

INPUT

parameter	conditions/description	min	typ	max	units
operating input voltage		8.5	72	160	Vdc
surge voltage	for maximum of 100 ms			200	Vdc
input undervoltage lockout	turn-on voltage treshold at 80% load	8.2	9	9.5	Vdc
	turn-off voltage treshold at 80% load	6.9	7.5	8.0	Vdc
	lockout hysteresis voltage at 80% load		1.5		Vdc
current	Vin = 12V, full load Vin = 8.5V, 80% load			1.3	A
input filter	LC filter				
inrush current (I ² t)	as per ETS300 132-2			0.1	A ² s
input reflected ripple current	P-P thru 12uH inductor, 5Hz to 20MHz		30		mA
CTRL	module on: CTRL pin open or pulled high (3.5~160 Vdc) module off: CTRL pin pulled low to GND (0~1.2 Vdc) CTRL pin current when pulled low		0.4	1	mA

OUTPUT

parameter	conditions/description	min	typ	max	units
maximum capacitive load	5 Vdc output			2,000	μF
	12 Vdc output			835	μF
	15 Vdc output			668	μF
	±5 Vdc output			1,000	μF
	±12 Vdc output			416	μF
	±15 Vdc output			333	μF
voltage accuracy	Vin = 72V, full load, 25°C			±1	%
output voltage balance	Vin = 72V, full load, 25°C, dual models only			±1	%
line regulation	input voltage from low to high, full load			±0.2	%
load regulation	0%~100% load			±0.5	%
	single output models			±1	%
	dual output models				
cross regulation	load cross variation 25%/100%, dual output models			±5	%
switching frequency		230	255	280	kHz
transient recovery time	75% to 100% load step change, 0.1 A/us, within 1% nominal input voltage			250	μs
transient response deviation	75% to 100% load step change, 0.1 A/us			±5	%
temperature coefficient	40°C to 100°C			±0.02	%/°C

PROTECTIONS

parameter	conditions/description	min	typ	max	units
over voltage protection	zener clamp, single output only				
	5 Vdc output		6.2		Vdc
	12 Vdc output		15		Vdc
	15 Vdc output		18		Vdc
over current protection	auto recovery, hiccup	110	150	180	%
short circuit protection	continuous, auto recovery				

SAFETY AND COMPLIANCE

parameter	conditions/description	min	typ	max	units
isolation voltage	input to output, for 1 minute			3,000 4,200	Vac Vdc
isolation resistance	input to output	1,000			MΩ
isolation capacitance	input to output, 100kHz / 0.25V		16		pF
safety approvals	certified to 62368: IEC, BS EN, UL designed to meet 50155: EN designed to meet 45545-2: EN				
conducted emissions	EN55032 and EN50155 Compliant (with external filter)				
radiated emissions	EN55032 and EN50155 Compliant (with external filter)				
ESD	EN 61000-4-2 Level 3: Air ±8kV, Contact± 6kV, perf. Criteria A				
radiated immunity	EN 61000-4-3 Level 3: 80~1000MHz, 20 V/m, perf. Criteria A				
EFT/burst	EN61000-4-4 Level 3: On power input port, ±2kV, external input capacitor required, perf. Criteria A				
surge	EN 61000-4-5 Level 4: Line to earth, ±4kV, line to line, ±2kV, perf. Criteria A				
conducted immunity	EN 61000-4-6 Level 3: 0.15~80MHz, 10V, perf. Criteria A				
voltage dips and interruptions	EN 50155 Class S3: 20ms interruptions, perf. Criteria A				
MTBF	as per MIL-HDBK-217F, 25°C				
	5 Vdc output		1,654		K hours
	12 Vdc output		2,295		K hours
	15 Vdc output		2,363		K hours
	±5 Vdc output		1,664		K hours
	±12 Vdc output		2,093		K hours
	±15 Vdc output		2,335		K hours
RoHS	yes				

