



JSCS Series

Cold Shrink
Disconnectable
Joint System
2023 PRODUCT GUIDE



15/25/28kV	35kV
Class	Class

JSCS™ Series

INTRODUCTION & PRODUCT RATINGS

The most versatile splicing solution

The Richards Disconnectable Joint system is a multi-way medium voltage splicing system available through 35kV. Commonly found in higher load density underground systems, these Joints can be useful even for lighter loads due to their versatility and simplicity. Other methods involve complicated installations that are often unfeasible in congested underground distribution environments.

- **Simplified Installation:** Disconnectable Joints make multi-way splicing as simple as possible. Lugs are bolted to a center Bus in clear view of the splicer, eliminating the need for “blind connections” during assembly. Our range-taking JSCS Cold Shrink Sleeve eliminates the need for cable adapters, retaining rings and vent rods. The Barrier Bolt and Sleeve Restraint ensure proper bolt torque and sleeve positioning, respectively, reducing the chance of improper installation.
- **Versatile Solution:** Any cable of a Disconnectable Joint can be accessed without disturbing other connections. The Bus is offered in 4 configurations, and accessories are available to isolate, insulate, test and ground. This provides our customers the flexibility to meet their internal requirements which can vary by location or project.
- **Low-Profile Design:** Manholes and vaults can be extremely congested and space is at a premium. Disconnectable Joints—including the 4-Position “H” Joint—have a total installed height of under 10”.
- **Designed, Molded, Tested in the USA:** Our team is intimately involved in everything from material development, product and mold design, and production. This allows us to control every aspect of the design, down to the smallest detail.

IEEE 386 - Industry Minimum Requirements

For your reference, IEEE ratings are provided below. Many of our products exceed these ratings. For product-specific information, see appropriate Product Data Sheet or contact the factory.

Voltage Ratings			
Voltage Class, Phase-to-Phase	15kV	25kV	35kV
Maximum Operating Voltage – (phase-to-ground)	8.3kV	15.2kV	21.1kV
Corona Voltage Level – (partial discharge extinction voltage)	11kV	19kV	26kV
AC Withstand – (1 minute)	34kV	40kV	50kV
Impulse-Withstand Voltage – (BIL)	95kV	125kV	150kV

Continuous Current Ratings	
Aluminum	600A
Copper	900A

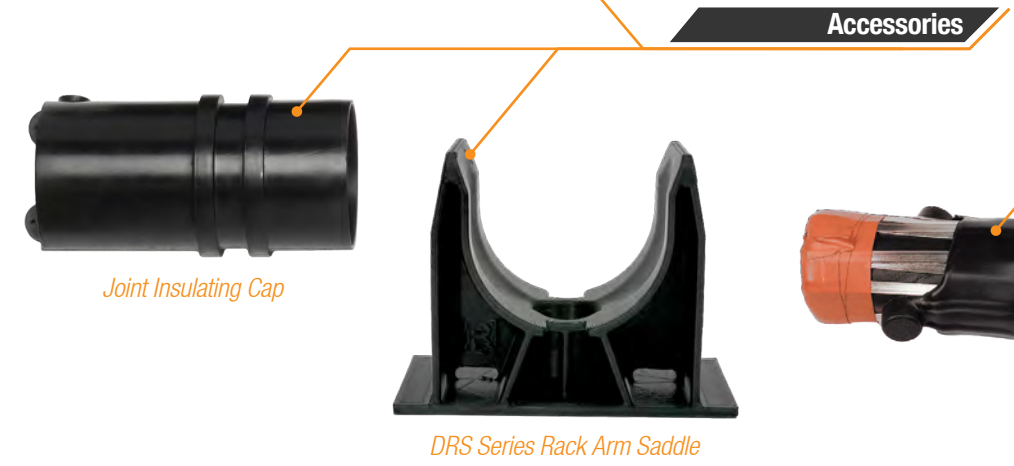
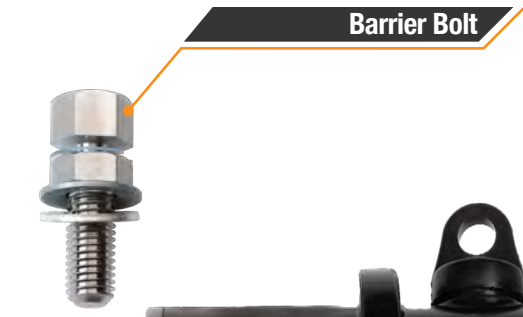
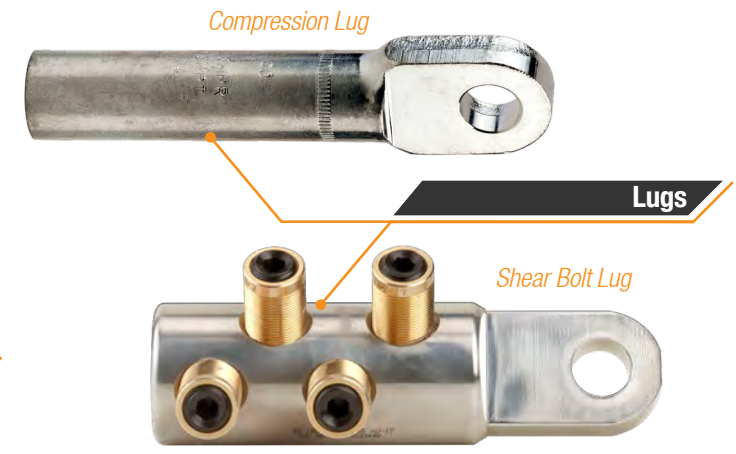
Short-Time Current Ratings	
Aluminum	25kA, 10c. and 10kA, 3s.
Copper	40kA, 10c. and 10kA, 3s.

