

EAT•N

Powerware

Automatic Transfer Switches T2235 Series



Enclosure Power Distribution Units (ePDU™)

Switches out of Phase Power sources. Optional power Filtering and Circuit Breaker



T2235-AB Front



A2 - Version Back



AB - Version Back



AB - Version ONLY

PHYSICAL

- Height 1.72" (1U) x Depth 7.0" Depth 9.5" - Versions C2, F3, F4
- Powder coated black steel
- Detachable mounting brackets allow for several mounting options

DUAL POWER INPUT

- Power cables with plugs are attached to unit through the rear panel cable grip
- -AB version has C20 inlets
- Cables must be ordered separately

OVERLOAD CIRCUIT PROTECTION

- (Optional) Electromagnetic circuit breakers with long time delay curve
- Circuit breaker trip guards are provided
- C1, C2, F3, F4 require circuit breakers for branch circuit protection to meet NEC and UL requirements

INDICATOR LIGHTS

- (5) LED Indicator lights: Main Power, Primary Available, Secondary Available, Primary Output, Secondary Output

POWER OUTLETS

- North American versions have NEMA style receptacles, (8) on the rear
- International versions have IEC style receptacles, (6-12) on the rear
- Optional cable restraint system with cable management.

POWER FILTERING (Optional)

- High performance EMI/RFI filtering provides protection from both electromagnetic and radio frequency interference
- Filtering is both Common Mode (Line to Ground) and Differential Mode (Line to Line)

SPIKE/SURGE SUPPRESSION (TVSS)

- Transient voltage surge suppression prevents damage due to voltage fluctuations
- Metal Oxide Varistors (MOVs) are utilized Line to Line (or neutral)

AUTO TRANSFER SWITCH

- Firm drop out points allow a transfer before an under-voltage will affect equipment operation
- Transfer ranges (Voltage):

Nominal	Drop Out	Pull In
120V	90V	103V
208V	182V	195V
240V	197V	210V

- Sources do NOT need to be phase synchronized
- Source transfer time of less than 30ms (clean sine wave to clean sine wave)
- Front panel LED's indicate which sources are available and selected at the output

VOLTAGE RANGE SELECTION

- The "AB" International (IEC) version allows for all three voltage ranges 120V, 208V, or 240V
- Front panel switch to set the drop out and pull in range to the desired voltages see chart above
- This allows this one version to be specified for worldwide usage

T2235 "Design Your Own" part number guide

T 2 2 3 5 . [] [] . [] [] B [] [] []

Option 1

- A1** = 120V/15A input, 12A output
Receptacles: (8) NEMA 5-15R
- A2** = 120V/20A input, 16A output
Receptacles: (8) NEMA 5-20R
- AB** = 100-240V/20A input, 16A output
Output: (8) IEC C13 (1) IEC C19
- C1** = 120V/30A input, 24A output
Receptacles: (8) NEMA 5-15R
- C2** = 120V/30A input, 24A output
Receptacles: (8) NEMA 5-20R
- F3** = 200-240V/30A input, 24A output
Output: (12) IEC C13
- F4** = 200-240V/30A input, 24A output
Output: (4) IEC C13 (2) IEC C19

Option 5

- 09S** = 9' cable with straight blade plug
- 09L** = 9' cable with locking plug
- 15S** = 15' cable with straight blade plug
- 15L** = 15' cable with locking plug
- C20** = IEC C20 power inlet, cables ordered separately, AB version only

Option 4

- B** = Color Black - Adjustable Mounting

Option 3







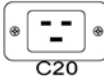











- F** = Filtering
- N** = No Filtering

Option 2

- C** = Circuit Breaker
- N** = No Circuit Breaker

Option 1: Voltage and Current Configuration

The following chart shows the available input/output voltage and current configurations. Most options have a choice of straight blade or twist lock connectors. This selection is made in options 3 and 4.

T2235 Series Version	Voltage/Current Input/Output Rating	Input Connectors		Output Connectors	
		Straight Blade	Twist Lock	Straight Blade	
A1	120V, 12A	 5-15P	 L5-15P	 5-15R	
A2	120V, 16A	 5-20P	 L5-20P	 5-20R	
AB	100-240V, 16A	 C20	NA	 C13	 C19
C1	120V, 24A (1) 2 Pole 15A UL listed CB is required for branch protection	NA	 L5-30P	 5-15R	
C2	120V, 24A (1) 2 Pole 20A UL listed CB is required for branch protection	NA	 L5-30P	 5-20R	
F3	200-240V, 24A (2) 2 Pole 15A UL Listed CB is required for branch protection	NA	 L6-30P	 C13	
F4	200-240V, 24A (2) 2 Pole 15A UL Listed CB is required for branch protection	NA	 L6-30P	 C13	 C19

Option 2: Circuit Breaker

This unit is available with or without a circuit breaker. The circuit breaker provides supplementary overload protection to the devices connected to the T2235. For mission critical applications, the T2235 can be ordered without a circuit breaker, preventing a single point of failure. Select "C" in this option to include the circuit breaker or "N" to not include it. (Circuit breakers are mandatory in C1, C2, F3, F4 versions.)