ENVIRONMENTAL

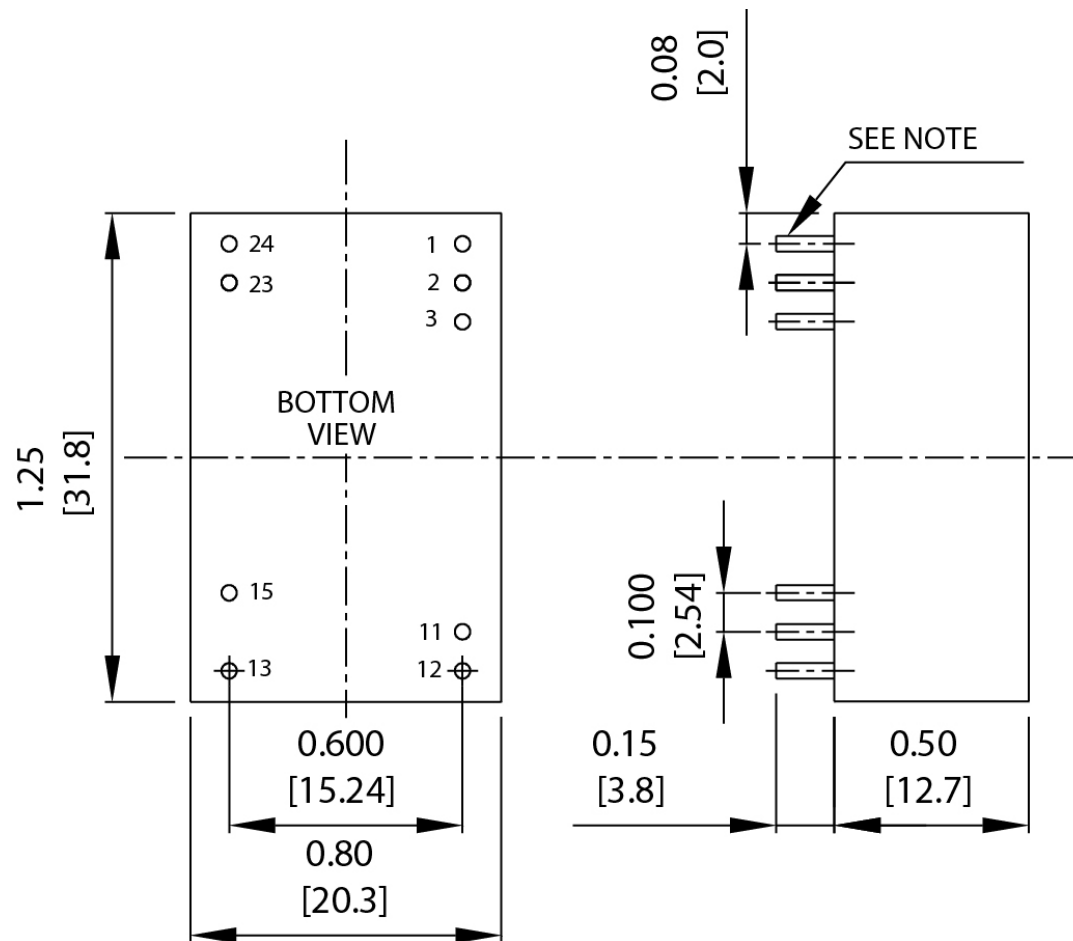
parameter	conditions/description	min	typ	max	units
operating temperature	see derating curve	-40		100	°C
storage temperature		-55		125	°C
storage humidity	non-condensing			95	%

MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	31.8 x 20.3 x 12.7 [1.25 x 0.80 x 0.50 inch]				mm
weight			16		g
case material	plastic, DAP, UL 94V-0				
base material	plastic, LCP, UL 94V-0				
potting material	UL 94V-0				
pin material	base: copper plated steel wire plating: tin				
cooling method	natural convection				

