



***Volex***

**Data Center Power  
Cable Solutions**

**PDU Whips, Cables and  
Cords for Facilities,  
Equipment and Racks**



## Volex is a leading integrated cable manufacturing and electronics manufacturing service specialist for performance-critical applications and power products.

Our products and services are as diverse as the customers we serve. Each helps to enable the increasingly sophisticated digital world in which we live. Providing power and connectivity for both complex machinery and everyday items, from data center high speed interconnects and power distribution, radiation oncology treatments, industrial lasers, right through to electric vehicles for the 21st century, Volex is integral to a vast universe of modern manufacturers.



## Volex Data Center Power Cables and Support Services

Selection of data center power distribution cables affects both performance and cost. As the world's leading power cable manufacturer, Volex can provide expert services to select cables with the right plugs and connectors, cordage, materials and lengths to meet any power wattage, destination country and operating environment requirements, and other custom needs. Volex is equipped to manufacture many standard power cords with integrated automation modules and control mechanisms that can handle precision cable cutting, cable and wire preparation, wire termination and testing.

## Global reasons for doing business with Volex

- TOTAL SYSTEMS SOLUTION DESIGN, MANUFACTURING, AND DELIVERY PROVIDER
- TARIFF-FREE MANUFACTURING OPTION
- ASSISTING ORGANIZATIONS OF ALL SIZES TO SUPPORT FASTER PROCESSING, GREATER BANDWIDTH AND INCREASED DENSITY
- LOCAL ENGINEERING AND SALES SUPPORT IN OVER 20 COUNTRIES
- QUICK TURNAROUND AND CUSTOMER RESPONSE TIME
- COST COMPETITIVE WITHOUT SACRIFICING PERFORMANCE AND QUALITY

## Volex provides product and service for the needs of data center power cables

Volex offers custom PDU power whip cable assemblies manufactured to your specification using rewireable plugs, connectors and cables from specified vendors, or Volex supplied alternatives. Our power components are cost-effective, industrial-grade and made of the highest quality materials. Assembly and tightening of rewireable plugs, connector housings and cable glands is performed with specific and consistent torque.

For NEMA L5, L6 and L21 twist-lock plugs and IEC 60320 C13, C15 and C19 connectors, and 'E' and 'I' plug connectors, Volex offers a molded option that is more cost-effective, and has lower minimum ordering quantities, and shorter lead times.

For interconnection cord sets between rack equipment and rack PDU, Volex offers standard length off-the-shelf cord sets with our patented 'V-lock' locking feature and custom lengths, that all meet North American and international safety and design standards.

## World-Class Quality and Reliability

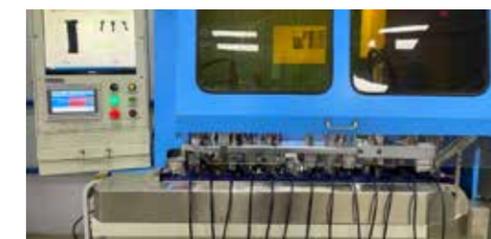
All Volex data center power cables are available with a wide range of safety approvals and go through rigorous factory testing and certification to ensure their quality and safety. All of our cables undergo 100% electrical performance checks for opens, short-circuit compliance, polarity test, continuity under high voltage (Hipot), along with insulation resistance testing. Our quality assurance procedures include automatically imprinting a test mark applied on all plugs that have passed Electrical testing for traceability purposes. Our testers are equipped with sensors to cut off any power cords that have a recognized electrical failure.

## Volex factories perform the following testing per UL / CSA, CCC, SAA, PSE, VDE and IEC standards as part of R&D and for ongoing quality and reliability assurance.

