EDITION 26
VOLUME 1

20 TRENDING AND HIGH DEMAND DATA CENTER PRODUCTS AND SERVICES

WRITTEN BY: Dr. Yuhsin Hawig, VP of Applications Engineering | **Erika Akins, P.E.,** Applications Engineering Manager

DYNAMIC AND GROWING

Data Center construction rates in North America have jumped 600% since 2000. The explosive growth is driven by the rising demand for cloud computing, data-intensive services, AI applications, and more. The facilities house various types of equipment to process, store, and share data, thus, they are built at a dynamic and ultra-fast pace using diverse and sustainable products. This whitepaper showcases the top reasons why the Southwire brand has been specified for data center applications in the past two decades, which include 8 common wire and cable products, 5 popular services, and 3 hands-on solutions.

BUILD AMERICA, BUY AMERICA

We've got it MADE IN AMERICA™

Southwire's wire and cable products supplied to data centers meet the Build America, Buy America (BABA) policy and are fully compliant with 49 U.S.C. § 5323(j) regulation. All raw materials for cables including metals and compounds sourced for drawing, stranding, extrusion, cabling, and the final packaging are produced in the U.S. **Scan the QR code** to browse the comprehensive data center spec library for your upcoming Bipartisan Infrastructure Law (BIL) projects.

BROWSE DATA

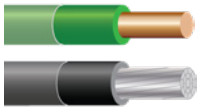
SUSTAINABLE ATTRIBUTES AND PRODUCTS

STRONG. SUSTAINABLE. SOUTHWIRE.

Most of all data center owners are accelerating their green initiatives to reduce the carbon footprint. Southwire is also committed to protecting the well-being of our communities and the environment. The life cycle of our wire and cable products is scrutinized from the extraction of raw materials, manufacturing processes, designs, code and standard compliance, installation efficiency, performance, and the final disposal. **Scan the QR code** to learn the 5 attributes of sustainability that we use to define, track, and promote our sustainable product sales.

LEARN MORE

SIM*pull* THHN/THWN-2® CABLE



Southwire's SIM*pull* THHN/THWN-2® cables are primarily installed in PVC conduits or cable trays as branch circuits or feeders to service mega-scale data centers. 600 volts rated SIM*pull* THHN/THWN-2® products meet UL 83 and are marked with our E-file E23919. They are coextruded with PVC Insulation and an outer Nylon sheath. In addition to solid or compressed stranded copper conductors in sizes from 14 AWG to 1000 kcmil, we also offer compact stranded 8000 series aluminum designs in sizes from 6 AWG to 1000 kcmil that are a cost-saving alternative to copper.

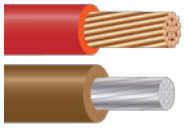
ENVIRONMENTAL PRODUCT DECLARATION

CERTIFIED ENVIRONMENTAL PRODUCT DECLARATION

As we continue to foster environmental stewardship and corporate sustainability, Southwire is developing a portfolio of Environmental Product Declarations (EPD) to help our customers achieve their LEED certifications. This his ISO-14025 and ISO-21930-2017 report details the environmental impact of a product based on its Life Cycle Assessment (LCA). Currently, over 100 Southwire products have independently verified EPDs. 70% of these products are deployed in data centers and they represent approximately 90% of our wire and cable sales. **Scan the QR code** to view our Product Transparency.

VIEW PRODUCT EPDs

SIM*pull* XHHW-2® CABLE



For critical and heavily loaded circuits that demand a higher voltage rating, SIM*pull* XHHW-2® product is a must-have as it is dual-rated for 600V and 1000V and it features extensive stock options in any color and size combination. This product is certified to UL-44 under Southwire's E-file E30117 and is insulated with Crosslinked Polyethylene that is lead-free and naturally halogen-free with zero-acid gas emission compared to THHN/THWN. This is the most sustainable building wire solution for any construction seeking a LEED certification. **Scan the QR code** to learn the benefits of SIM*pull* XHHW-2® products.

