

TYPE DEB/DEV DOUBLE END BREAK SWITCH

O40-170331.1
(Rev. of O40-160315.1)

3-PHASE, GROUP-OPERATED (SUBSTATION AND TRANSMISSION APPLICATIONS)



- Horizontal upright, vertical or underhung mounting
- 34.5 KV through 345KV
- 1200A through 5000A
- Manual or motor operated control mechanism



MANUFACTURER OF HIGH VOLTAGE PRODUCTS SINCE 1914
1.800.426.4380

FEATURES OF THE TYPE DEB/DEV SWITCH

The **DEB/DEV** double end break switch is an aluminum, three pole, outdoor, air-break, group-operated, disconnect switch. It has three insulators and is operated by rotation of the center insulator. The switch is supplied with a complete operating mechanism including swing handle, vertical operating pipe, outboard bearing, interphase pipe, position indicator and all connecting fittings. Gear and motor operators are available as options. The DEB/DEV meets applicable industry standards for electrical and mechanical performance. Applications include disconnecting, isolating or bypassing equipment such as transformers or breakers, and sectionalizing bus and line.

JAW CONTACT

The DEB/DEV switch has silver plated copper reverse-loop contacts. This contact design utilizes magnetic forces generated by current to increase contact pressure as the current increases. Insulated stainless steel coil springs maintain contact pressure and are out of the current path. The mating blade contact plate is silver plated copper. The blade rotates in the contact during opening and closing operations. This action cleans contact surfaces and improves ice-breaking capability.

BLADE

The blade is constructed of aluminum tubing with welded aluminum castings for male contacts.

CENTER OPERATING MECHANISM

The DEB/DEV's internal construction consist of pin and lever mechanism with a cam locking system. It comes fully adjusted and is virtually maintenance free.

BASE

230kV to 345kV -- Square tube base.
115kV to 161kV -- Double channel base.
34.5kV to 69kV -- Single channel base.
-- Structural steel bases are drilled to customer mounting specifications. The bases are hot dip galvanized and have jacking bolts in the insulator supports to simplify switch alignment and adjustment.

ARCING HORN

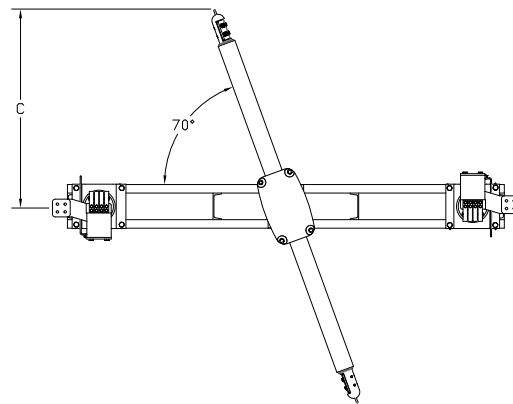
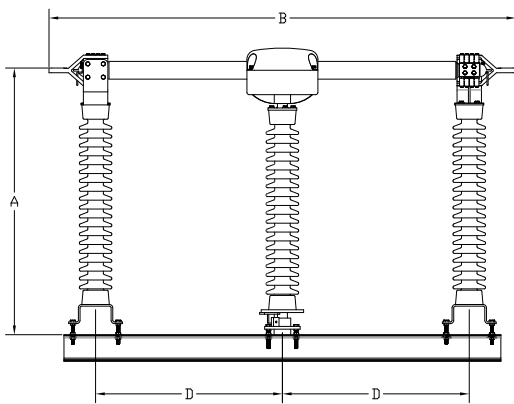
Protects switch contacts from arcing damage when low values of switching current are present.

TERMINAL PADS

Drilled to NEMA specifications -- 9/16" holes on 1 3/4" spacing.