OUR TESTING EXCEEDS INDUSTRY REQUIREMENTS. IEEE REQUIRES PARTIAL DISCHARGE PLUS A CHOICE OF AC OR IMPULSE WITHSTAND. RICHARDS RUNS ALL THREE TO ENSURE THE HIGHEST QUALITY.

Designed and tested per the following industry standards:

- IEEE Std. 386: For Separable Insulated Connector Systems
- IEEE Std. 404: For Extruded and Laminated Dielectric Shielded Cable Joints
- IEEE Std. 592: For Semiconducting Shields

To Schedule a Demonstration
Contact Your Local Sales Rep



1. Sleeve Restraints

Sleeve Restraints are fastened between pre-molded shoulders in the Sleeve to ensure proper positioning (they cannot be installed unless the Sleeves are correctly seated). The Restraints ensure the Sleeves remain securely in place even under abnormal conditions (such as extreme bending or pressure build-up inside the cable from water ingress in the strands). The Restraints also provide a low-resistance connection point for bleeder wires.

2. Barrier Bolt

Disconnectable Joints utilize bolted connections between Lugs and a center Bus. The Barrier Bolt prevents Sleeve installation if the bolt head is not sheared off. The shear head is engineered to break at 50-60 ft-lbs, ensuring the bolt is tightened to the correct torque value without the need for a special torque wrench.

3. JSCS Series - Cold Shrink Sleeve

The JSCS slides over the prepared cable end and onto the Bus interface to insulate and provide stress control. Molded from our carefully formulated cold shrinkable EPDM materials, the JSCS combines multiple components into a single housing, making installation extremely simple and reliable. The cable entrance of the JSCS is shrinkable, obsoleting the cable adapter, retaining ring, and vent rod. This eliminates the performance risk associated with cable adapter

positioning and makes installation markedly more ergonomic. This cold shrink cable entrance also allows the JSCS to cover a wide range of cable sizes as laid out in our Use Range Tables. With fewer components and range-taking capabilities, customers can reduce inventory.

4. Lugs

Our Disconnectable Joints are available with lugs for every application. Our 600A shear bolt lugs (aluminum/copper rated) can be installed on a large range of conductor sizes. They feature innovative “stepless” shear-bolts that are engineered to break below the surface of the lug regardless of conductor cross-section. Our compression connectors are available in 600A Aluminum (aluminum/copper rated) and 900A Copper (rated for copper conductors only).

5. Bus

The Bus is the center component of the Disconnectable Joint to which the cables are interconnected. Available in Aluminum or Copper, the Bus is fully insulated/shielded and features a capacitive test point. Four unique Bus configurations are available—“I”, “Y”, “H” or “U”—all achieving less than 10” of total stack-height.