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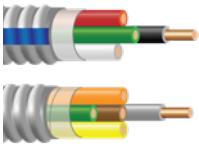
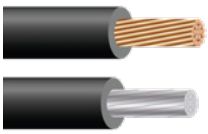


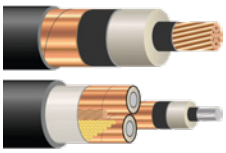
ARMORLITE® TYPE MC CABLE

Armorlite® Type MC Cable, certified to UL 1569 under Southwire's E-file E96627, can be installed in a variety of ways within a data center. It is used for lighting and receptacle circuits. It is offered as a precut whip that is used under the floor from the Power Distribution Cabinets (PDC) or Remote Power Panel to the main distribution units (MDU). Under the floor is considered a plenum space, and Type MC can be installed in plenum spaces per the National Electrical Code® 300.22(C)(1), Environmental Air-Handling Spaces.



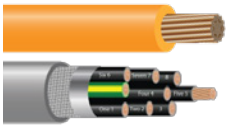
RHH/RHW-2/USE-2

Type USE-2 is a 600V Underground Service Entrance cable certified to UL-854 and is marked with Southwire's unique E-file E32071. It also meets UL 44 and is NOM-ANCE compliant for Mexico. It is made of a high-heat, moisture, and sunlight-resistant Crosslinked Polyethylene (XLPE) and is dual-rated as type RHH/RHW-2. USE-2 is frequently sourced for below-grade or direct burial applications as the ruggedized insulation design passes both impact and crushing-resistance testing per UL.



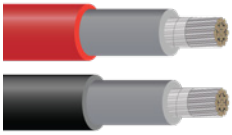
MV-105 SIM*pull*® PVC JACKET

MV cables rated for 15, 25, or 35kV, certified to UL-1072 under Southwire's E-file E66602, are essential cables that feed the power from the customer substation to the Main Distribution Units (MDU). The product contains a non-lead EPR insulation and a helically-applied copper tape shield. The patented SIM*pull*® PVC jacket boasts a reduced Coefficient of Friction of 0.2, which facilitates challenging long pulls and minimizes cable-pulling damages. MV cables can be designed with a single conductor or 3-conductor in compressed copper or 8000 Series compact aluminum conductors. During the cable core extrusion, the dimensions are monitored via an online X-ray for quality control.



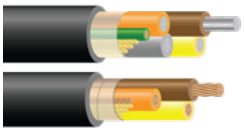
MachineFLEX™ POWER CABLE

MachineFLEX™ power cables are designed with Class K or Class I flexible rope-lay stranded copper that maintains its form for effortless handling and installations around bends, and easier terminations in tight spaces such as motor terminal and generator connection boxes, and confined spaces in switchgear. They are ideal for prefabricated switchgear lineup interconnection power wiring. Multi-rated as THHN/THWN-2, Appliance Wiring Material (AWM), Machine Tool Wiring (MTW), and T90 Nylon or for Canadian applications. Southwire also offers a XHHE-2/RW90 crosslinked polyethylene version for 1kV applications. MachineFLEX™ cables offer a smaller bending radius than DLO.



DIESEL LOCOMOTIVE CABLE (DLO)

Diesel Locomotive Cable (DLO) contains a Class I flexible stranded tinned copper conductor coextruded with a crosslinked EPDM Insulation and a thermoset CPE Jacket. This 2kV-rated product can power diverse applications as it is MSHA-approved, UL-certified for Type RHH/RHW-2, and CSA-listed as RW90. The RHW-2 rating denotes the maximum continuous operating temperature of 90°C in both wet and dry locations. It also carries an FT4 vertical flame rating that delays the spread of fire. DLO is commonly used in prefabricated cable bus designs or cable management systems in data centers that are easily adjustable. Moreover, they are often installed in battery banks and Uninterruptible Power Supply (UPS) systems.



600V TC-ER TRAY CABLE

Type TC-ER tray cables, certified to UL-1277 under Southwire's E-file E75755, are a versatile product that supports connections within data centers. Instead of pulling multiple reels of single THHN/THWN-2 cable one by one, multiconductor tray cables that have been plexed at the factory can be deployed. Placing 3 to 4 conductors under an overall PVC jacket to create an all-in-one assembly makes it easier and faster to pull from the disconnect to the server. Inner conductors can be designed with a more robust crosslinked XHHW-2 insulation instead of the Type THHN made of thermoplastic PVC with a higher dielectric constant.

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CABLE PULLING AND HANDLING SOLUTIONS

In addition to wire and cable products, Southwire also provides many tools and jobsite services to support data center needs. Our comprehensive cable-pulling solutions are built for durability and reliability. For example, Maxis® Pro-Jack, Maxis® Grips™, and QWIK*rope*® pulling rope significantly shorten set-up time, reduce labor, and improve worker safety. In some use cases, pulling time can be reduced from 50 to 35 minutes. **Scan the QR** code to access the brochure.

