conducted Disturbance	EN61000-4-6
	Power frequency magnetic field	EN61000-4-8
Immunity for voltage Dips	EN61000-4-11	

MONITORING COMMAND & CONTROL	Remote	
	Inhibit	Active LOW, all outputs shut down
	Power OK	Open collector active LOW when any of the outpus drop below 15% of its nominal value
	Input AC Connector	Molex 3 Pin, 0.2" 41695 Series
	Input DC Connector	
	Current Share	Yes
	Remote Sense	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
	Output Connectors V1/V2	Tap M5x82 by Fujicon F4076DS
	Output Connectors V3/V4	
	Aux. Output	+5V/5mA

MECHANICAL DIMENSIONS	Size in cm (Inch)	127 X 84 X 38 (5" X 3.3" X 1.5")
	Weight in Grams (Oz)	450gr. Max
	Cover	

OUTLINE DRAWING



eF175-124

200 Watt Open Frame Single Output AC/DC Switching power supply



Product description:

The Industry's smallest open frame single output AC/DC switcher delivering 200W continuous power with an option for built in "Oring" diodes. The unit is built in a 1U, 3" x 5" footprint.

Telkoor Part Number: 900-0424-0000

INPUT	AC	85-264VAC Wide Range
	DC	
	Input Frequency Range	47-63Hz
	Input Inrush Current	< 50Amp @ 220VAC Cold Start and < 25Amp@115VAC cold Start
	Input Reflected Ripple	FCC 68 part 15 Class B with an external line filter
	Active Power Factor Correction	0.90 typical at 110VAC input @ full load, 0.95 typical at 220VAC input @ full Load
	Efficiency @ 230VAC Full Load	85% Typical
	Efficiency @ 115VAC Full Load	82% Typical
	Efficiency @ 48VDC Full Load	
	Input Line Protection	Internal Line Fuse 5X20 type 6.3A 250Vac Normal Blow
	Hold-up Time	16mSec minimum @ Full Load
OUTPUT	V1/Current	+24VDC / 8.3A
	V2/Current	
	V3/Current	
	V4/Current	
	Aux V/Current	
	Total Output Power	200 Watt
	Line Regulation	+/- 0.2% for Vin (min.) to Vin (max.)
	Oring Option	Optional internal O-Ring diode in eFS175-124 model
	Load Regulation:	
	V1&V2	0.5% for load changes from zero to full load
	V3&V4	
	Min. Load Requirement	None
	Overshoot/Undershoot at Turn-On	< 1% at turn ON & OFF
	Turn-On Delay	2 Sec. Maximum
	Initial Setting Accuracy	Factory pre-set @ +/-0.4%
	Voltage Set point (Internal trim-pot) V1/V2	+/- 5%
	Ripple @ Noise with 20MHz Bandwidth and 10uF Load Capacitor:	
	V1	98145.451
	V3 & V4	
	Hot-Swap	Optional internal O-Ring diode in eFS175-124 model
	Current Share	Optional in eFS175-124 model, N+1 single wire
	Remote Sense (Open sense lines protected)	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
	Long Term Stability	
	Transient Response	±5% Max. Deviation for load change of 25% to 75%, at slew rate of 1A/μsec, recovery time less then 500Msec
	Over-Voltage Protection	Output shuts down at 125% of nominal (latched shutdown) AC input must recycle to re-start
	Overload Protection	
	V1 & V2	120% to 130% of I Max, constant current limit, automatic recovery
V3		
V4		
Short Circuit Protection	Yes	
Temperature Protection	Excess Temp. Shutdown When internal highest temperature exceeds >110Deg C +/- 5deg C. Auto recovery	

0456-DOC1-10-Rev-A

eF175-124

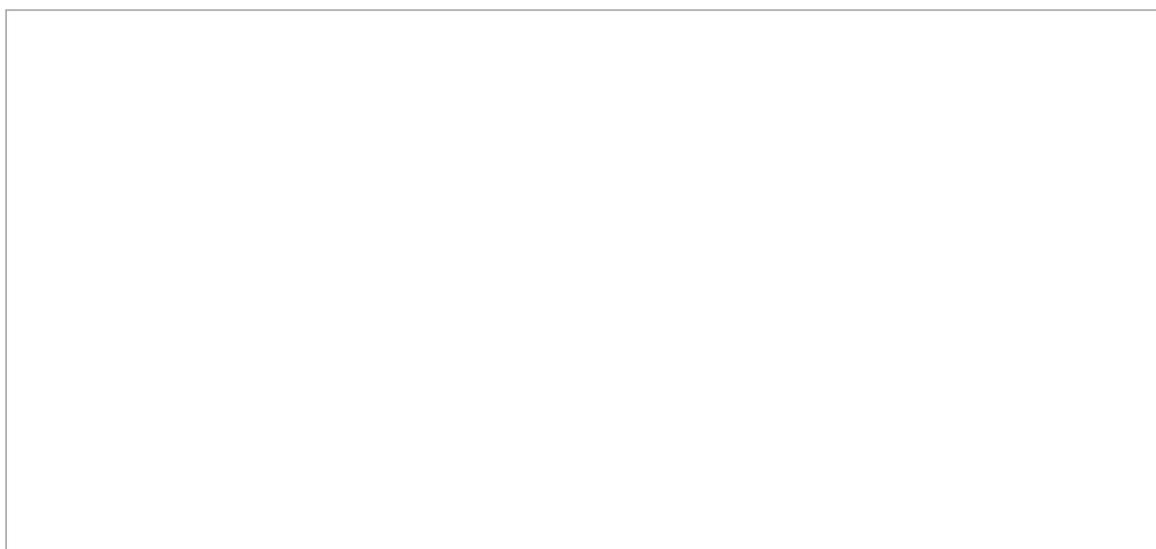
ENVIRONMENTAL	Temperature	
	Operation	-5C to +50C. Linear De-Rating of 2.5% per 1Deg. C up to +70C
	Storage	-25C to +85C
	Cooling	100W free air convection cooling (base plate cooling). 200W Forced Air Cooling 250LFM min.
	Humidity	Up to 95% RH Non-Condensing
	Shock & Vibration	Three orthogonal axis at 1 octave/min, 5 in dwell at four major resonances at 0.75G peak, 5Hz to 500Hz
	Conducted & Radiated Emission	EN55022 CLASS B with external line filter
	Surge, Spikes & Lightning Protection	EN61000-4-5
	Dielectric Isolation	
	Input to Case	1500VAC
	Input to Output	3000VAC
Output to Case	250VDC	
MTBF	300,000 Hours minimum per BELCORE 332, issue 6 specification @ 30 Deg C	

SAFETY REGULATIONS & EMI SPECIFICATIONS	Safety Approvals	EN-60950, UL-60950 & CE Marking
	Dielectric Withstand Voltage	
	ESD Susceptibility	Meets EN61000-4-2 8Kv Air, 4Kv contact
	Radiated Susceptibility	EN61000-4-3 30-1000MHz FCC Part 15, Subpart B CLASS B
	EFT/Burst	EN61000-4-4
	Input Surge	EN61000-4-5
	Conducted Disturbance	EN61000-4-6
	Power frequency magnetic field	EN61000-4-8
Immunity for voltage Dips	EN61000-4-11	

MONITORING COMMAND & CONTROL	Remote Inhibit	Optional Active LOW, all outputs shut down in eFS175-124 Model
	Power OK	Optional Open collector active LOW when any of the outputs drop below 15% of its nominal value in eFS175-124model.
	Input AC Connector	Molex 3 Pin, 0.2" 41695 Series
	Input DC Connector	
	Current Share	Optional in eFS175-124 Model
	Remote Sense	Optional in eFS175-124 Model
	Output Connectors V1/V2	Molex 6 Pin Header, 26-48-1065
	Output Connectors V3/V4	
	Aux. Output	Optional +5V/5mA in eFS175-124 Model

MECHANICAL DIMENSIONS	Size in cm (Inch)	127 X 84 X 38 (5" X 3.3" X 1.5")
	Weight in Grams (Oz)	450gr. Max
	Cover	

OUTLINE DRAWING



eF175-128

200 Watt Open Frame Dual Output AC/DC Switching power supply



Product description:

The Industry's smallest open frame single output AC/DC switcher delivering 200W continuous power with an option for built in "Oring" diodes. The unit is built in a 1U, 3" x 5" footprint.

Telkoor Part Number: 900-0428-0000

INPUT	
AC	85-264VAC Wide Range
DC	
Input Frequency Range	47-63Hz
Input Inrush Current	< 50Amp @ 220VAC Cold Start and < 25Amp@115VAC cold Start
Input Reflected Ripple	FCC 68 part 15 Class B with an external line filter
Active Power Factor Correction	0.90 typical at 110VAC input @ full load, 0.95 typical at 220VAC input @ full Load
Efficiency @ 230VAC Full Load	85% Typical
Efficiency @ 115VAC Full Load	82% Typical
Efficiency @ 48VDC Full Load	
Input Line Protection	Internal Line Fuse 5X20 type 6.3A 250Vac Normal Blow
Hold-up Time	16mSec minimum @ Full Load
OUTPUT	
V1/Current	+28VDC / 7.15A
V2/Current	
V3/Current	
V4/Current	
Aux V/Current	
Total Output Power	200 Watt
Line Regulation	+/- 0.2% for Vin (min.) to Vin (max.)
Oring Option	Optional internal O-Ring diode in eFS175-128 model
Load Regulation:	
V1&V2	0.5% for load changes from zero to full load
V3&V4	
Min. Load Requirement	None
Overshoot/Undershoot at Turn-On	< 1% at turn ON & OFF
Turn-On Delay	2 Sec. Maximum
Initial Setting Accuracy	Factory pre-set @ +/-0.4%
Voltage Set point (Internal trim-pot) V1/V2	+/- 5%
Ripple @ Noise with 20MHz Bandwidth and 10uF Load Capacitor:	
V1	1% Max
V2	
V3 & V4	
Hot-Swap	Optional internal O-Ring diode in eFS175-128 model
Current Share	
Remote Sense (Open sense lines protected)	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
Long Term Stability	
Transient Response	±5% Max. Deviation for load change of 25% to 75%, at slew rate of 1A/μsec, recovery time less then 500Msec
Over-Voltage Protection	Output shuts down at 125% of nominal (latched shutdown) AC input must recycle to re-start
Overload Protection	
V1 & V2	120% to 130% of I Max, constant current limit, automatic recovery
V3	
V4	
Short Circuit Protection	Yes
Temperature Protection	Excess Temp. Shutdown When internal highest temperature exceeds >110Deg C +/- 5deg C. Auto recovery

0428-DOC1-10-Rev-A

eF175-128

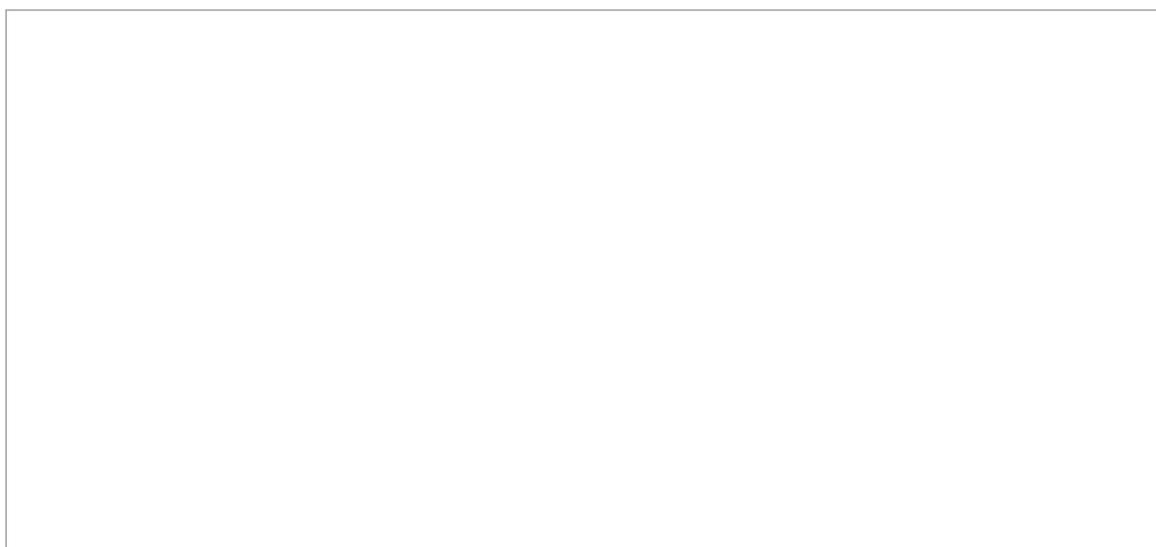
ENVIRONMENTAL	Temperature	
	Operation	-5C to +50C. Linear De-Rating of 2.5% per 1Deg. C up to +70C
	Storage	-25C to +85C
	Cooling	100W free air convection cooling (base plate cooling). 200W Forced Air Cooling 250LFM min.
	Humidity	Up to 95% RH Non-Condensing
	Shock & Vibration	Three orthogonal axis at 1 octave/min, 5 in dwell at four major resonances at 0.75G peak, 5Hz to 500Hz
	Conducted & Radiated Emission	EN55022 CLASS B with external line filter
	Surge, Spikes & Lightning Protection	EN61000-4-5
	Dielectric Isolation	
	Input to Case	1500VAC
	Input to Output	3000VAC
Output to Case	250VDC	
MTBF	300,000 Hours minimum per BELCORE 332, issue 6 specification @ 30 Deg C	

SAFETY REGULATIONS & EMI SPECIFICATIONS	Safety Approvals	EN-60950, UL-60950 & CE Marking
	Dielectric Withstand Voltage	
	ESD Susceptibility	Meets EN61000-4-2 8Kv Air, 4Kv contact
	Radiated Susceptibility	EN61000-4-3 30-1000MHz FCC Part 15, Subpart B CLASS B
	EFT/Burst	EN61000-4-4
	Input Surge	EN61000-4-5
	Conducted Disturbance	EN61000-4-6
	Power frequency magnetic field	EN61000-4-8
Immunity for voltage Dips	EN61000-4-11	

MONITORING COMMAND & CONTROL	Remote	
	Inhibit	Optional Active LOW, all outputs shut down
	Power OK	Open collector active LOW when any of the outputs drop below 15% of its nominal value
	Input AC Connector	Molex 3 Pin, 0.2" 41695 Series
	Input DC Connector	
	Current Share	Optional in eFS175-128 Model
	Remote Sense	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
	Output Connectors V1/V2	Molex 6 Pin Header, 26-48-1065
	Output Connectors V3/V4	
	Aux. Output	N/A

MECHANICAL DIMENSIONS	Size in cm (Inch)	127 X 84 X 38 (5" X 3.3" X 1.5")
	Weight in Grams (Oz)	450gr. Max
	Cover	

OUTLINE DRAWING



eF175-148

200 Watt Open Frame Single Output AC/DC Switching power supply



Product description:

The Industry's smallest open frame single output AC/DC switcher delivering 200W continuous power with an option for built in "Oring" diodes. The unit is built in a 1U, 3" x 5" footprint.