Option 3: EMI/RFI Filtering

Select "F" for filtering and "N" for no filtering.

Option 4: Color and Mounting

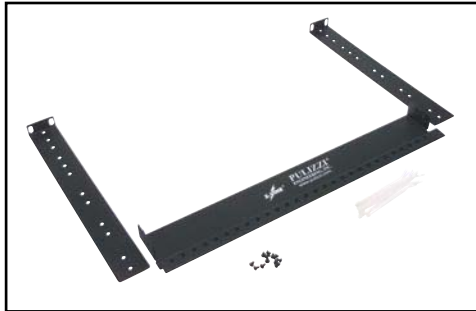
Powder Coat Black finish with adjustable mounting options.

Option 5: Power Cable and Plug Type

Choose either straight blade or twist lock style plug. See the table in Option 1 for a view of the available plug styles. Verify you have the correct type of mating receptacle available at your facility. Plug types sometimes limit the available voltage and current options. The AB version is available only with the C20 power inlet. The power cables for this version must be ordered separately.

Accessories

Optional Cable Restraint and Management



KIT-CABLRES-01

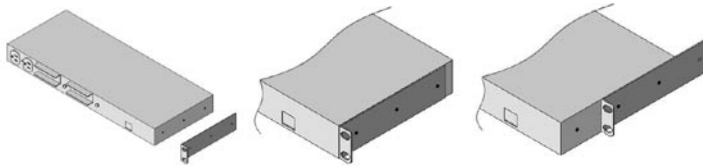


TRANSVERSE MOUNTING



- Prevent downtime and accidental disconnection
- Secure cables/plugs to Power Distribution Unit
- Cable ties provide highest level of retention

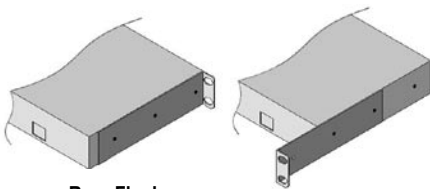
Adjustable Mounting Options



Mounting Brackets Are Detachable With Several Mounting Options Shown

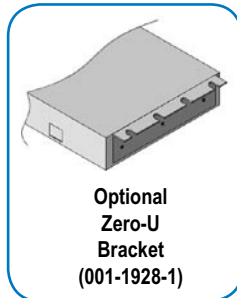
Front Flush

Center Mount



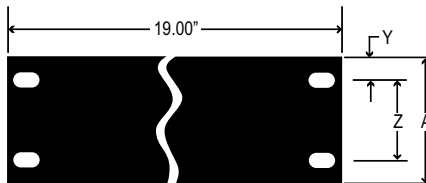
Rear Flush

Front Recessed



Optional Zero-U Bracket (001-1928-1)