- TEMPERATURE / HUMIDITY CHAMBER
- TEMPERATURE RISE
- AGEING
- GLOW WIRE
- FLEXING
- FORCE
- ANTI-TRACKING RESISTANCE
- ABRUPT PULL
- CORD ANCHORAGE
- TUMBLE
- NORMAL OPERATION



Continuity and Hipot tester



C13 3Pin sub-automation line

## Volex Data Center Power Cables

Facility  
PDU / Power  
Panel



Facility PDU Whip Cable  
(5-25M typically)

Equipment  
Rack Power  
Outlet



Rack PDU Whip Cable / Input Cord  
(up to 5M)

Rack  
PDU



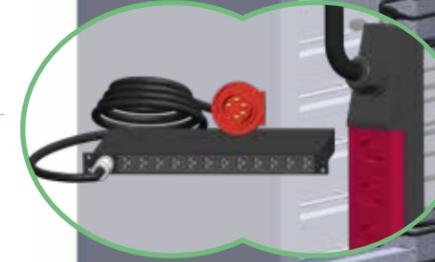
Rack Equipment Cord Set  
(1-3M)

Rack  
Equipment

Facility PDU  
Whip Cable



Rack PDU Whip  
Cable / Input Cord



Rack Equipment  
Cord Set



### Cordage options for all three categories of whip cables and cord sets:

- CONDUCTOR SIZES DEPENDING ON WATTAGE AND LENGTH
- JACKET COLOR
- CUSTOM LABELS, BINDING AND PACKAGING
- CABLE TYPE / JACKET MATERIAL BASED ON APPLICATION REQUIREMENTS

Termination Type	Options	Termination Type (Plug)	Options	Termination Type (Connector & Plug Connector)	Options
Custom connector	From specified supplier	NEMA locking	Single-phase	For high outlet density PDU: IEC C13/14 and NEMA 5-20R typically	Volex V-Lock IEC locking connectors
	Custom molded plug		Three-phase Delta		Left, right, up and down angled connectors
Exposed conductor wires	Ground screw lug		Three-phase Wye	Equivalent Volex molded plug for NEMA twist-lock	For high power, low outlet density PDU: IEC C13/14, C15/14 and C19/20 and NEMA L6-20P or L6-30P
	Spade or round terminal	IEC 60309	Quick-disconnect connector	Volex equivalent molded NEMA twist-lock plug	
Termination Type (Connector)	Options	Termination Type (Connector)	Options		
NEMA locking	Single-phase	For fixed / built-in input whip, custom termination	Straight or angled strain relief and cable gland		
	Three-phase Delta		For detachable rack PDU whip cable, range of housing available for multiple contacts and various amperage and wire sizes in a compact form factor	Custom wiring and wire splicing	
	Three-phase Wye	Plastic or metal locking			
IEC 60309	Volex equivalent molded NEMA receptacle		Volex equivalent molded connector		

## V-LOCK IEC LOCKING CONNECTORS

This award winning product eliminates the risk of power supply disconnection due to poor insertion during system set-up, loosening caused by system vibration, or accidental pull-outs while undergoing routine maintenance. Thus, improving troubleshooting turn-around time.

### Connector Features

- EASY TO MANAGE – NO EXTRA STEP REQUIRED
- CONFIRMED ENGAGEMENT WITH THE SOUND OF A CLICK
- FLEXIBLE V-LOCK INLETS ACCEPT STANDARD CONNECTORS
- WIDE BUTTONS ALLOW EASY ACCESS TO DISENGAGE
- WIDE SAFETY APPROVAL COVERAGE



- **Exceptional operational reliability**
- **Fatigue-resistant designed plastic cantilever**
- **Durability tested to 3,000 cycles**

## NEMA TWIST-LOCK PLUGS

### Combined with V-lock Connectors, your power is secured end-to-end.

NEMA Twist Locking Plugs are functionally the same as lever locks. A clockwise twist, locks the plug to its matching receptacle; while counterclockwise twist disengages. Volex molded plug versions are more cost-effective and offers shorter lead-time with reasonable Minimum ordering quantities as compared to its assembly type counterparts.

### Molded NEMA twist-lock plugs

- **Molded body**
- **Crimped blades**



### Assembly type NEMA twist-lock plugs



Full range of NEMA L5, L6 and L21 twist-lock plugs are available.