Telkoor Part Number: 900-0448-0000

INPUT	AC	85-264VAC Wide Range
	DC	
	Input Frequency Range	47-63Hz
	Input Inrush Current	< 50Amp @ 220VAC Cold Start and < 25Amp@115VAC cold Start
	Input Reflected Ripple	FCC 68 part 15 Class B with an external line filter
	Active Power Factor Correction	0.90 typical at 110VAC input @ full load, 0.95 typical at 220VAC input @ full Load
	Efficiency @ 230VAC Full Load	85% Typical
	Efficiency @ 115VAC Full Load	82% Typical
	Efficiency @ 48VDC Full Load	
	Input Line Protection	Internal Line Fuse 5X20 type 6.3A 250Vac Normal Blow
Hold-up Time	16mSec minimum @ Full Load	
OUTPUT	V1/Current	+48VDC / 4.2A
	V2/Current	
	V3/Current	
	V4/Current	
	Aux V/Current	
	Total Output Power	200W
	Line Regulation	+/- 0.2% for Vin (min.) to Vin (max.)
	Oring Option	Optional internal O-Ring diode in eFS175-148 model
	Load Regulation:	
	V1&V2	0.5% for load changes from zero to full load
	V3&V4	
	Min. Load Requirement	None
	Overshoot/Undershoot at Turn-On	< 1% at turn ON & OFF
	Turn-On Delay	2 Sec. Maximum
	Initial Setting Accuracy	Factory pre-set @ +/-0.4%
	Voltage Set point (Internal trim-pot) V1/V2	+/- 5%
	Ripple @ Noise with 20MHz Bandwidth and 10uF Load Capacitor:	
	V1	1% Max
	V2	
	V3 & V4	
	Hot-Swap	Optional internal O-Ring diode in eFS175-148 model
	Current Share	Optional in eFS175-148 model, N+1 single wire
	Remote Sense (Open sense lines protected)	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
	Long Term Stability	
	Transient Response	±5% Max. Deviation for load change of 25% to 75%, at slew rate of 1A/ μsec, recovery time less then 500Msec
	Over-Voltage Protection	Output shuts down at 125% of nominal (latched shutdown) AC input must recycle to re-start
	Overload Protection	
	V1 & V2	120% to 130% of I Max, constant current limit, automatic recovery
V3		
V4		
Short Circuit Protection	Yes	
Temperature Protection	Excess Temp. Shutdown When internal highest temperature exceeds >110Deg C +/- 5deg C. Auto recovery	

0448-DOC1-10-Rev-A

eF175-148

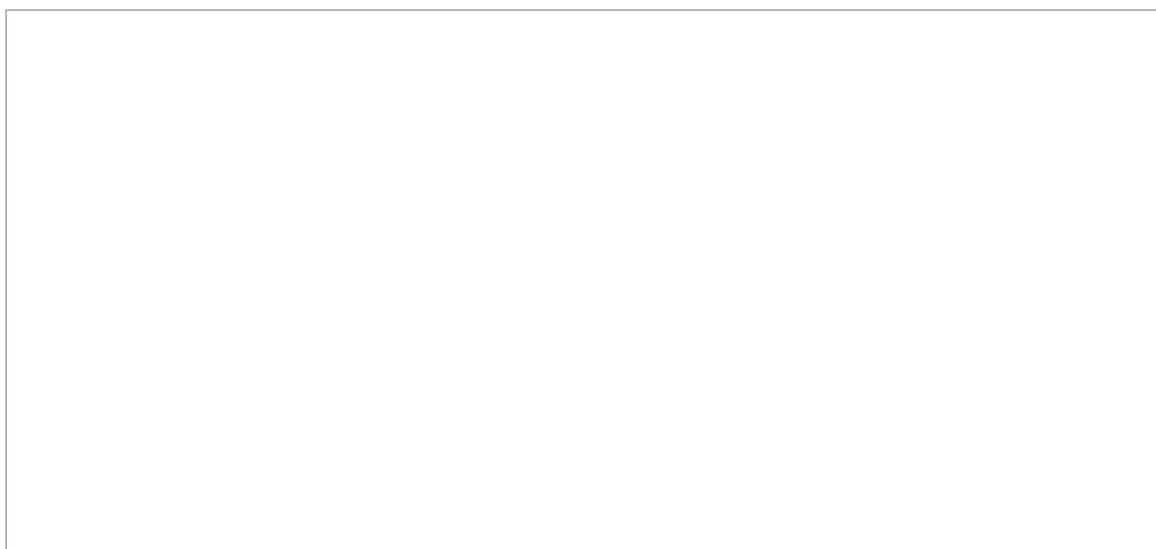
ENVIRONMENTAL	Temperature	
	Operation	-5C to +50C. Linear De-Rating of 2.5% per 1Deg. C up to +70C
	Storage	-25C to +85C
	Cooling	100W free air convection cooling (base plate cooling). 200W Forced Air Cooling 250LFM min.
	Humidity	Up to 95% RH Non-Condensing
	Shock & Vibration	Three orthogonal axis at 1 octave/min, 5 in dwell at four major resonances at 0.75G peak, 5Hz to 500Hz
	Conducted & Radiated Emission	EN55022 CLASS B with external line filter
	Surge, Spikes & Lightning Protection	EN61000-4-5
	Dielectric Isolation	
	Input to Case	1500VAC
	Input to Output	3000VAC
Output to Case	250VDC	
MTBF	300,000 Hours minimum per BELCORE 332, issue 6 specification @ 30 Deg C	

SAFETY REGULATIONS & EMI SPECIFICATIONS	Safety Approvals	EN-60950, UL-60950 & CE Marking
	Dielectric Withstand Voltage	
	ESD Susceptibility	Meets EN61000-4-2 8Kv Air, 4Kv contact
	Radiated Susceptibility	EN61000-4-3 30-1000MHz FCC Part 15, Subpart B CLASS B
	EFT/Burst	EN61000-4-4
	Input Surge	EN61000-4-5
	Conducted Disturbance	EN61000-4-6
	Power frequency magnetic field	EN61000-4-8
Immunity for voltage Dips	EN61000-4-11	

MONITORING COMMAND & CONTROL	Remote Inhibit	Optional Active LOW, all outputs shut down in eFS175-148 Model
	Power OK	Optional Open collector active LOW when any of the outputs drop below 15% of its nominal value in eFS175-148model.
	Input AC Connector	Molex 3 Pin, 0.2" 41695 Series
	Input DC Connector	
	Current Share	Optional in eFS175-148 Model
	Remote Sense	Optional in eFS175-148 Model
	Output Connectors V1/V2	Molex 6 Pin Header, 26-48-1065
	Output Connectors V3/V4	
	Aux. Output	Optional +5V/5mA in eFS175-148 Model

MECHANICAL DIMENSIONS	Size in cm (Inch)	127 X 84 X 38 (5" X 3.3" X 1.5")
	Weight in Grams (Oz)	450gr. Max
	Cover	

OUTLINE DRAWING



eFI75-205

200 Watt Open Frame Dual Output AC/DC Switching power supply



Product description:

The Industry's smallest open frame dual output AC/DC switcher delivering 200W continuous power with an option for built in "Oring" diodes. The unit is built in a 1U, 3" x 5" footprint.

Telkoor Part Number: 900-0205-0000

INPUT	
AC	85-264VAC Wide Range
DC	
Input Frequency Range	47-63Hz
Input Inrush Current	< 50Amp @ 220VAC Cold Start and < 25Amp@115VAC cold Start
Input Reflected Ripple	FCC 68 part 15 Class B with an external line filter
Active Power Factor Correction	0.90 typical at 110VAC input @ full load, 0.95 typical at 220VAC input @ full Load
Efficiency @ 230VAC Full Load	85% Typical
Efficiency @ 115VAC Full Load	82% Typical
Efficiency @ 48VDC Full Load	
Input Line Protection	Internal Line Fuse 5X20 type 6.3A 250Vac Normal Blow
Hold-up Time	16mSec minimum @ Full Load
OUTPUT	
V1/Current	+5V/30A
V2/Current	+12V/5A
V3/Current	
V4/Current	
Aux V/Current	
Total Output Power	200W
Line Regulation	+/- 0.2% for Vin (min.) to Vin (max.)
Oring Option	Optional internal O-Ring diode in eFS175-205 model
Load Regulation:	
V1&V2	0.5% for load changes from zero to full load
V3&V4	
Min. Load Requirement	None
Overshoot/Undershoot at Turn-On	< 1% at turn ON & OFF
Turn-On Delay	2 Sec. Maximum
Initial Setting Accuracy	Factory pre-set @ +/-0.4%
Voltage Set point (Internal trim-pot) V1/V2	+/- 5%
Ripple @ Noise with 20MHz Bandwidth and 10uF Load Capacitor:	
V1	1% Max
V2	
V3 & V4	
Hot-Swap	Optional internal O-Ring diode in eFS175-205 model
Current Share	Optional in eFS175-205 model, N+1 single wire
Remote Sense (Open sense lines protected)	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
Long Term Stability	
Transient Response	±5% Max. Deviation for load change of 25% to 75%, at slew rate of 1A/ μsec, recovery time less then 500Msec
Over-Voltage Protection	Output shuts down at 125% of nominal (latched shutdown) AC input must recycle to re-start
Overload Protection	
V1 & V2	120% to 130% of I Max, constant current limit, automatic recovery
V3	
V4	
Short Circuit Protection	Yes
Temperature Protection	Excess Temp. Shutdown When internal highest temperature exceeds >110Deg C +/- 5deg C. Auto recovery

0205-DOC1-10-Rev-A

eF175-205

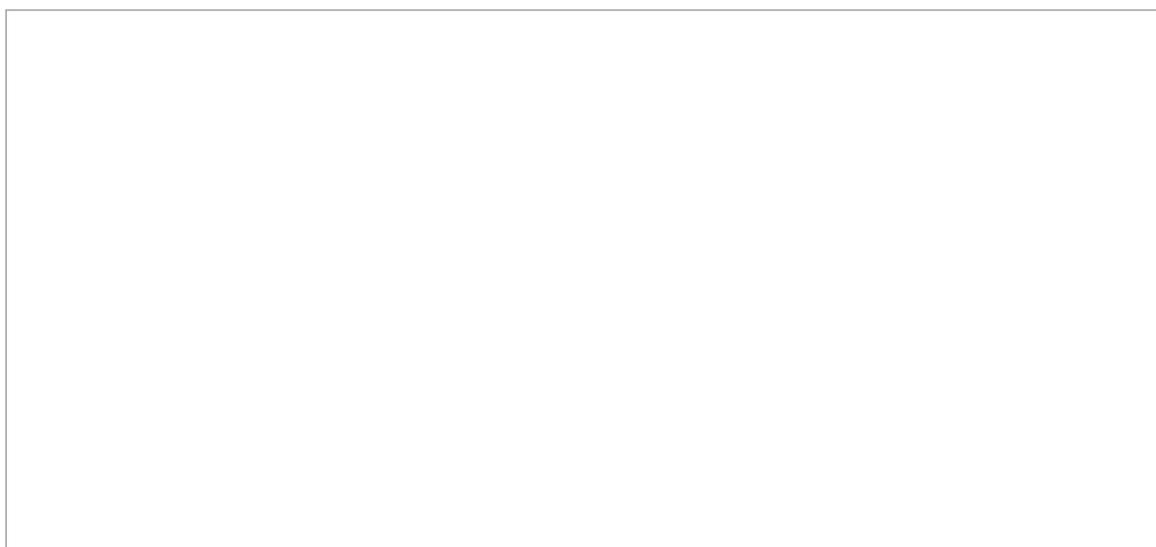
ENVIRONMENTAL	Temperature	
	Operation	-5C to +50C. Linear De-Rating of 2.5% per 1Deg. C up to +70C
	Storage	-25C to +85C
	Cooling	100W free air convection cooling (base plate cooling). 200W Forced Air Cooling 250LFM min.
	Humidity	Up to 95% RH Non-Condensing
	Shock & Vibration	Three orthogonal axis at 1 octave/min, 5 in dwell at four major resonances at 0.75G peak, 5Hz to 500Hz
	Conducted & Radiated Emission	EN55022 CLASS B with external line filter
	Surge, Spikes & Lightning Protection	EN61000-4-5
	Dielectric Isolation	
	Input to Case	1500VAC
	Input to Output	3000VAC
Output to Case	250VDC	
MTBF	300,000 Hours minimum per BELCORE 332, issue 6 specification @ 30 Deg C	