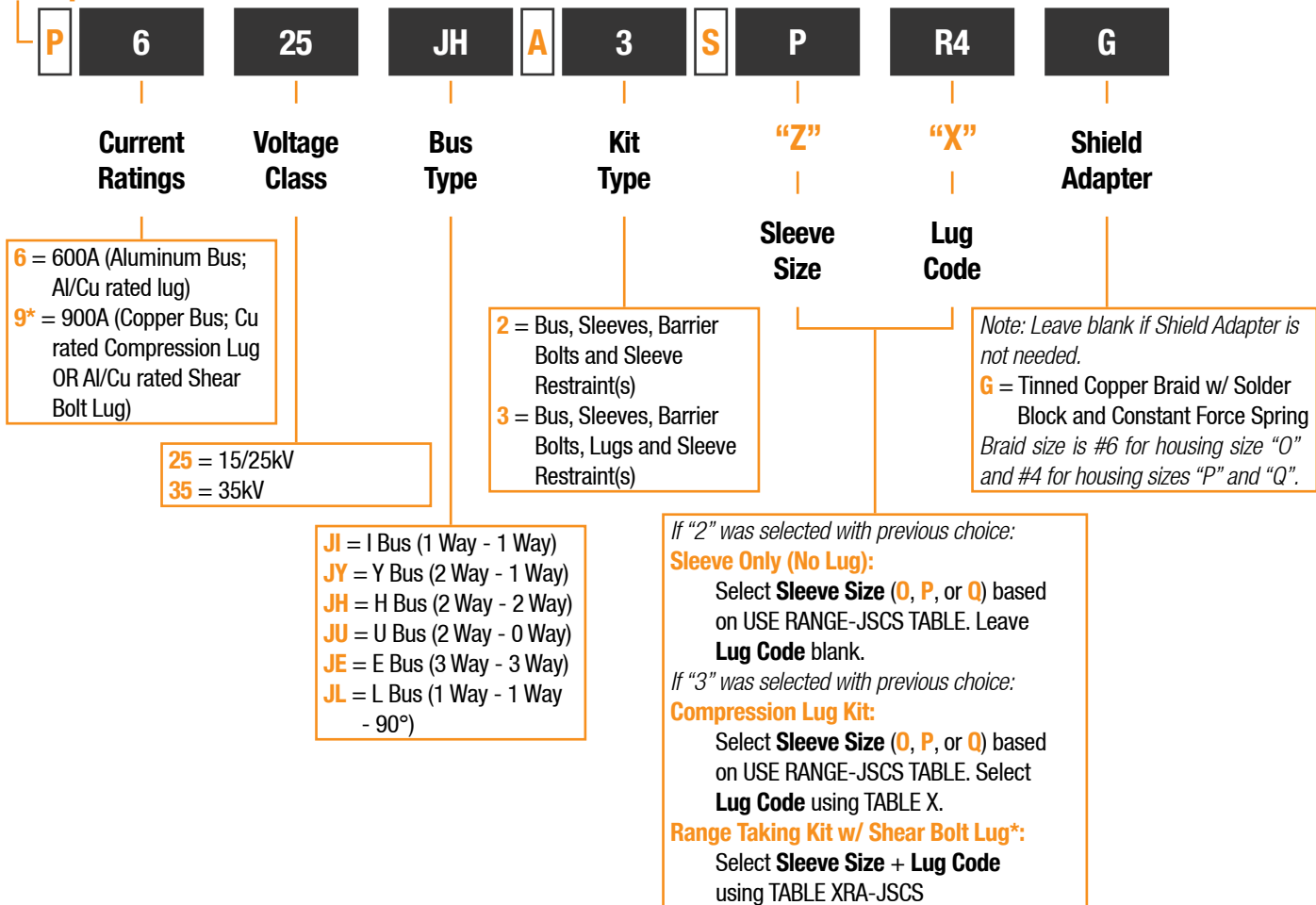
6. Accessories

Disconnectable Joints are versatile and can be configured in a variety of ways to meet the requirements of any job. Accessories, such as the Joint Insulating Cap and Spiking Stem Kit, are available to insulate, isolate, ground and test. The DRS Series Rack Arm Saddle provides an easy method to rack and organize Disconnectable Joint assemblies.

JSCS™ Series

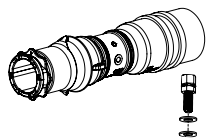
ORDERING INFORMATION

Sample Part Number



For joints with multiple sleeve and/or lug sizes use Kit Options chart below to order sleeve kits as needed.

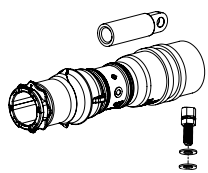
Kit Options



Cold Shrink Sleeve & Barrier Bolt Pack

P625JSCS1Z — 15/25/28kV
P635JSCS1Z — 35kV

To specify "Z" (**Sleeve Size**), follow instructions above for selecting **Sleeve Only (No Lug)**



Cold Shrink Sleeve, Barrier Bolt, and Aluminum Lug

P625JSCS2ZX — 15/25/28kV
P635JSCS2ZX — 35kV

To specify "Z" (**Sleeve Size**) and "X" (**Lug Code**), follow instructions above for selecting **Compression Lug Kit** or **Range Taking Kit w/ Shear Bolt Lug***

For Shield Adapter add "G" after "X" Lug Code. Braid size is #6 for sleeve size "O" and #4 for sleeve sizes "P" and "Q".