Rack Mounting Hole Specification Table



HOLE SPECIFICATION TABLE

A	Y	Z
1.75	.25	1.25

010-9334:
C19 to NEMA 5-15P
125V, 15A Straight Blade
8 foot, 14AWG/3wire



010-9335:
C19 to NEMA 5-20P
125V, 20A Straight Blade
8 foot, 12AWG/3wire



010-9339:
C19 to NEMA L5-20P
125V, 20A Twist-Lock
8 foot, 12AWG/3wire



010-9341:
C19 to NEMA L6-20P
250V, 20A Twist-Lock
8 foot, 12AWG/3wire



010-9343:
CEE7-7 to C19
250V, 16A EUROPE (Schuko)
2.5M, 1.5mm/3wire Harmonized



010-0025: 8 foot
C13 to C14 Harmonized, 1mm/3wire
100-240V rated



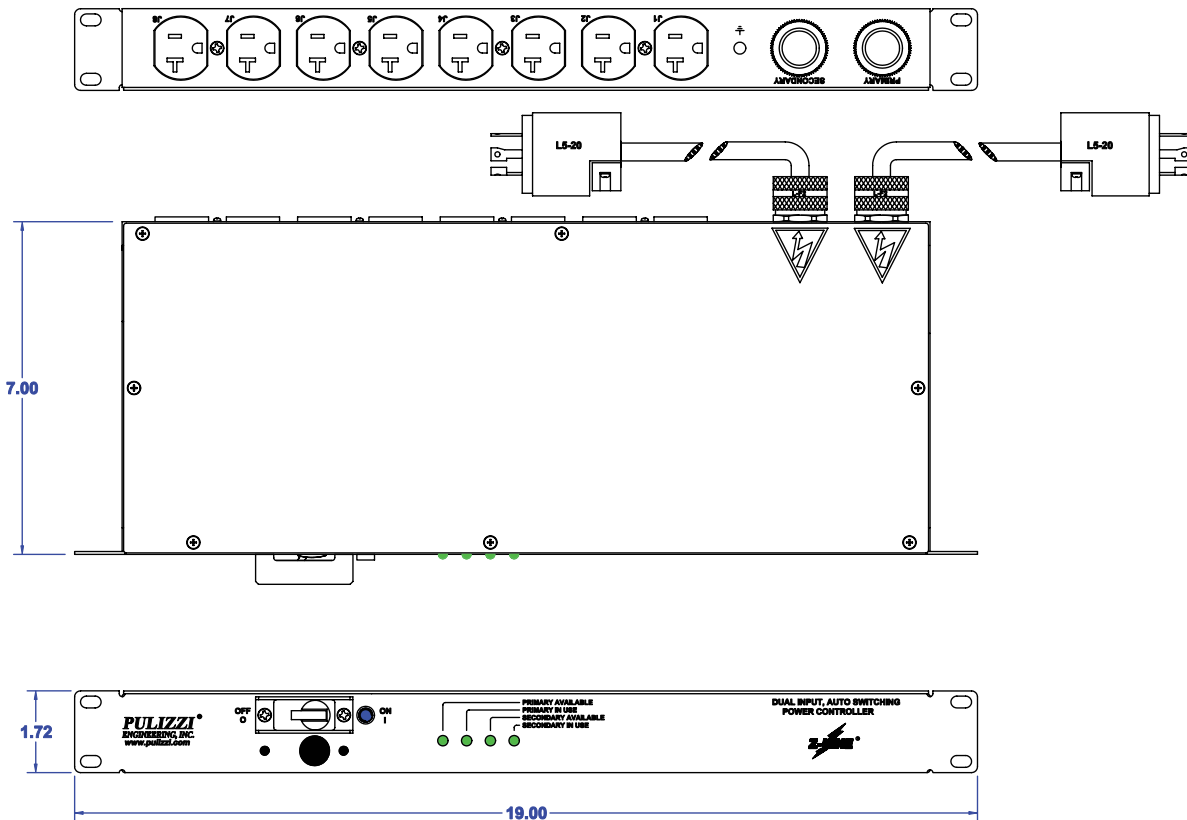
TVSS (Transient Voltage Surge Suppression) MOV SPECIFICATIONS			
Continuous AC Voltage	150VAC	270VAC	320VAC
Continuous DC Voltage	200VDC	360VDC	420VDC
Max. DC Leakage	200µA	200µA	200µA
Low Varistor Voltage Limit	212VDC	389VDC	462VDC
High Varistor Voltage Limit	243VDC	453VDC	540VDC
Nominal Varistor Voltage	236VDC	424VDC	503VDC
Current For Varistor Voltage	1mA	1mA	1mA
Max. Clamp Voltage 8x20µs	360V	680V	810V
Max. Clamp Voltage Test Current	100A	100A	100A
Peak Current Rating (1 Pulse)	12000A	10000A	10000A
Peak Current Rating (2 Pulse)	9000A	6500A	6500A
Energy Rating (10x1000µs)	170J	325J	385J
Energy Rating (8x20µs)	170J	325J	385J
Capacitance	1700pF	970pF	820pF
Impulse Response Time	50ns	50ns	50ns

EMI/RFI FILTERING COMMON MODE INSERTION LOSS				
Mhz.	.2	1.0	2.0	10.0
dB.	15	25	45	50

DIFFERENTIAL INSERTION LOSS				
Mhz.	.2	1.0	2.0	10.0
dB.	10	22	32	50

Environmental

Operating Temperature is 0 to 50 C
 Storage Temperature is -40 to 70 C
 Altitude Maximum 10,000 ft.
 Relative Humidity is 95% Max Non-Condensing



Drawings are not shown to scale
 Dimensions are in inches