SAFETY REGULATIONS & EMI SPECIFICATIONS	Safety Approvals	EN-60950, UL-60950 & CE Marking
	Dielectric Withstand Voltage	
	ESD Susceptibility	Meets EN61000-4-2 8Kv Air, 4Kv contact
	Radiated Susceptibility	EN61000-4-3 30-1000MHz FCC Part 15, Subpart B CLASS B
	EFT/Burst	EN61000-4-4
	Input Surge	EN61000-4-5
	Conducted Disturbance	EN61000-4-6
	Power frequency magnetic field	EN61000-4-8
	Immunity for voltage Dips	EN61000-4-11

MONITORING COMMAND & CONTROL	Remote Inhibit	Optional Active LOW, all outputs shut down in eFS175-205 Model
	Power OK	Open collector active LOW when any of the outpus drop below 15% of its nominal value
	Input AC Connector	Molex 3 Pin, 0.2" 41695 Series
	Input DC Connector	
	Current Share	Optional in eFS175-205 Model
	Remote Sense	Optional in eFS175-205 Model
	Output Connectors V1/V2	V1 - Tap M5x82 by Fujicon F4076DS & V2 - Molex 2 Pin Header, 26-48-1065
	Output Connectors V3/V4	
	Aux. Output	Optional +5V/5mA in eFS175-212 Model

MECHANICAL DIMENSIONS	Size in cm (Inch)	127 X 84 X 38 (5" X 3.3" X 1.5")
	Weight in Grams (Oz)	500gr. Max
	Cover	

OUTLINE DRAWING



eF175-212

200 Watt Open Frame Dual Output AC/DC Switching power supply



Product description:

The Industry's smallest open frame dual output AC/DC switcher delivering 200W continuous power with an option for built in "Oring" diodes. The unit is built in a 1U, 3" x 5" footprint.

Telkoor Part Number: 900-0212-0000

INPUT	
AC	85-264VAC Wide Range
DC	
Input Frequency Range	47-63Hz
Input Inrush Current	< 50Amp @ 220VAC Cold Start and < 25Amp@115VAC cold Start
Input Reflected Ripple	FCC 68 part 15 Class B with an external line filter
Active Power Factor Correction	0.90 typical at 110VAC input @ full load, 0.95 typical at 220VAC input @ full Load
Efficiency @ 230VAC Full Load	85% Typical
Efficiency @ 115VAC Full Load	82% Typical
Efficiency @ 48VDC Full Load	
Input Line Protection	Internal Line Fuse 5X20 type 6.3A 250Vac Normal Blow
Hold-up Time	16mSec minimum @ Full Load
OUTPUT	
V1/Current	+12V/14.5A
V2/Current	+5V/5A
V3/Current	
V4/Current	
Aux V/Current	
Total Output Power	200W
Line Regulation	+/- 0.2% for Vin (min.) to Vin (max.)
Oring Option	Optional internal O-Ring diode in eFS175-212 model
Load Regulation:	
V1&V2	0.5% for load changes from zero to full load
V3&V4	
Min. Load Requirement	None
Overshoot/Undershoot at Turn-On	< 1% at turn ON & OFF
Turn-On Delay	2 Sec. Maximum
Initial Setting Accuracy	Factory pre-set @ +/-0.4%
Voltage Set point (Internal trim-pot) V1/V2	+/- 5%
Ripple @ Noise with 20MHz Bandwidth and 10uF Load Capacitor:	
V1	1% Max
V2	
V3 & V4	
Hot-Swap	Optional internal O-Ring diode in eFS175-212 model
Current Share	Optional in eFS175-212 model, N+1 single wire
Remote Sense (Open sense lines protected)	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
Long Term Stability	
Transient Response	±5% Max. Deviation for load change of 25% to 75%, at slew rate of 1A/μsec, recovery time less then 500Msec
Over-Voltage Protection	Output shuts down at 125% of nominal (latched shutdown) AC input must recycle to re-start
Overload Protection	
V1 & V2	120% to 130% of I Max, constant current limit, automatic recovery
V3	
V4	
Short Circuit Protection	Yes
Temperature Protection	Excess Temp. Shutdown When internal highest temperature exceeds >110Deg C +/- 5deg C. Auto recovery

0212-DOC1-10-Rev-A

eF175-212

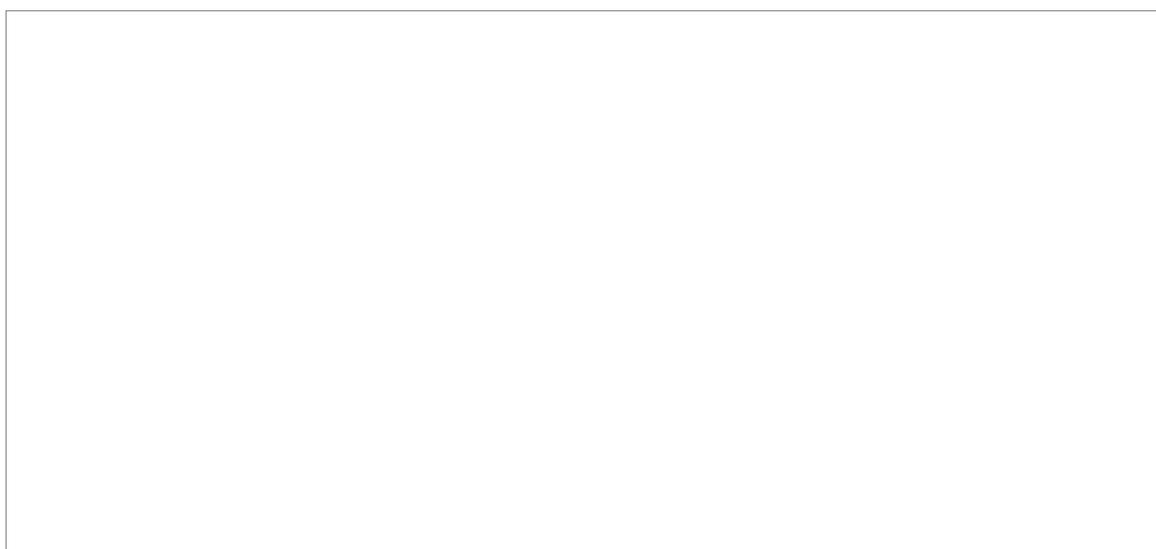
ENVIRONMENTAL	Temperature	
	Operation	-5C to +50C. Linear De-Rating of 2.5% per 1Deg. C up to +70C
	Storage	-25C to +85C
	Cooling	100W free air convection cooling (base plate cooling). 200W Forced Air Cooling 250LFM min.
	Humidity	Up to 95% RH Non-Condensing
	Shock & Vibration	Three orthogonal axis at 1 octave/min, 5 in dwell at four major resonances at 0.75G peak, 5Hz to 500Hz
	Conducted & Radiated Emission	EN55022 CLASS B with external line filter
	Surge, Spikes & Lightning Protection	EN61000-4-5
	Dielectric Isolation	
	Input to Case	1500VAC
	Input to Output	3000VAC
Output to Case	250VDC	
MTBF	300,000 Hours minimum per BELCORE 332, issue 6 specification @ 30 Deg C	

SAFETY REGULATIONS & EMI SPECIFICATIONS	Safety Approvals	EN-60950, UL-60950 & CE Marking
	Dielectric Withstand Voltage	
	ESD Susceptibility	Meets EN61000-4-2 8Kv Air, 4Kv contact
	Radiated Susceptibility	EN61000-4-3 30-1000MHz FCC Part 15, Subpart B CLASS B
	EFT/Burst	EN61000-4-4
	Input Surge	EN61000-4-5
	Conducted Disturbance	EN61000-4-6
	Power frequency magnetic field	EN61000-4-8
	Immunity for voltage Dips	EN61000-4-11

MONITORING COMMAND & CONTROL	Remote Inhibit	Optional Active LOW, all outputs shut down in eFS175-212 Model
	Power OK	Open collector active LOW when any of the outpus drop below 15% of its nominal value
	Input AC Connector	Molex 3 Pin, 0.2" 41695 Series
	Input DC Connector	
	Current Share	Optional in eFS175-212 Model
	Remote Sense	Optional in eFS175-212 Model
	Output Connectors V1/V2	V1 - Tap M5x82 by Fujicon F4076DS & V2 - Molex 2 Pin Header, 26-48-1065
	Output Connectors V3/V4	
	Aux. Output	Optional +5V/5mA in eFS175-212 Model

MECHANICAL DIMENSIONS	Size in cm (Inch)	127 X 84 X 38 (5" X 3.3" X 1.5")
	Weight in Grams (Oz)	500gr. Max
	Cover	

OUTLINE DRAWING



eFI75-224

200 Watt Open Frame Quad Output AC/DC Switching power supply



Product description:

The Industry's smallest open frame quad output AC/DC switcher delivering 200W continuous power with active PFC. The unit is built in a 1U, 3" x 5" footprint.

Telkoor Part Number: 900-0224-0000

INPUT	
AC	85-264VAC Wide Range
DC	
Input Frequency Range	47-63Hz
Input Inrush Current	< 50Amp @ 220VAC Cold Start and < 25Amp@115VAC cold Start
Input Reflected Ripple	FCC 68 part 15 Class B with an external line filter
Active Power Factor Correction	0.90 typical at 110VAC input @ full load, 0.95 typical at 220VAC input @ full Load
Efficiency @ 230VAC Full Load	85% Typical
Efficiency @ 115VAC Full Load	82% Typical
Efficiency @ 48VDC Full Load	
Input Line Protection	Internal Line Fuse 5X20 type 6.3A 250Vac Normal Blow
Hold-up Time	16mSec minimum @ Full Load
OUTPUT	
V1/Current	+24VDC/7.5A, 12V/1A
V2/Current	
V3/Current	
V4/Current	
Aux V/Current	
Total Output Power	200 Watt
Line Regulation	+/- 0.2% for Vin (min.) to Vin (max.)
Oring Option	No
Load Regulation:	
V1&V2	0.5% for load changes from zero to full load
V3&V4	
Min. Load Requirement	None
Overshoot/Undershoot at Turn-On	< 1% at turn ON & OFF
Turn-On Delay	2 Sec. Maximum
Initial Setting Accuracy	Factory pre-set @ +/-0.4%
Voltage Set point (Internal trim-pot) V1/V2	+/- 5%
Ripple @ Noise with 20MHz Bandwidth and 10uF Load Capacitor:	
V1	75mV Max. Vp-p 20Mhz BW
V2	150mV Max. Vp-p 20Mhz BW
V3 & V4	
Hot-Swap	N/A
Current Share	N/A
Remote Sense (Open sense lines protected)	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
Long Term Stability	
Transient Response	±5% Max. Deviation for load change of 25% to 75%, at slew rate of 1A/ μsec, recovery time less then 500Msec
Over-Voltage Protection	Output shuts down at 125% of nominal (latched shutdown) AC input must recycle to re-start
Overload Protection	
V1 & V2	120% to 130% of I Max, constant current limit, automatic recovery
V3	
V4	
Short Circuit Protection	Yes
Temperature Protection	Excess Temp. Shutdown When internal highest temperature exceeds >110Deg C +/- 5deg C. Auto recovery