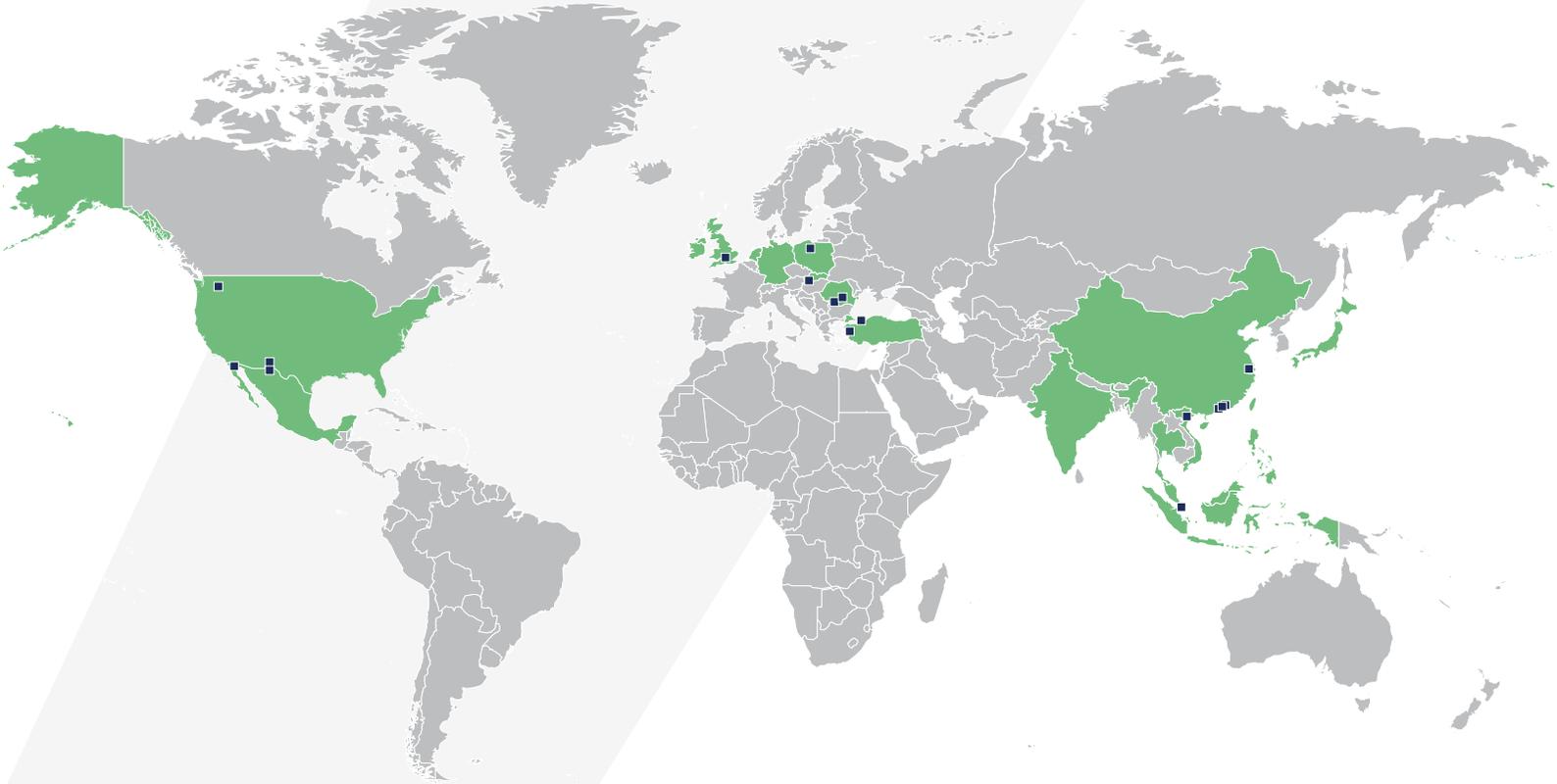
## VOLEX POWER PRODUCTS SAFETY APPROVAL COVERAGE

Catalogue No.	Cable Types	Max. Rating	Safety Approval
<b>V1625, V1625A, V1625LA, V1625BA, V1625BS, VNC13A, VAC13AU, VAC13AD (standard), VAC13KS (V-Lock) (C13)</b>	V-75 H05VV-F Ordinary Duty (Circular) 3C x 0.75/1/1.5 mm <sup>2</sup>	10A, 250V	Australia (SAA)
	H05VV-F 3C x 0.75/1/1.5 mm <sup>2</sup>	10A, 250V	Europe (VDE)
	RVV 300/500 3C x 0.75/1/1.5 mm <sup>2</sup>	10A, 250V	China (CCC)
	VCTF 3C x 0.75/1.25/2 mm <sup>2</sup> & HVCTF 3C x 1.25 mm <sup>2</sup>	7 / 12 / 15A, 125V	Japan (PSE)
	VCTF 3C x 1.25 mm <sup>2</sup> & 227 IEC 53 (IEC-J) Round 3C x 1 mm <sup>2</sup>	10A, 250V	Japan (IEC-J)
	SJT 3C x AWG 18/16/14 & Shielded AWG 16	10 / 13 / 15A, 125 / 250V	N. America (UL / CSA)
	ST & SVT 3C x AWG 18	10A, 125 / 250V	
<b>VAC14S (standard), VAC14KC (V-Lock) (C14)</b>	V-75 H05VV-F Ordinary Duty (Circular) 3C x 0.75/1 mm <sup>2</sup>	10A, 250V	Australia (SAA)
	H05VV-F 3C x 0.75/1 mm <sup>2</sup>	10A, 250V	Europe (VDE)
	RVV 300/500 3C x 0.75/1 mm <sup>2</sup>	10A, 250V	China (CCC)
	VCTF 3C x 0.75/2 mm <sup>2</sup>	7 / 15A, 125V	Japan (PSE)
	VCTF 3C x 1.25 mm <sup>2</sup>	10 / 12A, 250V	Japan (PSE)
	227 IEC 53 (IEC-J) Round 3C x 1 mm <sup>2</sup>	10A, 250V	Japan (IEC-J)