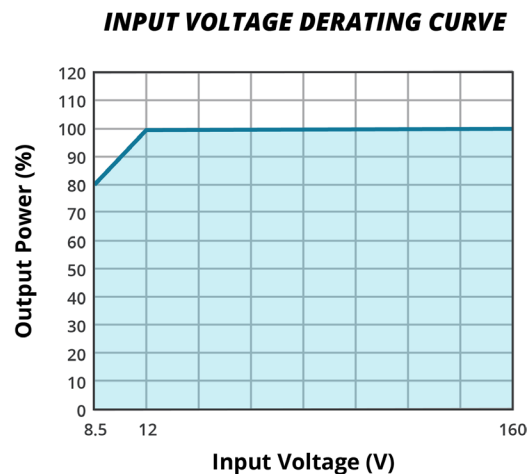
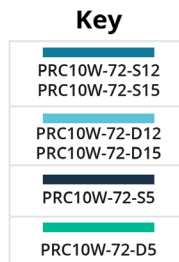
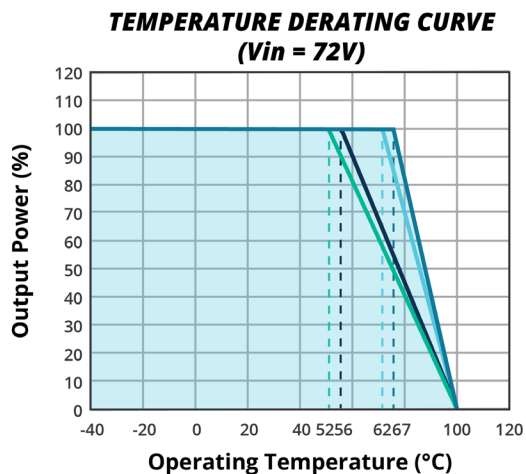
MECHANICAL DRAWING

units: inch [mm]

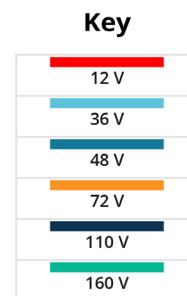
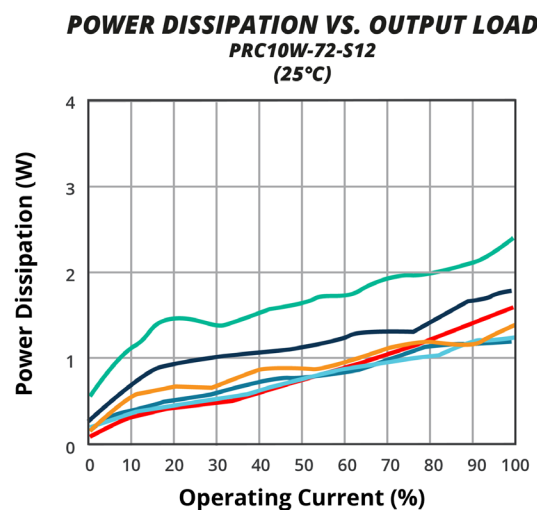
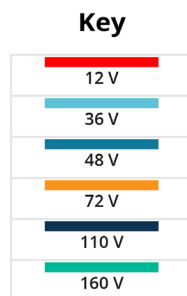
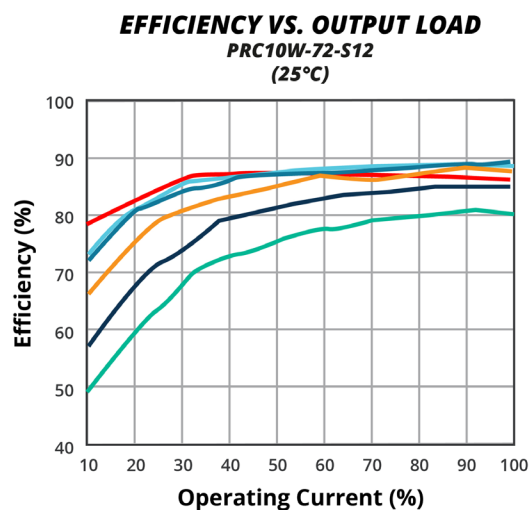