0224-DOC1-10-Rev-A

eF175-224

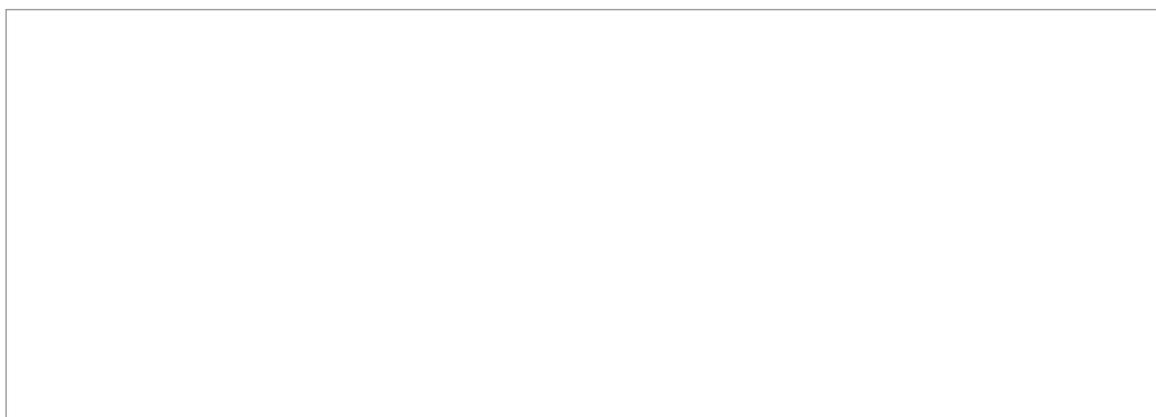
ENVIRONMENTAL	Temperature	
	Operation	-5C to +50C. Linear De-Rating of 2.5% per 1Deg. C up to +70C
	Storage	-25C to +85C
	Cooling	100W free air convection cooling (base plate cooling). 200W Forced Air Cooling 250LFM min.
	Humidity	Up to 95% RH Non-Condensing
	Shock & Vibration	Three orthogonal axis at 1 octave/min, 5 in dwell at four major resonances at 0.75G peak, 5Hz to 500Hz
	Conducted & Radiated Emission	EN55022 CLASS B with external line filter
	Surge, Spikes & Lightning Protection	EN61000-4-5
	Dielectric Isolation	
	Input to Case	1500VAC
Input to Output	3000VAC	
Output to Case	250VDC	
MTBF	300,000 Hours minimum per BELCORE 332, issue 6 specification @ 30 Deg C	

SAFETY REGULATIONS & EMI SPECIFICATIONS	Safety Approvals	EN-60950, UL-60950 & CE Marking
	Dielectric Withstand Voltage	
	ESD Susceptibility	Meets EN61000-4-2 8Kv Air, 4Kv contact
	Radiated Susceptibility	EN61000-4-3 30-1000MHz FCC Part 15, Subpart B CLASS B
	EFT/Burst	EN61000-4-4
	Input Surge	EN61000-4-5
	Conducted Disturbance	EN61000-4-6
	Power frequency magnetic field	EN61000-4-8
	Immunity for voltage Dips	EN61000-4-11

MONITORING COMMAND & CONTROL	Remote	
	Inhibit	Optional Active LOW, all outputs shut down
	Power OK	Open collector active LOW when any of the outputs drop below 15% of its nominal value
	Input AC Connector	Molex 3 Pin, 0.2" 41695 Series
	Input DC Connector	
	Current Share	N/A
	Remote Sense	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
	Output Connectors V1/V2	Molex 6 Pin Header, 26-48-1065
	Output Connectors V3/V4	
Aux. Output	N/A	

MECHANICAL DIMENSIONS	Size in cm (Inch)	127 X 84 X 38 (5" X 3.3" X 1.5")
	Weight in Grams (Oz)	450gr. Max
	Cover	

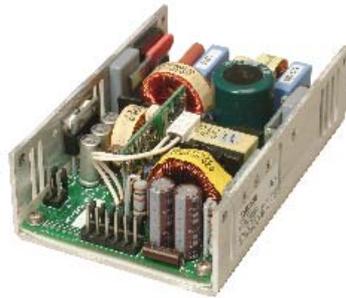
OUTLINE DRAWING



0224-DOC1-10-Rev-A

eFI75-248

200 Watt Open Frame Dual Output AC/DC Switching power supply



Product description:

The Industry's smallest open frame dual output AC/DC switcher delivering 200W continuous power with built in "Oring" diodes. The unit is built in a 1U, 3" x 5" footprint.

Telkoor Part Number: 900-0248-0000

INPUT	
AC	85-264VAC Wide Range
DC	
Input Frequency Range	47-63Hz
Input Inrush Current	< 50Amp @ 220VAC Cold Start and < 25Amp@115VAC cold Start
Input Reflected Ripple	FCC 68 part 15 Class B with an external line filter
Active Power Factor Correction	0.90 typical at 110VAC input @ full load, 0.95 typical at 220VAC input @ full Load
Efficiency @ 230VAC Full Load	85% Typical
Efficiency @ 115VAC Full Load	82% Typical
Efficiency @ 48VDC Full Load	
Input Line Protection	Internal Line Fuse 5X20 type 6.3A 250Vac Normal Blow
Hold-up Time	16mSec minimum @ Full Load
OUTPUT	
V1/Current	+48V/2.9A
V2/Current	+12V/5A
V3/Current	
V4/Current	
Aux V/Current	
Total Output Power	200W
Line Regulation	+/- 0.2% for Vin (min.) to Vin (max.)
Oring Option	Optional internal O-Ring diode in eFS175-248 model
Load Regulation:	
V1&V2	0.5% for load changes from zero to full load
V3&V4	
Min. Load Requirement	None
Overshoot/Undershoot at Turn-On	< 1% at turn ON & OFF
Turn-On Delay	2 Sec. Maximum
Initial Setting Accuracy	Factory pre-set @ +/-0.4%
Voltage Set point (Internal trim-pot) V1/V2	+/- 5%
Ripple @ Noise with 20MHz Bandwidth and 10uF Load Capacitor:	
V1	1% Max
V2	
V3 & V4	
Hot-Swap	Optional internal O-Ring diode in eFS175-248 model
Current Share	Optional in eFS175-248 model, N+1 single wire
Remote Sense (Open sense lines protected)	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
Long Term Stability	
Transient Response	±5% Max. Deviation for load change of 25% to 75%, at slew rate of 1A/ μsec, recovery time less then 500Msec
Over-Voltage Protection	Output shuts down at 125% of nominal (latched shutdown) AC input must recycle to re-start
Overload Protection	
V1 & V2	120% to 130% of I Max, constant current limit, automatic recovery
V3	
V4	
Short Circuit Protection	Yes
Temperature Protection	Excess Temp. Shutdown When internal highest temperature exceeds >110Deg C +/- 5deg C. Auto recovery

0248-DOC1-10-Rev-A

eF175-248

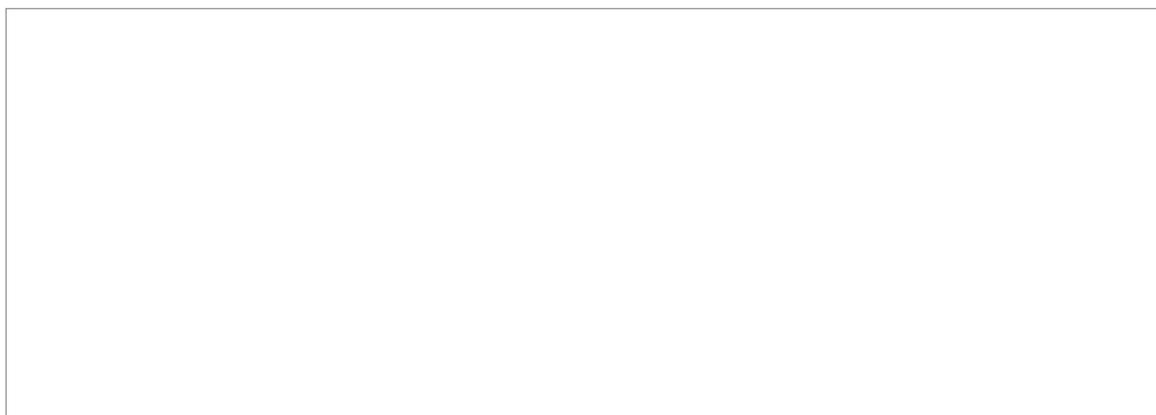
ENVIRONMENTAL	Temperature	
	Operation	-5C to +50C. Linear De-Rating of 2.5% per 1Deg. C up to +70C
	Storage	-25C to +85C
	Cooling	100W free air convection cooling (base plate cooling). 200W Forced Air Cooling 250LFM min.
	Humidity	Up to 95% RH Non-Condensing
	Shock & Vibration	Three orthogonal axis at 1 octave/min, 5 in dwell at four major resonances at 0.75G peak, 5Hz to 500Hz
	Conducted & Radiated Emission	EN55022 CLASS B with external line filter
	Surge, Spikes & Lightning Protection	EN61000-4-5
	Dielectric Isolation	
	Input to Case	1500VAC
	Input to Output	3000VAC
	Output to Case	250VDC
	MTBF	300,000 Hours minimum per BELCORE 332, issue 6 specification @ 30 Deg C

SAFETY REGULATIONS & EMI SPECIFICATIONS	Safety Approvals	EN-60950, UL-60950 & CE Marking
	Dielectric Withstand Voltage	
	ESD Susceptibility	Meets EN61000-4-2 8Kv Air, 4Kv contact
	Radiated Susceptibility	EN61000-4-3 30-1000MHz FCC Part 15, Subpart B CLASS B
	EFT/Burst	EN61000-4-4
	Input Surge	EN61000-4-5
	Conducted Disturbance	EN61000-4-6
	Power frequency magnetic field	EN61000-4-8
	Immunity for voltage Dips	EN61000-4-11

MONITORING COMMAND & CONTROL	Remote	
	Inhibit	Optional Active LOW, all outputs shut down in eFS175-248 Model
	Power OK	Open collector active LOW when any of the output drop below 15% of its nominal value
	Input AC Connector	Molex 3 Pin, 0.2" 41695 Series
	Input DC Connector	
	Current Share	Optional in eFS175-248 Model
	Remote Sense	Optional in eFS175-248 Model
	Output Connectors V1/V2	Molex 6 Pin Header, 26-48-1065
	Output Connectors V3/V4	
	Aux. Output	Optional +5V/5mA in eFS175-248 Model

MECHANICAL DIMENSIONS	Size in cm (Inch)	127 X 84 X 38 (5" X 3.3" X 1.5")
	Weight in Grams (Oz)	500gr. Max
	Cover	

OUTLINE DRAWING



0248-DOC1-10-Rev-A

eFI75-255

150 Watt Open Frame Dual Output AC/DC Switching power supply



Product description:

The Industry's smallest open frame dual output AC/DC switcher delivering 150W continuous power with an option for built in "Oring" diodes. The unit is built in a 1U, 3" x 5" footprint.

Telkoor Part Number: 900-0255-0000

INPUT	
AC	85-264VAC Wide Range
DC	
Input Frequency Range	47-63Hz
Input Inrush Current	< 50Amp @ 220VAC Cold Start and < 25Amp@115VAC cold Start
Input Reflected Ripple	FCC 68 part 15 Class B with an external line filter
Active Power Factor Correction	0.90 typical at 110VAC input @ full load, 0.95 typical at 220VAC input @ full Load
Efficiency @ 230VAC Full Load	85% Typical
Efficiency @ 115VAC Full Load	82% Typical
Efficiency @ 48VDC Full Load	
Input Line Protection	Internal Line Fuse 5X20 type 6.3A 250Vac Normal Blow
Hold-up Time	16mSec minimum @ Full Load
OUTPUT	
V1/Current	-55V/1.6A
V2/Current	+12V/5A
V3/Current	
V4/Current	
Aux V/Current	
Total Output Power	150W
Line Regulation	+/- 0.2% for Vin (min.) to Vin (max.)
Oring Option	Optional internal O-Ring diode in eFS175-255 model
Load Regulation:	
V1&V2	0.5% for load changes from zero to full load
V3&V4	
Min. Load Requirement	None
Overshoot/Undershoot at Turn-On	< 1% at turn ON & OFF
Turn-On Delay	2 Sec. Maximum
Initial Setting Accuracy	Factory pre-set @ +/-0.4%
Voltage Set point (Internal trim-pot) V1/V2	+/- 5%
Ripple @ Noise with 20MHz Bandwidth and 10uF Load Capacitor:	
V1	1% Max
V2	
V3 & V4	
Hot-Swap	Optional internal O-Ring diode in eFS175-255 model
Current Share	Optional in eFS175-255 model, N+1 single wire
Remote Sense (Open sense lines protected)	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
Long Term Stability	
Transient Response	±5% Max. Deviation for load change of 25% to 75%, at slew rate of 1A/ μsec, recovery time less then 500Msec
Over-Voltage Protection	Output shuts down at 125% of nominal (latched shutdown) AC input must recycle to re-start
Overload Protection	
V1 & V2	120% to 130% of I Max, constant current limit, automatic recovery
V3	
V4	
Short Circuit Protection	Yes
Temperature Protection	Excess Temp. Shutdown When internal highest temperature exceeds >110Deg C +/- 5deg C. Auto recovery