VIEW BROCHURE

ASSEMBLED PRODUCT SOLUTIONS

Southwire cables can be bundled for data center applications to reduce the large number of pulls and many bulky reels being handled. We customize UL-listed, mission-critical, branch circuit power cables that have been manufactured and tested in a controlled environment across multiple cable types and wiring devices. NEMA-rated devices, pin and sleeve, and modular connectors can be paired with various cables including but not limited to MC, Rubber Cord, Tray Cable, and DLO. Each cable is individually serialized with a custom label for its unique customer. **Scan the QR** code to access the brochure.

VIEW BROCHURE

AGILE MANUFACTURING AND SPEED™ SERVICES

Southwire has invested heavily in manufacturing facilities where we make wire and cable products for data centers from the inside out. Older machines and testing devices are upgraded with new equipment to improve the Overall Equipment Effectiveness (OEE), production quality, and worker safety. The expanded capacity in different states boosts agility and business continuity, allowing us to service more data center customers in North America under all circumstances. **Scan the QR code** to learn more about Southwire's *SPEED*™ Services.

VIEW BROCHURE

PROJECT MANAGEMENT AND CUSTOMER SERVICES

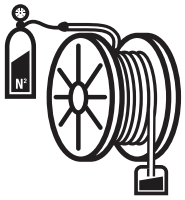
Southwire's dedicated project management team streamlines services from pre-sale (quotation, project award, order releases) to post-sale (shipping, delivery, installation, repair, or replacement) and achieves seamless data center project flow from start to finish. We are the one-stop shop for customers with improved collaboration between key stakeholders. Additionally, our new Customer Hub offers an intuitive self-serve site to view order details, search inventory, and more. **Scan the QR code** to watch the videos to learn more.

LEARN MORE

CABLETECHSUPPORT™ SERVICES

Southwire's CableTechSupport™ Services team includes members with Ph.D. and Master of Science degrees along with Professional Engineer (PE) certifications. The team handles more than 15,000 technical requests with over 100 signed engineering letters created each year. We help to gain approvals from inspectors or Authorities Having Jurisdiction (AHJ) to avoid construction delays. Our monthly whitepaper publication brings technical insights to help end users select and install wire and cable products. Scan the QR code to access a whitepaper example entitled, "20 Best Practices for Cable Installation," in conduit for your next data center projects.

LEARN MORE



EMERGENCY NITROGEN PURGING SERVICES

Southwire has a track record of delivering emergency field services for 20 years, which include Nitrogen Purging to mitigate unforeseen moisture intrusions in new cables during transit, storage, or installation. Our engineering team designs, builds, and ships the purging tubes and connectors to match the cable in question. Step-by-step instructions are provided to ensure an efficient purging process to restore the wet cables on the job site. **Scan the QR code** to learn more.

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ISO-ACCREDITED LABORATORY SERVICES

Southwire's Cofer Technology Center is an ISO-17025 accredited R&D facility and a UL and CSA recognized laboratory, specializing in electrical, mechanical, thermal, and accelerated aging qualifications. Many formulations were invented and tested here, including the patented SIM*pull*® Technology, commonly specified for data centers. We also offer forensics and customer-specific testing to evaluate environmental exposures or system impact on installed cables.

SINCLAIR DIGITAL PARTNERSHIP

Southwire has partnered with Sinclair Digital to provide Agile Core™, a plug-and-play solution that provides a modular, sustainable backbone for data center lighting and sensors. This new technology combines Power over Ethernet (PoE) and Fault Managed Power (FMP) to create a touch-safe electrical system. It is LEED-credit eligible due to less power lost and material savings. Pairing Southwire's PoE cabling solutions with Sinclair Digital's intelligent system makes it easier to leverage data, control lighting, and maximize sensors through automation at data centers. **Scan the QR code** to learn more.

LEARN MORE

FREE ONLINE CALCULATOR SOLUTIONS

Southwire offers many free engineering tools online for end users to perform cable pulling, conduit fill ratio, and voltage drop calculations. We recommend conducting the full pull calculations in advance to evaluate the entire route, the coefficient of friction for different jacket materials, the number of bends, and the angle of each bend. **Scan the QR code** to access all online calculators.

ACCESS CALCULATORS

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For more information, please contact cabletechsupport@southwire.com or visit **southwire.com**.