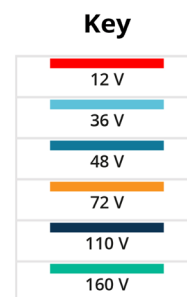
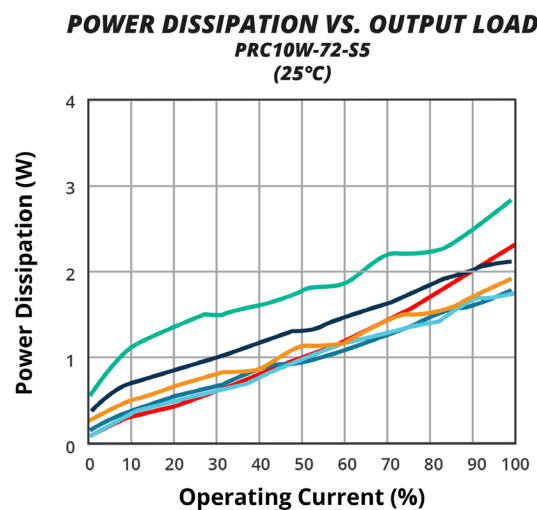
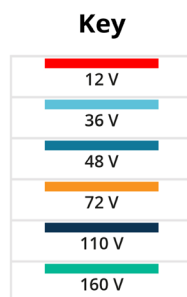
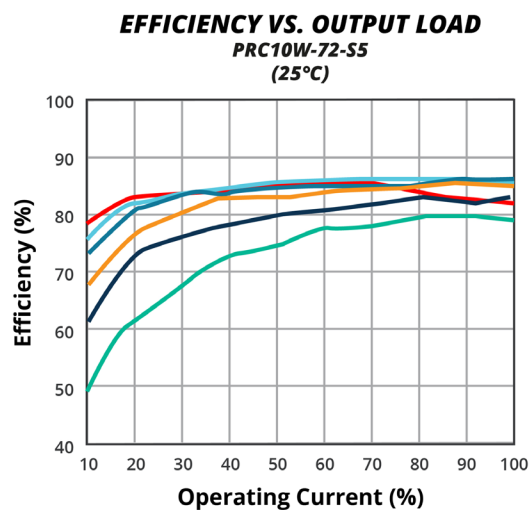
pin size diameter: 0.02 ± 0.002 inch (0.5 ± 0.05 mm)general tolerance: inches: x.xx = ± 0.02 , x.xxx = ± 0.010 mm: x.x = ± 0.5 , x.xx = ± 0.25 