0255-DOC1-10-Rev-A

eF175-255

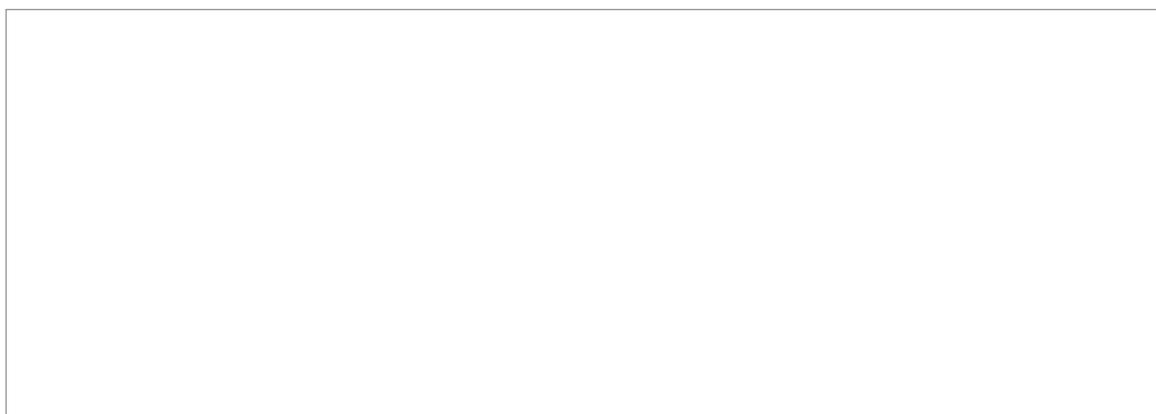
ENVIRONMENTAL	Temperature	
	Operation	-5C to +50C. Linear De-Rating of 2.5% per 1Deg. C up to +70C
	Storage	-25C to +85C
	Cooling	75W free air convection cooling (base plate cooling). 150W Forced Air Cooling 250LFM min.
	Humidity	Up to 95% RH Non-Condensing
	Shock & Vibration	Three orthogonal axis at 1 octave/min, 5 in dwell at four major resonances at 0.75G peak, 5Hz to 500Hz
	Conducted & Radiated Emission	EN55022 CLASS B with external line filter
	Surge, Spikes & Lightning Protection	EN61000-4-5
	Dielectric Isolation	
	Input to Case	1500VAC
Input to Output	3000VAC	
Output to Case	250VDC	
MTBF	300,000 Hours minimum per BELCORE 332, issue 6 specification @ 30 Deg C	

SAFETY REGULATIONS & EMI SPECIFICATIONS	Safety Approvals	EN-60950, UL-60950 & CE Marking
	Dielectric Withstand Voltage	
	ESD Susceptibility	Meets EN61000-4-2 8Kv Air, 4Kv contact
	Radiated Susceptibility	EN61000-4-3 30-1000MHz FCC Part 15, Subpart B CLASS B
	EFT/Burst	EN61000-4-4
	Input Surge	EN61000-4-5
	Conducted Disturbance	EN61000-4-6
	Power frequency magnetic field	EN61000-4-8
	Immunity for voltage Dips	EN61000-4-11

MONITORING COMMAND & CONTROL	Remote	
	Inhibit	Optional Active LOW, all outputs shut down in eFS175-255 Model
	Power OK	Option Open collector active LOW when any of the output drop below 15% of its nominal value in eFS175-255 model
	Input AC Connector	Molex 3 Pin, 0.2" 41695 Series
	Input DC Connector	
	Current Share	Optional in eFS175-255 Model
	Remote Sense	Optional in eFS175-255 Model
	Output Connectors V1/V2	Molex 6 Pin Header, 26-48-1065
	Output Connectors V3/V4	
	Aux. Output	Optional +5V/5mA in eFS175-255 Model

MECHANICAL DIMENSIONS	Size in cm (Inch)	127 X 84 X 38 (5" X 3.3" X 1.5")
	Weight in Grams (Oz)	500gr. Max
	Cover	

OUTLINE DRAWING



0255-DOC1-10-Rev-A

eFI75-455

200 Watt Open Frame Quad Output AC/DC Switching power supply

Product description:

The Industry's smallest open frame quad output AC/DC switcher delivering 200W continuous power with active PFC. The unit is built in a 1U, 3" x 5" footprint.

Telkoor Part Number: 900-0455-0000

INPUT	
AC	85-264VAC Wide Range
DC	
Input Frequency Range	47-63Hz
Input Inrush Current	< 50Amp @ 220VAC Cold Start and < 25Amp@115VAC cold Start
Input Reflected Ripple	FCC 68 part 15 Class B with an external line filter
Active Power Factor Correction	0.90 typical at 110VAC input @ full load, 0.95 typical at 220VAC input @ full Load
Efficiency @ 230VAC Full Load	85% Typical
Efficiency @ 115VAC Full Load	82% Typical
Efficiency @ 48VDC Full Load	
Input Line Protection	Internal Line Fuse 5X20 type 6.3A 250Vac Normal Blow
Hold-up Time	16mSec minimum @ Full Load
OUTPUT	
V1/Current	-55V/2.8A
V2/Current	+12V/2A
V3/Current	+5V/2.8A
V4/Current	+3.3V/8.5A
Aux V/Current	
Total Output Power	200W
Line Regulation	+/- 0.2% for Vin (min.) to Vin (max.)
Oring Option	No
Load Regulation:	
V1&V2	±2% for load change from zero to full load
V3&V4	±2% for load change from 10% to 100% load
Min. Load Requirement	None
Overshoot/Undershoot at Turn-On	< 1% at turn ON & OFF
Turn-On Delay	3 Sec. Maximum
Initial Setting Accuracy	Factory pre-set @ +/-0.4%
Voltage Set point (Internal trim-pot) V1/V2	+/- 5%
Ripple @ Noise with 20MHz Bandwidth and 10uF Load Capacitor:	
V1	100mV p-p tested on 10 microfarad, in parallel with 0.1 microfarad capacitors, Bandwidth 20 MHz
V2	100mV p-p tested on 10 microfarad, in parallel with 0.1 microfarad capacitors, Bandwidth 20 MHz
V3 & V4	50mV p-p tested on 10 microfarad, in parallel with 0.1 microfarad capacitors Bandwidth 20 MHz
Hot-Swap	N/A
Current Share	N/A
Remote Sense (Open sense lines protected)	N/A
Long Term Stability	
Transient Response	±5% Max. Deviation for load change of 25% to 75% , at slew rate of 1A/ usec, recovery time less then 500Msec
Over-Voltage Protection	Output shuts down at 125% of nominal (latched shutdown) AC input must recycle to re-start
Overload Protection	
V1 & V2	
V3	
V4	
Short Circuit Protection	
Temperature Protection	Excess Temp. Shutdown When internal highest temperature exceeds >110Deg C +/- 5deg C. Auto recovery

0455-DOC1-10-Rev-A

eF175-455

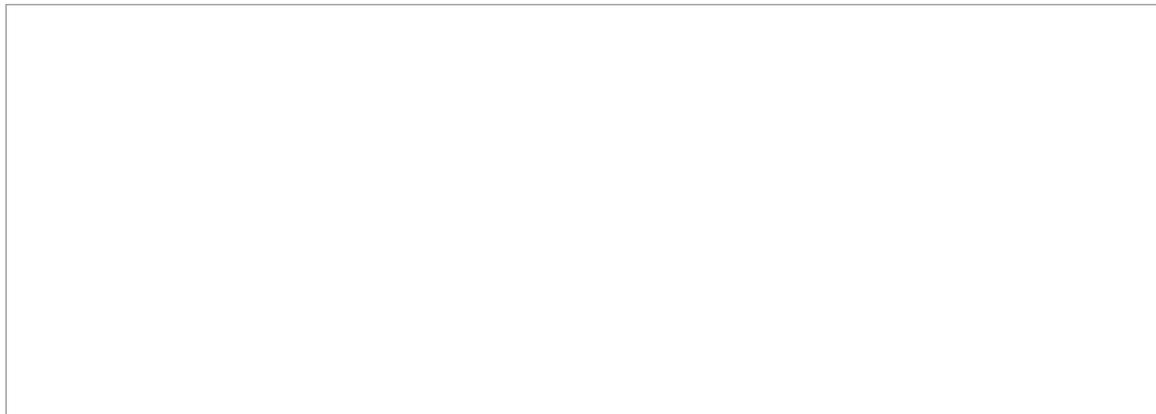
ENVIRONMENTAL	Temperature	
	Operation	-5C to +50C. Linear De-Rating of 2.5% per 1Deg. C up to +70C
	Storage	-25C to +85C
	Cooling	100W free air convection cooling (base plate cooling). 200W Forced Air Cooling 250LFM min.
	Humidity	Up to 95% RH Non-Condensing
	Shock & Vibration	Three orthogonal axis at 1 octave/min, 5 in dwell at four major resonances at 0.75G peak, 5Hz to 500Hz
	Conducted & Radiated Emission	EN55022 CLASS B with external line filter
	Surge, Spikes & Lightning Protection	EN61000-4-6
	Dielectric Isolation	
	Input to Case	1500VAC
Input to Output	3000VAC	
Output to Case	250VDC	
MTBF	300,000 Hours minimum per BELCORE 332, issue 6 specification @ 30 Deg C	

SAFETY REGULATIONS & EMI SPECIFICATIONS	Safety Approvals	EN-60950, UL-60950 & CE Marking
	Dielectric Withstand Voltage	
	ESD Susceptibility	Meets EN61000-4-2 8Kv Air, 4Kv contact
	Radiated Susceptibility	EN61000-4-3 30-1000MHz FCC Part 15, Subpart B CLASS B
	EFT/Burst	EN61000-4-4
	Input Surge	EN61000-4-5
	Conducted Disturbance	EN61000-4-6
	Power frequency magnetic field	EN61000-4-8
	Immunity for voltage Dips	EN61000-4-11

MONITORING COMMAND & CONTROL	Remote Inhibit	Optional Active LOW, all outputs shut down
	Power OK	Open collector active LOW when any of the outputs drop below 15% of its nominal value
	Input AC Connector	Molex 26-48-1055
	Input DC Connector	
	Current Share	N/A
	Remote Sense	N/A
	Output Connectors V1/V2	Molex 16 pin P/N: 26-48-1166
	Output Connectors V3/V4	See Output Connectors V1/V2
	Aux. Output	N/A

MECHANICAL DIMENSIONS	Size in cm (Inch)	128 X 84 X 38 (5" X 3.3" X 1.5")
	Weight in Grams (Oz)	650gr. Max
	Cover	

OUTLINE DRAWING



eFS175-105

150 Watt Open Frame Single Output AC/DC Switching power supply



Product description:

Industry's highest power density front end delivering 3600W in a 1U 19" Rack frame. 3 plug-in cassettes enable 1:1 or N+1 redundancy configuration. Hot swap and parallel powering enables higher output power configuration.

Telkoor Part Number: 900-0105-0000

INPUT	
AC	85-264VAC Wide Range
DC	
Input Frequency Range	47-63Hz
Input Inrush Current	< 50Amp @ 220VAC Cold Start and < 25Amp@115VAC cold Start
Input Reflected Ripple	FCC 68 part 15 Class B with an external line filter
Active Power Factor Correction	0.90 typical at 110VAC input @ full load, 0.95 typical at 220VAC input @ full Load
Efficiency @ 230VAC Full Load	85% Typical
Efficiency @ 115VAC Full Load	82% Typical
Efficiency @ 48VDC Full Load	
Input Line Protection	Internal Line Fuse 5X20 type 6.3A 250Vac Normal Blow
Hold-up Time	16mSec minimum @ Full Load
OUTPUT	
V1/Current	+5VDC / 30A
V2/Current	
V3/Current	
V4/Current	
Aux V/Current	
Total Output Power	150 Watt
Line Regulation	+/- 0.2% for Vin (min.) to Vin (max.)
Oring Option	Yes
Load Regulation:	
V1&V2	0.5% for load changes from zero to full load
V3&V4	
Min. Load Requirement	None
Overshoot/Undershoot at Turn-On	< 1% at turn ON & OFF
Turn-On Delay	2 Sec. Maximum
Initial Setting Accuracy	Factory pre-set @ +/-0.4%
Voltage Set point (Internal trim-pot) V1/V2	+/- 5%
Ripple @ Noise with 20MHz Bandwidth and 10uF Load Capacitor:	
V1	1% Max
V2	
V3 & V4	
Hot-Swap	Internal O-Ring diode
Current Share	N+1 single wire
Remote Sense (Open sense lines protected)	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
Long Term Stability	
Transient Response	±5% Max. Deviation for load change of 25% to 75%, at slew rate of 1A/μsec, recovery time less then 500Msec
Over-Voltage Protection	Output shuts down at 125% of nominal (latched shutdown) AC input must recycle to re-start
Overload Protection	
V1 & V2	120% to 130% of I Max, constant current limit, automatic recovery
V3	
V4	
Short Circuit Protection	Yes
Temperature Protection	Excess Temp. Shutdown When internal highest temperature exceeds >110Deg C +/- 5deg C. Auto recovery