Cold Shrink Sleeve, Barrier Bolt, and Copper Lug

P925JSCS2ZX — 15/25/28kV
P935JSCS2ZX — 35kV



Aluminum I Bus w/Restraints

P625JIRO — 15/25kV
P635JIRO — 35kV

I Bus Shown. To order different Bus Types replace "JI" with desired Bus Type as shown above. Copper not available for JE or JL busses.

Copper I Bus w/Restraints

P925JIRO — 15/25kV
P935JIRO — 35kV

* Range Taking Shear Bolt Lugs are only available in aluminum.

Sample Part Number is a 15/25kV 600A Disconnectable "H" Joint kit. Kit includes "H" Bus, Size "P" JSCS Sleeves, Barrier Bolts, Sleeve Restraints, P6ALR4 Range Taking Shear Bolt Lugs, and PCRK-GA-05 Shield Adapter kits.

The following product sizing information is based on AEIC/ICEA dimensional ranges. The true range of the JSCS Series on a particular cable construction may vary. To confirm sizing on non-standard cables, or to check sizing on cables that fall just outside our min or max, contact the factory.

JSCS™ Series

SIZING OPTIONS

Table X - Compression Lug Selection

Conductor Size	Strd/Compr	Cmpt/Sol
	"X"	"X"
#2	7	6
#1	8	7
1/0 AWG	9	8
2/0 AWG	10	9
3/0 AWG	11	10
4/0 AWG	12	11
250 kcmil	13	12
300 kcmil	14	13
350 kcmil	15	14
400 kcmil	16	15
450 kcmil	17	16
500 kcmil	18	17
550 kcmil	20	18
600 kcmil	20	18
650 kcmil	211 [†]	20
700 kcmil	22	20
750 kcmil	23	211 [#]
800 kcmil	24	22
900 kcmil	26	23
1000 kcmil	28	26
1100 kcmil	285	contact factory
1250 kcmil	29	contact factory

For copper P9CU Series Lugs, use code 21 instead.

Table XRA-JSCS - Range Taking Lug Selection[†]

Sleeve Size + Lug Code	Voltage Class	Kit Conductor Range	
		MINIMUM	MAXIMUM
OR1	15kV (175 mil)	1/0 AWG [‡]	300 kcmil
	15kV (220 mil)	#2 AWG [‡]	
	25kV (260 mil)	#3 AWG	
OR2	15kV (175/220 mil)	1/0 AWG [‡]	500 kcmil Cmpt
	25kV (260 mil)		350 kcmil
PR2	15kV (175/220mil)	350 kcmil [‡]	500 Cmpt
	25kV (260mil)	4/0 AWG	
	35kV (345mil)	1/0 AWG	
PR3	15kV (175/220mil)	350 kcmil [‡]	600 kcmil
	25kV (260 mil)	4/0 AWG	500 kcmil
	35kV (345 mil)		
PR4	15kV (175/220mil)	350 kcmil [‡]	750 kcmil
	25kV (260mil)		500 kcmil
	35kV (345mil)		
QR4	15kV (175mil)	750 kcmil	750 kcmil
	15kV (220mil)	600 kcmil	
	25kV (260mil)	500kcmil [‡]	
	35kV (345mil)	350 kcmil	
QR5	15kV (175mil)	750 kcmil	1250 kcmil
	15kV (220mil)	600 kcmil	
	25kV (260mil)		
	35kV (345mil)		

[†] Range Taking Shear Bolt Lugs are only available in aluminum (Al/Cu rated).

[‡] May not fit some compact/compressed cables. See USE RANGE TABLE below.

Use Range-JSCS Table

Sleeve Size	Voltage Class	Conductor Size	
		Minimum	Maximum
O Minimum Insulation Diameter = 0.725"	15kV (175 mil)	1/0 AWG*	500 kcmil
	15kV (220 mil)	#2 AWG**	
	25kV (260 mil)	#4 AWG	
P Minimum Insulation Diameter = 0.990"	15kV (175/220 mil)	350 kcmil***	750 kcmil
	25kV (260 mil)	4/0 AWG	
	35kV (345 mil)	1/0 AWG	
Q Minimum Insulation Diameter = 1.268"	15kV (175 mil)	750 kcmil	1500 kcmil
	15kV (220 mil)	600 kcmil	
	25kV (260 mil)	500 kcmil****	
	35kV (345 mil)	350 kcmil	

* May not fit some 1/0 AWG compressed/compact 100% (175mil) insulated power cables. Check minimum insulation diameter to confirm.

** May not fit some #2 AWG compact 133% (220 mil) insulated power cables. Check minimum insulation diameter to confirm.

*** May not fit some 350 kcmil compact 100% (175 mil) insulated power cables. Check minimum insulation diameter to confirm.

**** May not fit some 500 kcmil compact insulated power cables. Check minimum insulation diameter to confirm.