Pin Out		
PIN	Single outputs	Dual outputs
1	+Vin	+Vin
2	+Vin	+Vin
3	Remote on/off	Remote on/off
11	NP	Common
12	-Vout	NP
13	+Vout	-Vout
15	NP	+Vout
23	-Vin	-Vin
24	-Vin	-Vin

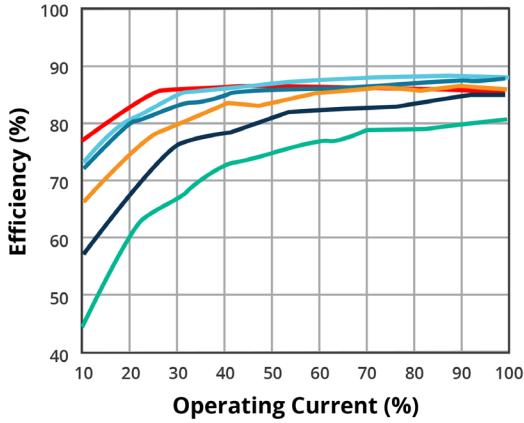
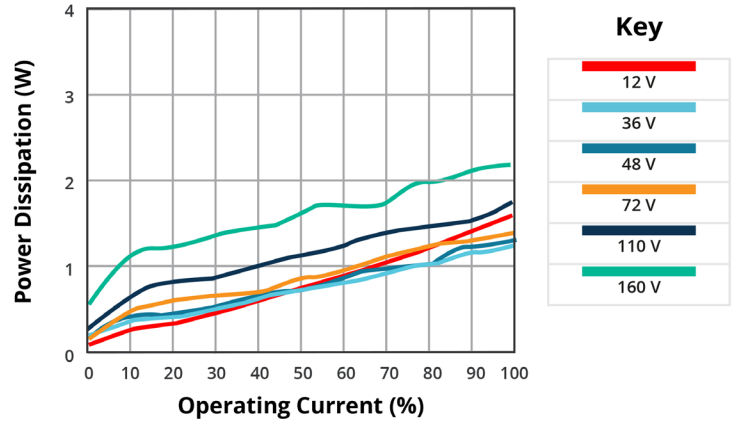
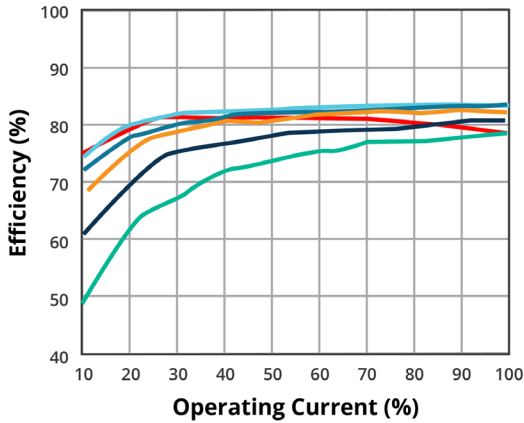
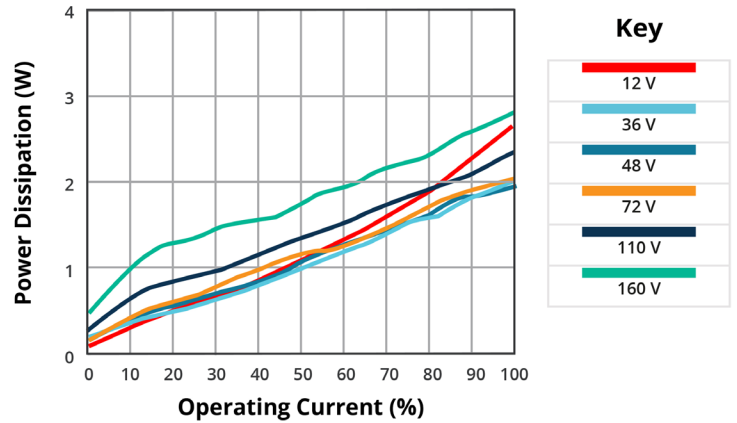
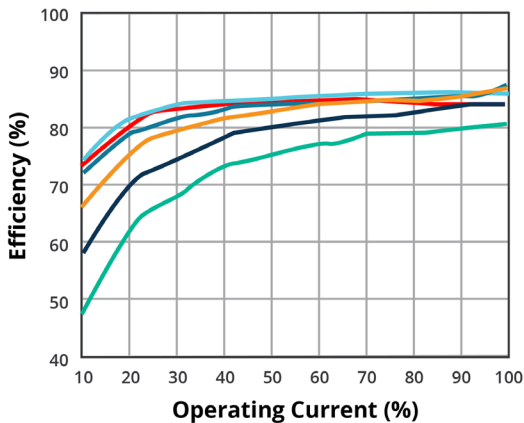
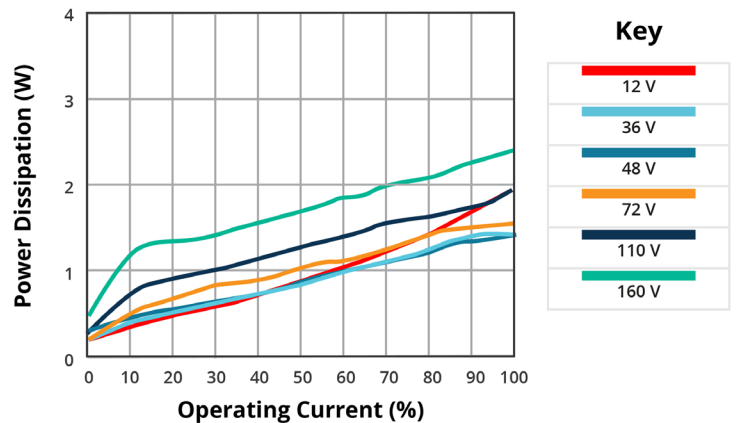
DERATING CURVE