	SJT 3C x AWG 18/16	10 / 13A, 125 / 250V	N. America (UL / CSA)
	SVT 3C x AWG 18	10A, 125 / 250V	
<b>VSC19, VAC19A, VAC19LA (standard), VAC19KS (V-Lock) (C19)</b>	V-75 H05VV-F Ordinary Duty (Circular) 3C x 1.5 mm <sup>2</sup>	16A, 250V	Australia (SAA)
	H05VV-F 3C x 1.5 mm <sup>2</sup>	16A, 250V	Europe (VDE)
	RVV 300/500 3C x 1.5 mm <sup>2</sup>	16A, 250V	China (CCC)
	VCT 3C x 3.5 mm <sup>2</sup>	20A, 125 / 250V	
	VCTF 3C x 2.0 mm <sup>2</sup>	15A, 125 / 250V	Japan (PSE)
	HVCTF 3C x 2.0 mm <sup>2</sup>	16A, 125 / 250V	
	SJT 3C x AWG 12	20A, 125 / 250V	N. America (UL / CSA)
	SJT 3C x AWG 14	15 / 16A, 125 / 250V	
<b>VAC20A, VAC20AD, VAC20S, VAC20BS (standard), AC20KC (V-Lock) (C20)</b>	V-75 H05VV-F Ordinary Duty (Circular) 3C x 1.5 mm <sup>2</sup>	16A, 250V	Australia (SAA)
	H05VV-F 3C x 1.5 mm <sup>2</sup>	16A, 250V	Europe (VDE)
	RVV 300/500 3C x 1.5 mm <sup>2</sup>	16A, 250V	China (CCC)
	IEC-J 3C x 1.5 mm <sup>2</sup>	16A, 250V	Japan (IEC-J)
	HVCTF 3C x 2.0 mm <sup>2</sup>	16A, 250V	Japan (PSE)
	SJT 3C x AWG 14	16A, 125 / 250V	N. America (UL / CSA)

Please refer to our online product catalogue @ [products.volex.com](http://products.volex.com) for the matching configurations covered by the safety approvals.



## GLOBAL SUPPORT



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