0105-DOC1-10-Rev-A

eFSI75-105

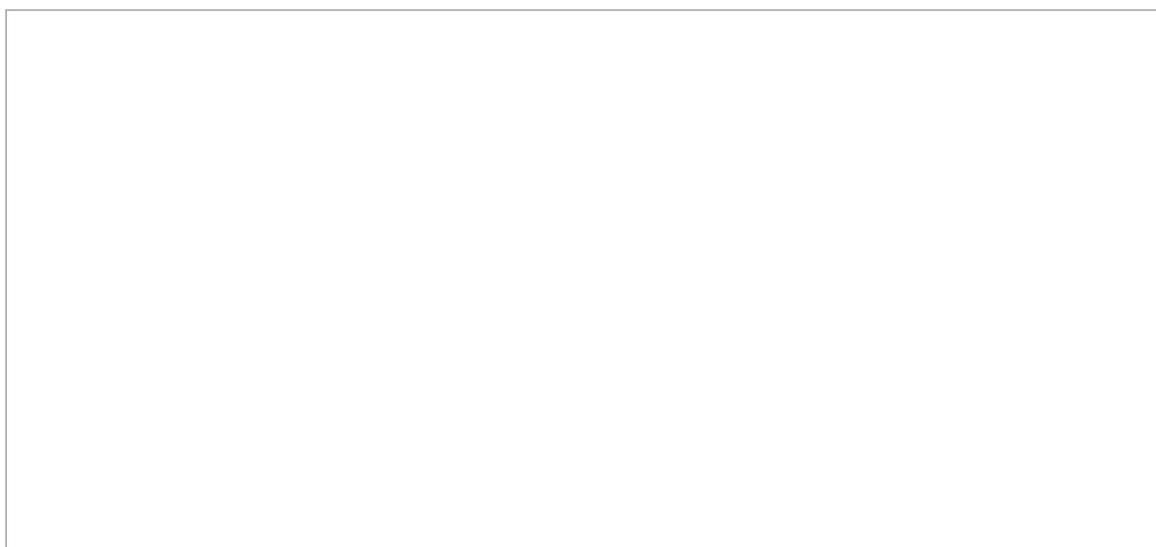
ENVIRONMENTAL	Temperature	
	Operation	-5C to +50C. Linear De-Rating of 2.5% per 1Deg. C up to +70C
	Storage	-25C to +85C
	Cooling	100W free air convection cooling (base plate cooling). 200W Forced Air Cooling 250LFM min.
	Humidity	Up to 95% RH Non-Condensing
	Shock & Vibration	Three orthogonal axis at 1 octave/min, 5 in dwell at four major resonances at 0.75G peak, 5Hz to 500Hz
	Conducted & Radiated Emission	EN55022 CLASS B with external line filter
	Surge, Spikes & Lightning Protection	EN61000-4-6
	Dielectric Isolation	
	Input to Case	1500VAC
	Input to Output	3000VAC
	Output to Case	250VDC
MTBF	300,000 Hours minimum per BELCORE 332, issue 6 specification @ 30 Deg C	

SAFETY REGULATIONS & EMI SPECIFICATIONS	Safety Approvals	EN-60950, UL-60950 & CE Marking
	Dielectric Withstand Voltage	
	ESD Susceptibility	Meets EN61000-4-2 8Kv Air, 4Kv contact
	Radiated Susceptibility	EN61000-4-3 30-1000MHz FCC Part 15, Subpart B CLASS B
	EFT/Burst	EN61000-4-4
	Input Surge	EN61000-4-5
	Conducted Disturbance	EN61000-4-6
	Power frequency magnetic field	EN61000-4-8
Immunity for voltage Dips	EN61000-4-11	

MONITORING COMMAND & CONTROL	Remote	
	Inhibit	Active LOW, all outputs shut down
	Power OK	Open collector active LOW when any of the outputs drop below 15% of its nominal value
	Input AC Connector	Molex 3 Pin, 0.2" 41695 Series
	Input DC Connector	
	Current Share	Yes
	Remote Sense	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
	Output Connectors V1/V2	Tap M5x82 by Fujicon F4076DS
	Output Connectors V3/V4	
	Aux. Output	+5V/5mA

MECHANICAL DIMENSIONS	Size in cm (Inch)	128 X 84 X 38 (5" X 3.3" X 1.5")
	Weight in Grams (Oz)	450gr. Max
	Cover	

OUTLINE DRAWING



eFS175-112

200 Watt Open Frame Single Output AC/DC Switching power supply



Product description:

The Industry's smallest open frame single output AC/DC switcher delivering 200W continuous power with built in "Oring" diodes. The unit is built in a 1U, 3" x 5" footprint.

Telkoor Part Number: 900-0536-0000

INPUT	
AC	85-264VAC Wide Range
DC	
Input Frequency Range	47-63Hz
Input Inrush Current	< 50Amp @ 220VAC Cold Start and < 25Amp@115VAC cold Start
Input Reflected Ripple	FCC 68 part 15 Class B with an external line filter
Active Power Factor Correction	0.90 typical at 110VAC input @ full load, 0.95 typical at 220VAC input @ full Load
Efficiency @ 230VAC Full Load	82% Typical
Efficiency @ 115VAC Full Load	79% Typical
Efficiency @ 48VDC Full Load	
Input Line Protection	Internal Line Fuse 5X20 type 6.3A 250Vac Normal Blow
Hold-up Time	16mSec minimum @ Full Load
OUTPUT	
V1/Current	+12VDC / 16.5A
V2/Current	
V3/Current	
V4/Current	
Aux V/Current	
Total Output Power	200 Watt
Line Regulation	+/- 0.2% for Vin (min.) to Vin (max.)
Oring Option	Yes
Load Regulation:	
V1&V2	0.5% for load changes from zero to full load
V3&V4	
Min. Load Requirement	None
Overshoot/Undershoot at Turn-On	< 1% at turn ON & OFF
Turn-On Delay	2 Sec. Maximum
Initial Setting Accuracy	Factory pre-set @ +/-0.4%
Voltage Set point (Internal trim-pot) V1/V2	+/- 5%
Ripple @ Noise with 20MHz Bandwidth and 10uF Load Capacitor:	
V1	1% Max
V2	
V3 & V4	
Hot-Swap	Internal O-Ring diode
Current Share	N+1 single wire
Remote Sense (Open sense lines protected)	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
Long Term Stability	
Transient Response	±5% Max. Deviation for load change of 25% to 75%, at slew rate of 1A/μsec, recovery time less then 500Msec
Over-Voltage Protection	Output shuts down at 125% of nominal (latched shutdown) AC input must recycle to re-start
Overload Protection	
V1 & V2	120% to 130% of I Max, constant current limit, automatic recovery
V3	
V4	
Short Circuit Protection	Yes
Temperature Protection	Excess Temp. Shutdown When internal highest temperature exceeds >110Deg C +/- 5deg C. Auto recovery

0536-DOC1-10-Rev-A

eFSI75-112

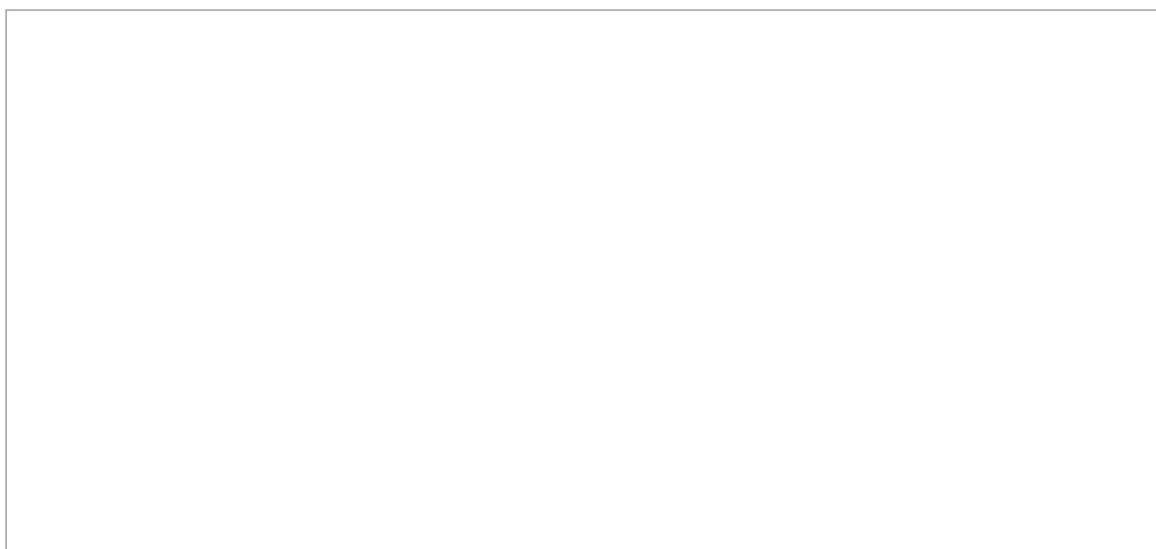
ENVIRONMENTAL	Temperature	
	Operation	-5C to +50C. Linear De-Rating of 2.5% per 1Deg. C up to +70C
	Storage	-25C to +85C
	Cooling	100W free air convection cooling (base plate cooling). 200W Forced Air Cooling 250LFM min.
	Humidity	Up to 95% RH Non-Condensing
	Shock & Vibration	Three orthogonal axis at 1 octave/min, 5 in dwell at four major resonances at 0.75G peak, 5Hz to 500Hz
	Conducted & Radiated Emission	EN55022 CLASS B with external line filter
	Surge, Spikes & Lightning Protection	EN61000-4-5
	Dielectric Isolation	
	Input to Case	1500VAC
Input to Output	3000VAC	
Output to Case	250VDC	
MTBF	300,000 Hours minimum per BELCORE 332, issue 6 specification @ 30 Deg C	

SAFETY REGULATIONS & EMI SPECIFICATIONS	Safety Approvals	EN-60950, UL-60950 & CE Marking
	Dielectric Withstand Voltage	
	ESD Susceptibility	Meets EN61000-4-2 8Kv Air, 4Kv contact
	Radiated Susceptibility	EN61000-4-3 30-1000MHz FCC Part 15, Subpart B CLASS B
	EFT/Burst	EN61000-4-4
	Input Surge	EN61000-4-5
	Conducted Disturbance	EN61000-4-6
	Power frequency magnetic field	EN61000-4-8
Immunity for voltage Dips	EN61000-4-11	

MONITORING COMMAND & CONTROL	Remote	
	Inhibit	Active LOW, all outputs shut down
	Power OK	Open collector active LOW when any of the outpus drop below 15% of its nominal value
	Input AC Connector	Molex 3 Pin, 0.2" 41695 Series
	Input DC Connector	
	Current Share	Yes
	Remote Sense	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
	Output Connectors V1/V2	Tap M5x82 by Fujicon F4076DS
	Output Connectors V3/V4	
	Aux. Output	+5V/5mA

MECHANICAL DIMENSIONS	Size in cm (Inch)	127 X 84 X 38 (5" X 3.3" X 1.5")
	Weight in Grams (Oz)	450gr. Max
	Cover	

OUTLINE DRAWING



eFS175-124

200 Watt Open Frame Single Output AC/DC Switching power supply



Product description:

The Industry's smallest open frame single output AC/DC switcher delivering 200W continuous power with built in "Oring" diodes. The unit is built in a 1U, 3" x 5" footprint.

Telkoor Part Number: 900-0124-0000

INPUT	
AC	85-264VAC Wide Range
DC	
Input Frequency Range	47-63Hz
Input Inrush Current	< 50Amp @ 220VAC Cold Start and < 25Amp@115VAC cold Start
Input Reflected Ripple	FCC 68 part 15 Class B with an external line filter
Active Power Factor Correction	0.90 typical at 110VAC input @ full load, 0.95 typical at 220VAC input @ full Load
Efficiency @ 230VAC Full Load	85% Typical
Efficiency @ 115VAC Full Load	82% Typical
Efficiency @ 48VDC Full Load	
Input Line Protection	Internal Line Fuse 5X20 type 6.3A 250Vac Normal Blow
Hold-up Time	16mSec minimum @ Full Load
OUTPUT	
V1/Current	+24VDC / 8.3A
V2/Current	
V3/Current	
V4/Current	
Aux V/Current	
Total Output Power	200 Watt
Line Regulation	+/- 0.2% for Vin (min.) to Vin (max.)
Oring Option	Yes
Load Regulation:	
V1&V2	0.5% for load changes from zero to full load
V3&V4	
Min. Load Requirement	None
Overshoot/Undershoot at Turn-On	< 1% at turn ON & OFF
Turn-On Delay	2 Sec. Maximum
Initial Setting Accuracy	Factory pre-set @ +/-0.4%
Voltage Set point (Internal trim-pot) V1/V2	+/- 5%
Ripple @ Noise with 20MHz Bandwidth and 10uF Load Capacitor:	
V1	1% Max
V2	
V3 & V4	
Hot-Swap	Internal O-Ring diode
Current Share	N+1 single wire
Remote Sense (Open sense lines protected)	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
Long Term Stability	
Transient Response	±5% Max. Deviation for load change of 25% to 75%, at slew rate of 1A/μsec, recovery time less then 500Msec
Over-Voltage Protection	Output shuts down at 125% of nominal (latched shutdown) AC input must recycle to re-start
Overload Protection	
V1 & V2	120% to 130% of I Max, constant current limit, automatic recovery
V3	
V4	
Short Circuit Protection	Yes
Temperature Protection	Excess Temp. Shutdown When internal highest temperature exceeds >110Deg C +/- 5deg C. Auto recovery