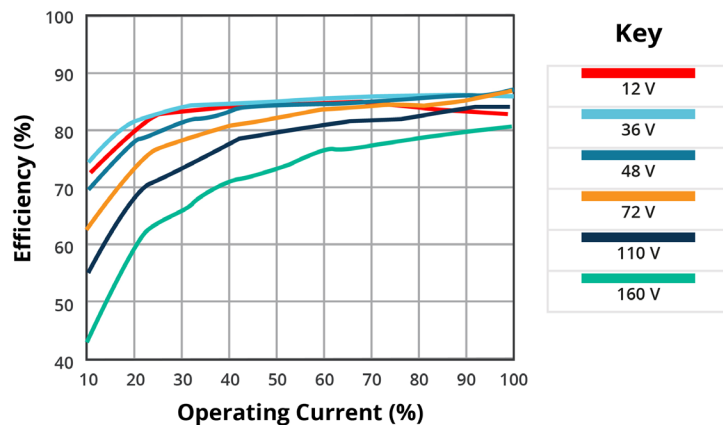
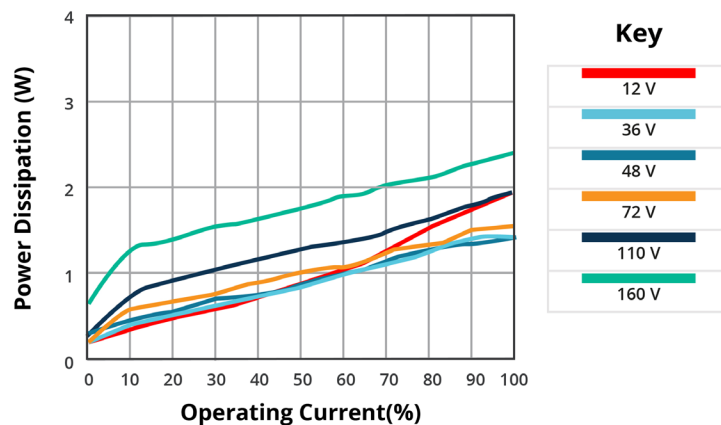
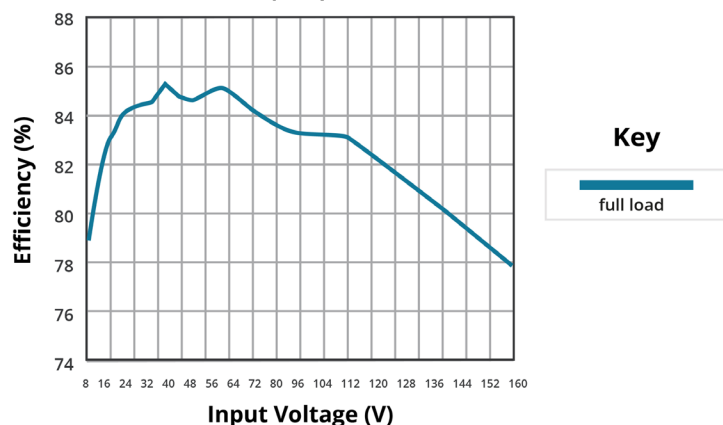
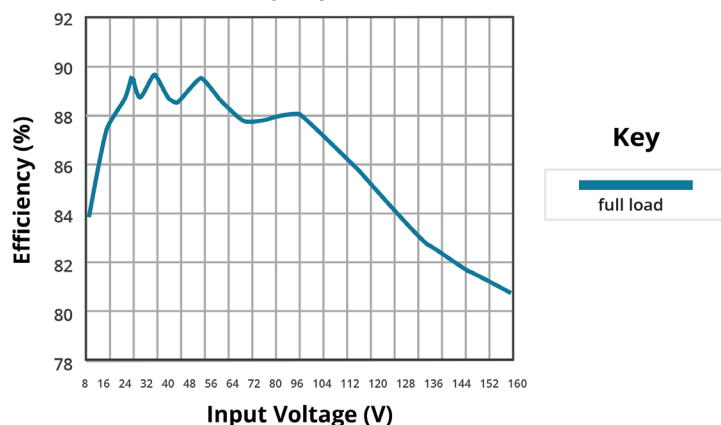
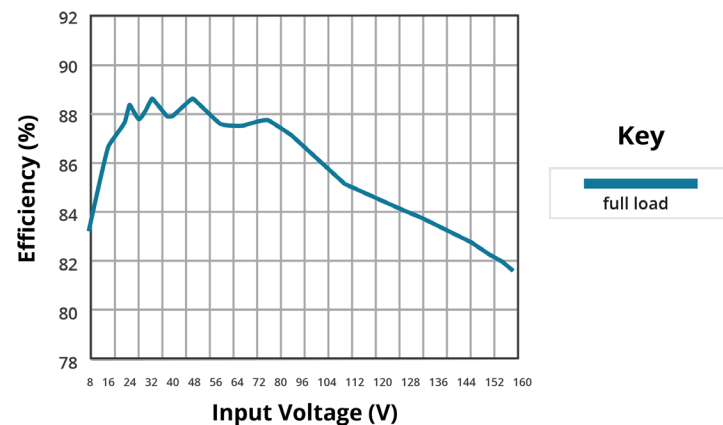
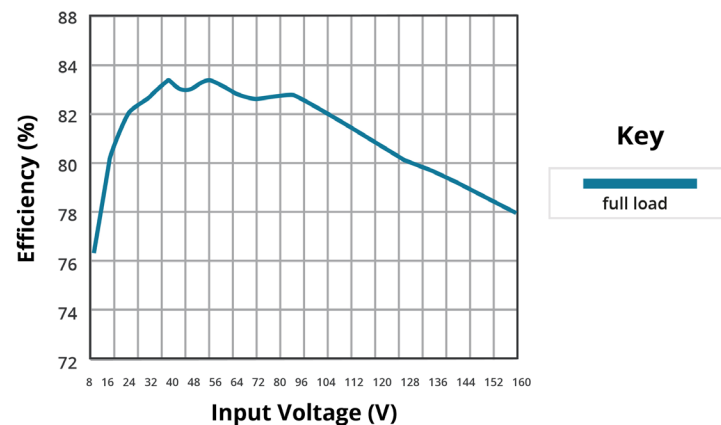
EFFICIENCY CURVES