TYPE DEB SWITCH SPECIFICATIONS

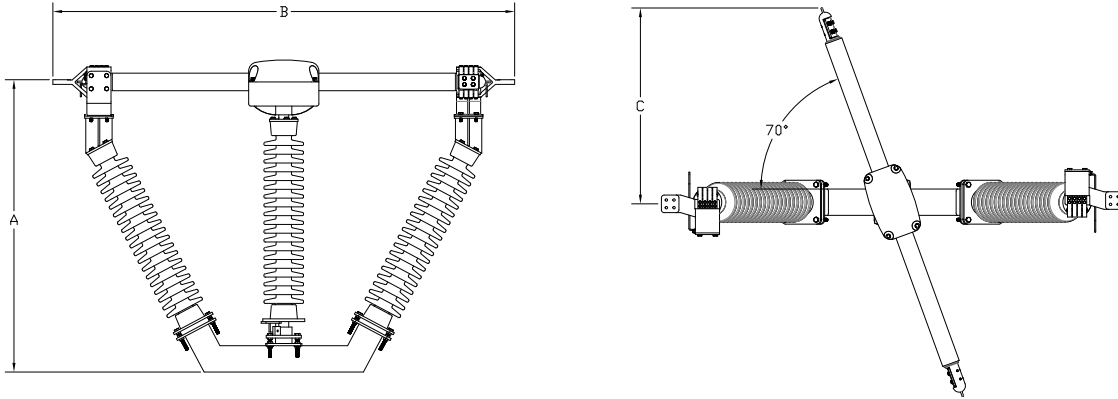


kV Nom. (kV Max.)	Amps Continuous (kA Mom.)	Insulator T.R. No.	B.I.L. Rating (kV)	Catalog Number	Dimensions (in)				Single Pole Weight (Lbs.)
					A	B	C	D	
34.5 (38)	1200 (120)	210	200	DEB3412	31 3/4	63	24 7/16	21	396
	2000 (120)			DEB3420					
	3000 (120)			DEB3430					
	4000 (120)			DEB3440					
	5000 (120)			DEB3450					
46 (48.3)	1200 (120)	214	250	DEB4612	35 3/4	69	27 1/4	24	430
	2000 (120)			DEB4620					
	3000 (120)			DEB4630					
	4000 (120)			DEB4640					
	5000 (120)			DEB4650					
69 (72.5)	1200 (120)	216	350	DEB6912	43 3/4	83	33 7/8	31	560
	2000 (120)			DEB6920					
	3000 (120)			DEB6930					
	4000 (120)			DEB6940					
	5000 (120)			DEB6950					
115 (123)	1200 (120)	286	550	DEB11512	60 1/4	105	44 1/4	42	799
	2000 (120)			DEB11520					
	3000 (120)			DEB11530					
	4000 (120)			DEB11540					
	5000 (120)			DEB11550					
138 (145)	1200 (120)	288	650	DEB13812	69 1/4	117	49 7/8	48	862
	2000 (120)			DEB13820					
	3000 (120)			DEB13830					
	4000 (120)			DEB13840					
	5000 (120)			DEB13850					
161 (170)	1200 (120)	291	750	DEB16112	77 1/4	129	55 7/16	54	1104
	2000 (120)			DEB16120					
	3000 (120)			DEB16130					
	4000 (120)			DEB16140					
	5000 (120)			DEB16150					
230 (245)	1200 (120)	304	900	DEB23012	95 1/4	157	68 5/8	68	1263
	2000 (120)			DEB23020					
	3000 (120)			DEB23030					
	4000 (120)			DEB23040					
	5000 (120)			DEB23050					
	1200 (120)	312	1050	DEB23012Z	107 1/4	171	75 3/16	75	1398
	2000 (120)			DEB23020Z					
	3000 (120)			DEB23030Z					
	4000 (120)			DEB23040Z					
	5000 (120)			DEB23050Z					
345 (362)	1200 (120)	324	1300	DEB34512	121 1/4	189	83 5/8	84	1829
	2000 (120)			DEB34520					
	3000 (120)			DEB34530					
	4000 (120)			DEB34540					
	5000 (120)			DEB34550					

NOTES

1. Dimensions are in inches and are for NEMA standard station post insulators.
2. Blade stops at 70°.
3. A gear or motor operator is recommended on 115kV switches and above.
4. All switches shipped with insulators installed at Royal, except 230kV and above. Consult factory if needed at 230kV

TYPE DEV SWITCH SPECIFICATIONS



kV Nom. (kV Max.)	Amps Continuous (kA Mom.)	Insulator T.R. No.	B.I.L. Rating (kV)	Catalog Number	Dimensions (in)			Single Pole Weight (Lbs.)
					A	B	C	
69 (72.5)	1200 (120)	216	350	DEV6912	49 5/8	83	33 7/8	628
	2000 (120)			DEV6920				
	3000 (120)			DEV6930				
	4000 (120)			DEV6940				
	5000 (120)			DEV6950				
115 (123)	1200 (120)	286	550	DEV11512	66 5/8	105	44 1/4	835
	2000 (120)			DEV11520				
	3000 (120)			DEV11530				
	4000 (120)			DEV11540				
	5000 (120)			DEV11550				
138 (145)	1200 (120)	288	650	DEV13812	75 5/8	117	49 7/8	884
	2000 (120)			DEV13820				
	3000 (120)			DEV13830				
	4000 (120)			DEV13840				
	5000 (120)			DEV13850				
161 (170)	1200 (120)	291	750	DEV16112	83 5/8	129	55 7/16	1116
	2000 (120)			DEV16120				
	3000 (120)			DEV16130				
	4000 (120)			DEV16140				
	5000 (120)			DEV16150				
230 (245)	1200 (120)	304	900	DEV23012	101 5/8	157	68 5/8	1257
	2000 (120)			DEV23020				
	3000 (120)			DEV23030				
	4000 (120)			DEV23040				
	5000 (120)			DEV23050				
345 (362)	1200 (120)	324	1300	DEV23012Z	113 5/8	171	75 3/16	1339
	2000 (120)			DEV23020Z				
	3000 (120)			DEV23030Z				
	4000 (120)			DEV23040Z				
	5000 (120)			DEV23050Z				
345 (362)	1200 (120)	324	1300	DEV34512	127 5/8	189	83 5/8	1759
	2000 (120)			DEV34520				
	3000 (120)			DEV34530				
	4000 (120)			DEV34540				
	5000 (120)			DEV34550				
					123 7/8	185 3/8	84 5/8	1876

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