0124-DOC1-10-Rev-A

eFSI75-124

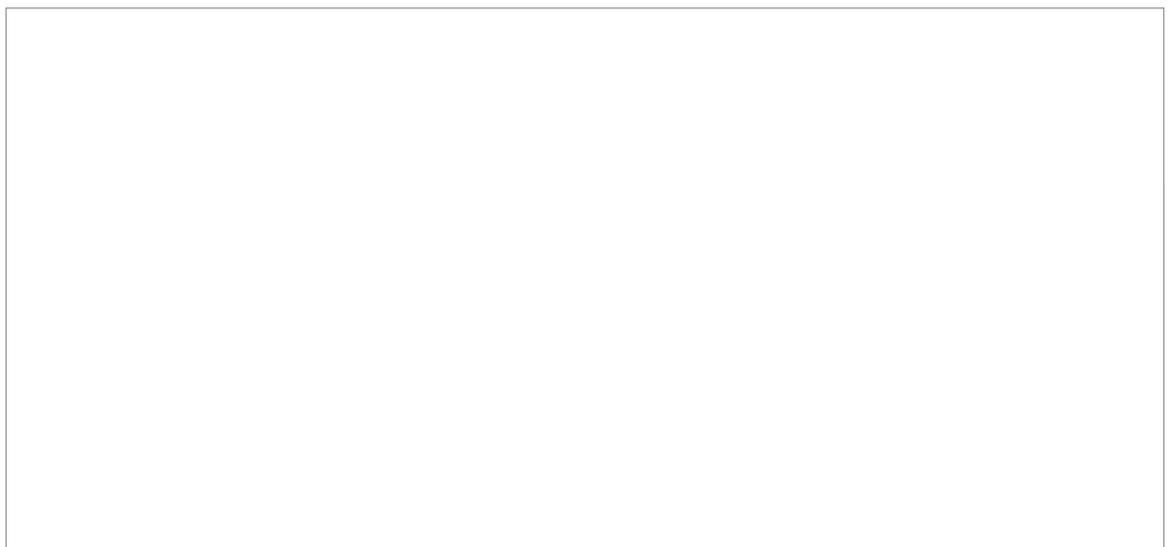
ENVIRONMENTAL	Temperature	
	Operation	-5C to +50C. Linear De-Rating of 2.5% per 1Deg. C up to +70C
	Storage	-25C to +85C
	Cooling	100W free air convection cooling (base plate cooling). 200W Forced Air Cooling 250LFM min.
	Humidity	Up to 95% RH Non-Condensing
	Shock & Vibration	Three orthogonal axis at 1 octave/min, 5 in dwell at four major resonances at 0.75G peak, 5Hz to 500Hz
	Conducted & Radiated Emission	EN55022 CLASS B with external line filter
	Surge, Spikes & Lightning Protection	EN61000-4-5
	Dielectric Isolation	
	Input to Case	1500VAC
	Input to Output	3000VAC
Output to Case	250VDC	
MTBF	300,000 Hours minimum per BELCORE 332, issue 6 specification @ 30 Deg C	

SAFETY REGULATIONS & EMI SPECIFICATIONS	Safety Approvals	EN-60950, UL-60950 & CE Marking
	Dielectric Withstand Voltage	
	ESD Susceptibility	Meets EN61000-4-2 8Kv Air, 4Kv contact
	Radiated Susceptibility	EN61000-4-3 30-1000MHz FCC Part 15, Subpart B CLASS B
	EFT/Burst	EN61000-4-4
	Input Surge	EN61000-4-5
	Conducted Disturbance	EN61000-4-6
	Power frequency magnetic field	EN61000-4-8
	Immunity for voltage Dips	EN61000-4-11

MONITORING COMMAND & CONTROL	Remote	
	Inhibit	Active LOW, all outputs shut down
	Power OK	Open collector active LOW when any of the output drop below 15% of its nominal value
	Input AC Connector	Molex 3 Pin, 0.2" 41695 Series
	Input DC Connector	
	Current Share	
	Remote Sense	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
	Output Connectors V1/V2	Molex 6 Pin Header, 26-48-1065
	Output Connectors V3/V4	
	Aux. Output	+5V/5mA

MECHANICAL DIMENSIONS	Size in cm (Inch)	127 X 84 X 38 (5" X 3.3" X 1.5")
	Weight in Grams (Oz)	450gr. Max
	Cover	

OUTLINE DRAWING



0124-DOC1-10-Rev-A

eFS175-128

200 Watt Open Frame Dual Output AC/DC Switching power supply



Product description:

The Industry's smallest open frame single output AC/DC switcher delivering 200W continuous power with a built in "Oring" diodes. The unit is built in a 1U, 3" x 5" footprint.

Telkoor Part Number: 900-0128-0000

INPUT	
AC	85-264VAC Wide Range
DC	
Input Frequency Range	47-63Hz
Input Inrush Current	< 50Amp @ 220VAC Cold Start and < 25Amp@115VAC cold Start
Input Reflected Ripple	FCC 68 part 15 Class B with an external line filter
Active Power Factor Correction	0.90 typical at 110VAC input @ full load, 0.95 typical at 220VAC input @ full Load
Efficiency @ 230VAC Full Load	85% Typical
Efficiency @ 115VAC Full Load	82% Typical
Efficiency @ 48VDC Full Load	
Input Line Protection	Internal Line Fuse 5X20 type 6.3A 250Vac Normal Blow
Hold-up Time	16mSec minimum @ Full Load
OUTPUT	
V1/Current	+28VDC / 7.15A
V2/Current	
V3/Current	
V4/Current	
Aux V/Current	
Total Output Power	200 Watt
Line Regulation	+/- 0.2% for Vin (min.) to Vin (max.)
Oring Option	Yes
Load Regulation:	
V1&V2	0.5% for load changes from zero to full load
V3&V4	
Min. Load Requirement	None
Overshoot/Undershoot at Turn-On	< 1% at turn ON & OFF
Turn-On Delay	2 Sec. Maximum
Initial Setting Accuracy	Factory pre-set @ +/-0.4%
Voltage Set point (Internal trim-pot) V1/V2	+/- 5%
Ripple @ Noise with 20MHz Bandwidth and 10uF Load Capacitor:	
V1	1% Max
V2	
V3 & V4	
Hot-Swap	Internal O-Ring diode
Current Share	N+1 single wire
Remote Sense (Open sense lines protected)	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
Long Term Stability	
Transient Response	±5% Max. Deviation for load change of 25% to 75%, at slew rate of 1A/μsec, recovery time less then 500Msec
Over-Voltage Protection	Output shuts down at 125% of nominal (latched shutdown) AC input must recycle to re-start
Overload Protection	
V1 & V2	120% to 130% of I Max, constant current limit, automatic recovery
V3	
V4	
Short Circuit Protection	Yes
Temperature Protection	Excess Temp. Shutdown When internal highest temperature exceeds >110Deg C +/- 5deg C. Auto recovery

0128-DOC1-10-Rev-A

eFS175-128

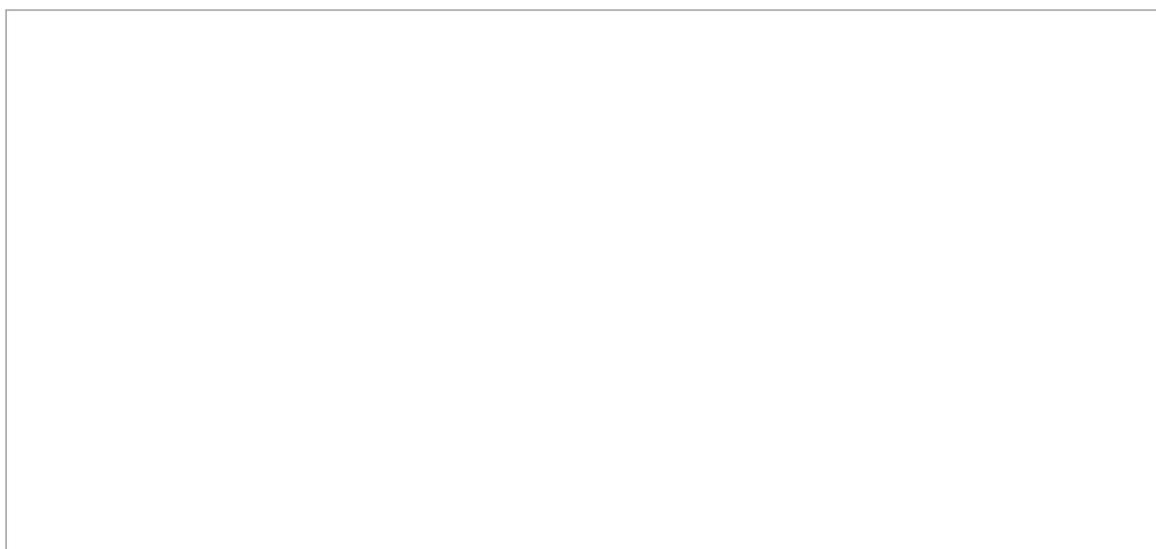
ENVIRONMENTAL	Temperature	
	Operation	-5C to +50C. Linear De-Rating of 2.5% per 1Deg. C up to +70C
	Storage	-25C to +85C
	Cooling	100W free air convection cooling (base plate cooling). 200W Forced Air Cooling 250LFM min.
	Humidity	Up to 95% RH Non-Condensing
	Shock & Vibration	Three orthogonal axis at 1 octave/min, 5 in dwell at four major resonances at 0.75G peak, 5Hz to 500Hz
	Conducted & Radiated Emission	EN55022 CLASS B with external line filter
	Surge, Spikes & Lightning Protection	EN61000-4-5
	Dielectric Isolation	
	Input to Case	1500VAC
Input to Output	3000VAC	
Output to Case	250VDC	
MTBF	300,000 Hours minimum per BELCORE 332, issue 6 specification @ 30 Deg C	

SAFETY REGULATIONS & EMI SPECIFICATIONS	Safety Approvals	EN-60950, UL-60950 & CE Marking
	Dielectric Withstand Voltage	
	ESD Susceptibility	Meets EN61000-4-2 8Kv Air, 4Kv contact
	Radiated Susceptibility	EN61000-4-3 30-1000MHz FCC Part 15, Subpart B CLASS B
	EFT/Burst	EN61000-4-4
	Input Surge	EN61000-4-5
	Conducted Disturbance	EN61000-4-6
	Power frequency magnetic field	EN61000-4-8
Immunity for voltage Dips	EN61000-4-11	

MONITORING COMMAND & CONTROL	Remote	
	Inhibit	Optional Active LOW, all outputs shut down
	Power OK	Open collector active LOW when any of the outputs drop below 15% of its nominal value
	Input AC Connector	Molex 3 Pin, 0.2" 41695 Series
	Input DC Connector	
	Current Share	Yes
	Remote Sense	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
	Output Connectors V1/V2	Molex 6 Pin Header, 26-48-1065
	Output Connectors V3/V4	
	Aux. Output	N/A

MECHANICAL DIMENSIONS	Size in cm (Inch)	127 X 84 X 38 (5" X 3.3" X 1.5")
	Weight in Grams (Oz)	450gr. Max
	Cover	

OUTLINE DRAWING



eFS175-148

200 Watt Open Frame Single Output AC/DC Switching power supply



Product description:

The Industry's smallest open frame single output AC/DC switcher delivering 200W continuous power with built in "Oring" diodes. The unit is built in a 1U, 3" x 5" footprint.

Telkoor Part Number: 900-0148-0000

INPUT	
AC	85-264VAC Wide Range
DC	
Input Frequency Range	47-63Hz
Input Inrush Current	< 50Amp @ 220VAC Cold Start and < 25Amp@115VAC cold Start
Input Reflected Ripple	FCC 68 part 15 Class B with an external line filter
Active Power Factor Correction	0.90 typical at 110VAC input @ full load, 0.95 typical at 220VAC input @ full Load
Efficiency @ 230VAC Full Load	85% Typical
Efficiency @ 115VAC Full Load	82% Typical
Efficiency @ 48VDC Full Load	
Input Line Protection	Internal Line Fuse 5X20 type 6.3A 250Vac Normal Blow
Hold-up Time	16mSec minimum @ Full Load
OUTPUT	
V1/Current	+48VDC / 4.2A
V2/Current	
V3/Current	
V4/Current	
Aux V/Current	
Total Output Power	200W
Line Regulation	+/- 0.2% for Vin (min.) to Vin (max.)
Oring Option	No
Load Regulation:	
V1&V2	0.5% for load changes from zero to full load
V3&V4	
Min. Load Requirement	None
Overshoot/Undershoot at Turn-On	< 1% at turn ON & OFF
Turn-On Delay	2 Sec. Maximum
Initial Setting Accuracy	Factory pre-set @ +/-0.4%
Voltage Set point (Internal trim-pot) V1/V2	+/- 5%
Ripple @ Noise with 20MHz Bandwidth and 10uF Load Capacitor:	
V1	1% Max
V2	
V3 & V4	
Hot-Swap	Internal O-Ring diode
Current Share	N+1 single wire
Remote Sense (Open sense lines protected)	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
Long Term Stability	
Transient Response	±5% Max. Deviation for load change of 25% to 75%, at slew rate of 1A/μsec, recovery time less then 500Msec
Over-Voltage Protection	Output shuts down at 125% of nominal (latched shutdown) AC input must recycle to re-start
Overload Protection	
V1 & V2	120% to 130% of I Max, constant current limit, automatic recovery
V3	
V4	
Short Circuit Protection	Yes
Temperature Protection	Excess Temp. Shutdown When internal highest temperature exceeds >110Deg C +/- 5deg C. Auto recovery