EFFICIENCY CURVES (CONTINUED)

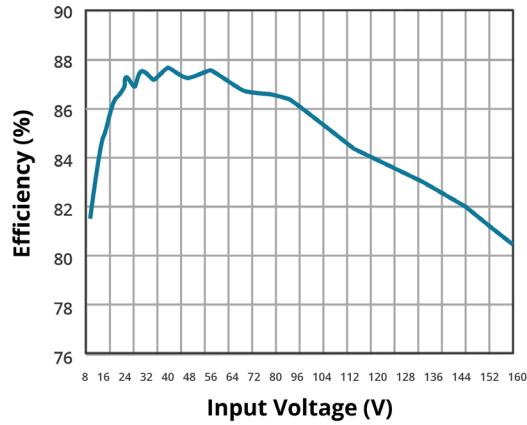
EFFICIENCY VS. OUTPUT LOAD
PRC10W-72-S15
(25°C)**POWER DISSIPATION VS. OUTPUT LOAD**
PRC10W-72-S15
(25°C)**EFFICIENCY VS. OUTPUT LOAD**
PRC10W-72-D5
(25°C)**POWER DISSIPATION VS. OUTPUT LOAD**
PRC10W-72-D5
(25°C)**EFFICIENCY VS. OUTPUT LOAD**
PRC10W-72-D12
(25°C)**POWER DISSIPATION VS. OUTPUT LOAD**
PRC10W-72-D12
(25°C)

EFFICIENCY CURVES (CONTINUED)

EFFICIENCY VS. OUTPUT LOAD
PRC10W-72-D15
(25°C)**POWER DISSIPATION VS. OUTPUT LOAD**
PRC10W-72-D15
(25°C)**EFFICIENCY VS. INPUT VOLTAGE**
PRC10W-72-S5
(25°C)**EFFICIENCY VS. INPUT VOLTAGE**
PRC10W-72-S12
(25°C)**EFFICIENCY VS. INPUT VOLTAGE**
PRC10W-72-S15
(25°C)**EFFICIENCY VS. INPUT VOLTAGE**
PRC10W-72-D5
(25°C)

EFFICIENCY CURVES (CONTINUED)

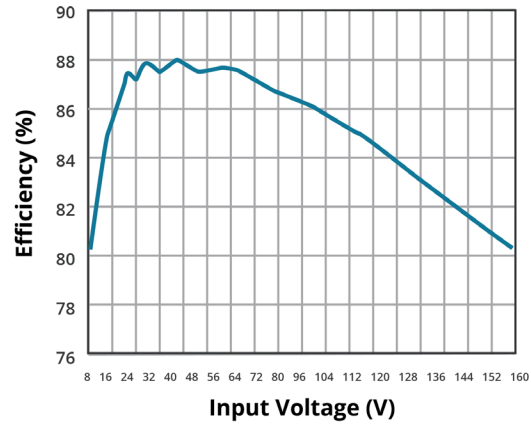
EFFICIENCY VS. INPUT VOLTAGE
PRC10W-72-D12
(25°C)



Key

full load

EFFICIENCY VS. INPUT VOLTAGE
PRC10W-72-D15
(25°C)



Key

full load

REVISION HISTORY

rev.	description	date
1.0	initial release	12/19/2022
1.01	safeties updated	01/16/2023

The revision history provided is for informational purposes only and is believed to be accurate.



Headquarters
20050 SW 112th Ave.
Tualatin, OR 97062
800.275.4899

Fax 503.612.2383
cui.com
techsupport@cui.com

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