

1. Product Range

Catalogue No.	Product name	Description
T8240	Power Shelf	19 inch x 1U chassis for up to 3 Power Packs. Includes Power Port + 10-way cable connector, 3 off mains plugs and retaining clips.
T8231	Power Pack 24 Vdc	750 W, universal input, 24 Vdc out.
T8232	Power Pack 28 Vdc	750 W, universal input, 28 Vdc out.
T8243	Power Port	Plug in diagnostic interface + 10-way cable connector.
T8234	Power Controller	For live adjustment of output voltage. 19 inch x 1U. 1 x 5 way ribbon cable.
T8235	Power Shield	Covers unused Power Pack positions.
TC-323	Power Shelf Interconnect	1 x 5 way ribbon cable for current sharing between shelves and connection to a Power Controller.
T8247	Power Shelf support brackets	A pair of brackets that can support up to 4 Power Shelves.

Table 1 T824X Power System Product Range



Figure 1 Front View - Power Shelf with Power Packs

4.3. Line Harmonics

Active power factor correction circuitry ensures that this Power Pack meets the requirements of IEC 61000-3-2.

4.4. Efficiency and Power Factor vs. Input Voltage at Full Load

Input voltage	Efficiency (Typical)	Power Factor (Typical)
90 Vac	78 %	0.99
100 Vac	79 %	0.99
110 Vac	80 %	0.99
120 Vac	81 %	0.98
180 Vac	82 %	0.98
220 Vac	83 %	0.98
240 Vac	83 %	0.98
264 Vac	84 %	0.98

Table 4 Efficiency and Power Factor vs. Input Voltage at Full Load

When using this table to calculate cable feed requirements, allow, at a minimum, an extra 3 % for variations between units. Actual measured results will depend upon the harmonic content of the input voltage waveform.

4.5. Output Specification

Parameter	Min	Type	Max	Unit	Note
V _{OUT} set point:					
T8231		24		Vdc	
T8232		28		Vdc	
Regulation (line, load, temperature and set point)	-2		2	%	Measured at remote sense
Remote-sense Drop			0.5	Vdc	between pins 20 and 22 of interface

Parameter	Min	Type	Max	Unit	Note
I_{OUT} (rated):					
T8231 (24 V_{OUT})	0		31.25	Adc	750 W maximum
T8232 (28 V_{OUT})	0		26.78	Adc	750 W maximum
Ripple (20 MHz bandwidth)			150	mVp-p	
Noise (20 MHz bandwidth)			300	mVp-p	Under any load conditions
Transmission Noise (C message)			45	dBmc	
Output Rise Time	10		100	ms	Rise from 10 % to 90 % of final output level (resistive load)
Over-voltage Protection	29		32	Vdc	Reset by cycling ac input, on/off, or reinsertion
Output Current Limit (Steady state)			40A	Adc	
Transient Response Voltage Range	-2		2	%	25 % step load transient with slew rate 0.1A/us within the range from 25 % to 75 % of full load
Active Current Sharing Differential			±3.2	A	Single-wire current share at full load
Efficiency					
At full load, 120 Vac with ORing diode	80	81		%	
At full load, 264 Vac with ORing diode	83.5	84		%	
Reserve Output Current Protection					ORing diode
Start-up Delay		1.3	2	s	Measured from application of valid AC voltage
Turn-on Delay			250	ms	Measured from DC on/off

Table 5 Output Specification

9. Power System Specification

Voltage Range	
Input	90 Vac to 264 Vac
Output	24 Vdc to 28 Vdc
Frequency Range	47 Hz to 63 Hz
Inrush Current	50 A Max per Pack
Power Factor	0.95 min, 0.99 typical
Efficiency	78 % – 84 %
Output Power	750 W per Power Pack
Power Hold-up Time	20 ms
Operating Temperature	0 °C to +60 °C (+32 °F to +140 °F)
Relative Humidity range (operating, storage & transport)	10 % – 95 %, non-condensing
Environmental Specifications	Refer to Document N° 552517
Power Shelf Dimensions	
Height	43 mm (1.71 in)
Width	483 mm (19 in)
Depth	340 mm (13.36 in)
Weight Data	
T8231,T8232 Power Pack	2.7 kg
T8230 Shelf (without supports)	4.4 kg