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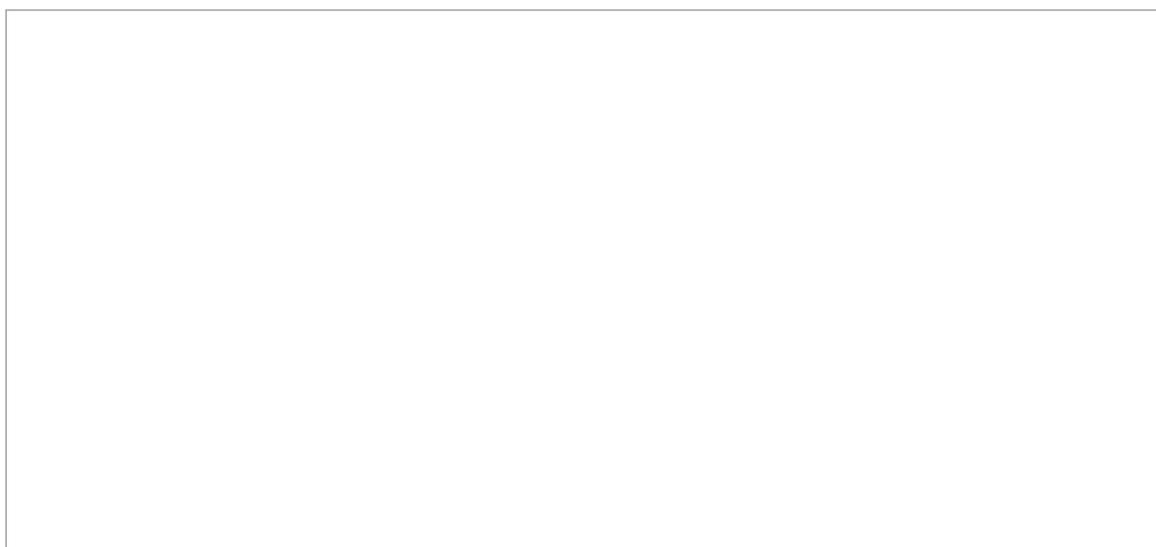
ENVIRONMENTAL	Temperature	
	Operation	-5C to +50C. Linear De-Rating of 2.5% per 1Deg. C up to +70C
	Storage	-25C to +85C
	Cooling	100W free air convection cooling (base plate cooling). 200W Forced Air Cooling 250LFM min.
	Humidity	Up to 95% RH Non-Condensing
	Shock & Vibration	Three orthogonal axis at 1 octave/min, 5 in dwell at four major resonances at 0.75G peak, 5Hz to 500Hz
	Conducted & Radiated Emission	EN55022 CLASS B with external line filter
	Surge, Spikes & Lightning Protection	EN61000-4-5
	Dielectric Isolation	
	Input to Case	1500VAC
Input to Output	3000VAC	
Output to Case	250VDC	
MTBF	300,000 Hours minimum per BELCORE 332, issue 6 specification @ 30 Deg C	

SAFETY REGULATIONS & EMI SPECIFICATIONS	Safety Approvals	EN-60950, UL-60950 & CE Marking
	Dielectric Withstand Voltage	
	ESD Susceptibility	Meets EN61000-4-2 8Kv Air, 4Kv contact
	Radiated Susceptibility	EN61000-4-3 30-1000MHz FCC Part 15, Subpart B CLASS B
	EFT/Burst	EN61000-4-4
	Input Surge	EN61000-4-5
	Conducted Disturbance	EN61000-4-6
	Power frequency magnetic field	EN61000-4-8
Immunity for voltage Dips	EN61000-4-11	

MONITORING COMMAND & CONTROL	Remote	
	Inhibit	Active LOW, all outputs shut down
	Power OK	Open collector active LOW when any of the outpus drop below 15% of its nominal value
	Input AC Connector	Molex 3 Pin, 0.2" 41695 Series
	Input DC Connector	
	Current Share	
	Remote Sense	V1 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened
	Output Connectors V1/V2	Molex 6 Pin Header, 26-48-1065
	Output Connectors V3/V4	
	Aux. Output	+5V/5mA

MECHANICAL DIMENSIONS	Size in cm (Inch)	127 X 84 X 38 (5" X 3.3" X 1.5")
	Weight in Grams (Oz)	450gr. Max
	Cover	

OUTLINE DRAWING



eF200-433

200 Watt Open Frame Quad Output AC/DC Switching power supply

Product description:

The Industry's smallest open frame quad output AC/DC switcher delivering 200W continuous power with active PFC. The unit is built in a 1U, 3" x 5" footprint.

Telkoor Part Number: 900-0633-0000

INPUT		
AC		85-264VAC Wide Range
DC		
Input Frequency Range		
Input Inrush Current		< 50Amp @ 220VAC Cold Start and < 25Amp@115VAC cold Start
Input Reflected Ripple		FCC 68 part 15 Class B
Active Power Factor Correction		0.98 Typical @ 110/220VAC input @ Full Load
Efficiency @ 230VAC Full Load		80% Typical
Efficiency @ 115VAC Full Load		78% Typical
Efficiency @ 48VDC Full Load		
Input Line Protection		4A 250VAC IEC Type SLO BLO Fuse
Hold-up Time		> 15mSec @ Full Load
OUTPUT		
V1/Current		+5VDC / 15A
V2/Current		+3.3VDC / 15A
V3/Current		+12VDC / 3.5A
V4/Current		-12VDC / 1A
Aux V/Current		
Total Output Power		175 Watt
Line Regulation		+/- 0.1% for Vin (min.) to Vin (max.)
Oring Option		No
Load Regulation:		
V1&V2		+/- 2% Max.
V3&V4		+/- 4% Max.
Min. Load Requirement		
Overshoot/Undershoot at Turn-On		
Turn-On Delay		
Initial Setting Accuracy		
Voltage Set point (Internal trim-pot) V1/V2		+/- 5%
Ripple @ Noise with 20MHz Bandwidth and 10uF Load Capacitor:		
V1		98145.451
V1		50mV p-p Max.
V3 & V4		120mV p-p Max.
Hot-Swap		No
Current Share		No
Remote Sense (Open sense lines protected)		
Long Term Stability		
Transient Response		
Over-Voltage Protection		Yes
Overload Protection		
V1 & V2		Yes
V3		
V4		
Short Circuit Protection		Yes
Temperature Protection		Excess Temp. Shutdown When Base Plate Temp. >90Deg C . Auto recovery

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eF200-433

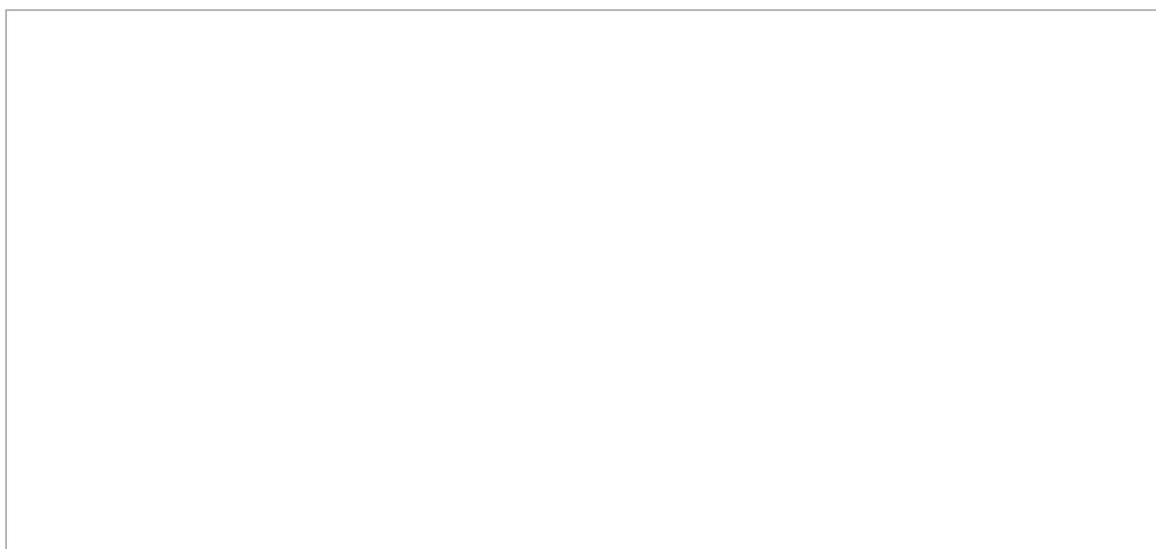
ENVIRONMENTAL	Temperature	
	Operation	-5C to +50C. Linear De-Rating of 2.5% per 1Deg. C up to +71C
	Storage	-25C to +85C
	Cooling	Forced Air Cooling 30CFM
	Humidity	Up to 95% RH Non-Condensing
	Shock & Vibration	
	Conducted & Radiated Emission	
	Surge, Spikes & Lightning Protection	
	Dielectric Isolation	
	Input to Case	> 1500VAC
	Input to Output	3000VAC
	Output to Case	400VDC
	MTBF	> 750,000 Hours

SAFETY REGULATIONS & EMI SPECIFICATIONS	Safety Approvals	EN-60950, UL-1950 & CE Marking
	Dielectric Withstand Voltage	
	ESD Susceptibility	Meets EN55022 class B with external IEC connector
	Radiated Susceptibility	
	EFT/Burst	
	Input Surge	
	Conducted Disturbance	
	Power frequency magnetic field Immunity for voltage Dips	

MONITORING COMMAND & CONTROL	Remote	No
	Inhibit	No
	Power OK	No
	Input AC Connector	Molex 3 Pin, 0.2" 41695 Series
	Input DC Connector	
	Current Share	No
	Remote Sense	No
	Output Connectors V1/V2	Molex 18 Pin Header, 26-48-1185
	Output Connectors V3/V4	Molex 18 Pin Header, 26-48-1186
Aux. Output	N/A	

MECHANICAL DIMENSIONS	Size in cm (Inch)	133 X 84 X 38 (5" X 3.3" X 1.5")
	Weight in Grams (Oz)	
	Cover	

OUTLINE DRAWING



-DOC1-10-Rev-A

DP200-433

200 Watt Open Frame Quad Output DC/DC Switching power supply

Product description:

The Industry's smallest open frame quad output AC/DC switcher delivering 200W continuous power with active PFC. The unit is built in a 1U, 3" x 5" footprint.

Telkoor Part Number: 900-8455-0000

INPUT	
AC	
DC	36-72VDC
Input Frequency Range	
Input Inrush Current	< 15Amp @ 220VAC Cold Start and < 30Amp@115VAC cold Start
Input Reflected Ripple	FCC 68 part 15 Class B
Active Power Factor Correction	
Efficiency @ 230VAC Full Load	80% Typical
Efficiency @ 115VAC Full Load	78% Typical
Efficiency @ 48VDC Full Load	
Input Line Protection	4A 250VAC IEC Type SLO BLO Fuse
Hold-up Time	> 15mSec @ Full Load
OUTPUT	
V1/Current	+5VDC / 15A
V2/Current	+3.3VDC / 15A
V3/Current	+12VDC / 3.5A
V4/Current	-12VDC / 1A
Aux V/Current	
Total Output Power	175 Watt
Line Regulation	+/- 0.1% for Vin (min.) to Vin (max.)
Oring Option	No
Load Regulation:	
V1&V2	+/- 2% Max.
V3&V4	+/- 4% Max.
Min. Load Requirement	
Overshoot/Undershoot at Turn-On	
Turn-On Delay	
Initial Setting Accuracy	
Voltage Set point (Internal trim-pot) V1/V2	+/- 5%
Ripple @ Noise with 20MHz Bandwidth and 10uF Load Capacitor:	
V1	75mV p-p Max.
V2	50mV p-p Max.
V3 & V4	120mV p-p Max.
Hot-Swap	No
Current Share	No
Remote Sense (Open sense lines protected)	
Long Term Stability	
Transient Response	
Over-Voltage Protection	Yes
Overload Protection	
V1 & V2	Yes
V3	
V4	
Short Circuit Protection	Yes
Temperature Protection	Excess Temp. Shutdown When Base Plate Temp. >90Deg C . Auto recovery

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DP200-433

ENVIRONMENTAL	Temperature	
	Operation	-5C to +50C. Linear De-Rating of 2.5% per 1Deg. C up to +71C
	Storage	-25C to +85C
	Cooling	Forced Air Cooling 30CFM
	Humidity	Up to 95% RH Non-Condensing
	Shock & Vibration	
	Conducted & Radiated Emission	
	Surge, Spikes & Lightning Protection	
	Dielectric Isolation	
	Input to Case	> 1500VAC
	Input to Output	3000VAC
Output to Case	400VDC	
MTBF	> 750,000 Hours	

SAFETY REGULATIONS & EMI SPECIFICATIONS	Safety Approvals	EN-60950, UL-1950 & CE Marking
	Dielectric Withstand Voltage	
	ESD Susceptibility	Meets EN55022 class B with external IEC connector
	Radiated Susceptibility	
	EFT/Burst	
	Input Surge	
	Conducted Disturbance	
	Power frequency magnetic field Immunity for voltage Dips	

MONITORING COMMAND & CONTROL	Remote Inhibit	No
	Power OK	Yes
		Option
	Input AC Connector	Molex 3 Pin, 0.2" 41695 Series
	Input DC Connector	
	Current Share	No
	Remote Sense	No
	Output Connectors V1/V2	Molex 18 Pin Header, 26-48-1185
	Output Connectors V3/V4	Molex 18 Pin Header, 26-48-1186
Aux. Output	N/A	

MECHANICAL DIMENSIONS	Size in cm (Inch)	133 X 84 X 38 (5" X 3.3" X 1.5")
	Weight in Grams (Oz)	
	Cover	

OUTLINE DRAWING

