



SIMABUS SUBSTATION CONNECTOR SYSTEM FOR ALUMINUM RIGID BUS CONNECTIONS UP TO 500 kV

KEY FEATURES

- **Modular design:** configures to virtually any busbar size
- **Suitable in new and retrofit applications** with flexibility throughout the design
- **Top electrical performance**
- **High strength mechanical components**
- **High quality casted components**

TE Connectivity (TE)'s SIMABUS is a product line of extra high voltage substation connectors and clamps, designed for rigid bus connections in AC & DC applications up to 550 kV for both Metric and Imperial sizes.

The line includes mechanical support, joints, derivations and connections to terminal equipment (stud & pads), as well as accessories such as earthing stirrups, end caps/shieldings and dampers.

The Metric range covers aluminum tubular conductors from 80 MM O/D to 250 MM O/D.

The Imperial range covers aluminum tubular bus conductors from 2.5" to 6" for both SPS and EHPS diameters.

Customers can count on consistent, high quality products, driven by TE's proven innovation and backed by our extraordinary customer support.

Metric Range



TECHNICAL DATA

Voltage	66 kV to 550 kV max
Current	1250 A to 6000 A
Short-time current	40 kA/3 sec to 80 kA/1 sec
Busbar size	80 MM O/D up to 250 MM O/D
Terminal fixing	Fixed or expansion type, to connect square or rectangular palms of high voltage equipment, as well as solid studs in aluminum or copper from 30 to 60 mm O/D
Post insulator connections	76 mm PCD to 275 mm PCD
Material	High-grade aluminum alloy
Fasteners	M12 bolts in stainless steel with pre-waxed nuts to ensure pressure contact efficiency and contact reliability. Avoids bolts seizing during tightening operation.
Standards	EN, ANSI/NEMA & DIN compliant
Expansion connectors	Expansion type connectors are equipped with multiple 721 SAL or 910 SAL conductor arrangements

ALUMINUM BUS SIZES

BUSBAR SIZE	METRIC	80	90	100	120	125	140	150	160	200	220	250
O/D	(mm)	80	90	100	120	125	140	150	160	200	220	250
I/D (Max)	(mm)	70	78	80	110	111	121	126	148	184	204	240
I/D (Min)	(mm)	60	70	90	96	102	120	126	140	180	200	222

ELECTRICAL DUTY (GIVEN FOR A BUS TEMPERATURE OF 65°C)

In (min)*	(A)	1560	1720	1880	2170	2800	2850	5000	3050	4250	220	4140
In (Max)*	(A)	2000	2250	2540	3150	3150	3000	5000	3850	4700	204	5600

* In (Min) & In (Max) corresponding respectively to the smallest and largest cross section of tubes

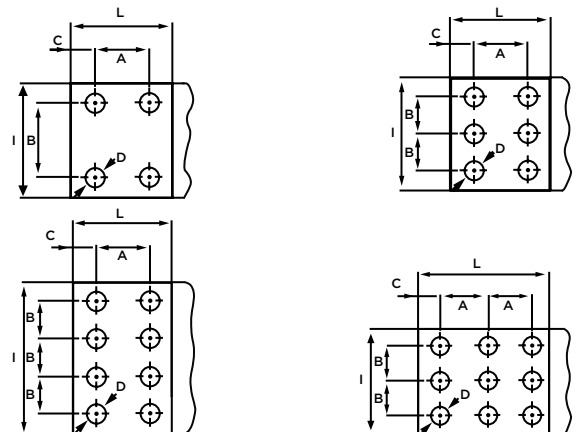
TERMINAL STUDS

Available from 30 MM Dia through 40 MM, 50 MM and up to 60 MM Dia in both Aluminum or Copper material

TERMINAL PADS CONNECTIONS

Available from 80x80, 100x100, 125x125 to 100x200 mm's according to IEC, NF, NEMA and DIN Standards

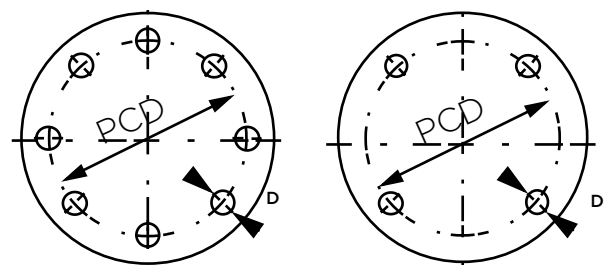
STANDARD	N° HOLES	L	L	A	B	C	D
IEC	4	80	80	40	40	20	14.5
NEMA		80	80	44.4	44.4	15.3	14.3
NF		80	80	45	45	16.5	16
IEC		100	100	40	40	30	14.5
NEMA		100	100	44.4	44.4	27.8	14.3
DIN		100	100	50	50	25	14.5
IEC	6	100	125	40	40	30	14.5
NEMA		100	125	44.4	44.4	27.8	14.3
DIN	8	100	200	50	50	25	14.5
IEC	9	125	125	40	40	22.5	14.5
NF		125	125	45	45	16.5	16



TERMINAL PADS CONNECTIONS

Available from 76 PCD trough 127 PCD, 178 PCD, 225 PCD, 254 PCD and up to 275 PCD

PCD (mm)	N° Holes	D
76	4	14
127		18
178		22
225	8	18
257		18
275		18



Imperial Range



TECHNICAL DATA

Voltage	66 kV to 550 kV max
Current	1250 A to 4500 A
Short-time current	40 kA/3 sec to 55 kA/1 sec
Busbar size	2.5" IPS O/D up to 6" IPS O/D for both SPS and EHPS sizes
Terminal fixing	Fixed or expansion type, to connect square or rectangular palms of high voltage equipment, as well as solid studs in aluminum or copper from 1.18" and up to 2.36" O/D
Post insulator connections	3" PCD to 10" PCD
Material	High-grade aluminum alloy
Fasteners	Stainless steel hardware with pre-waxed nuts to ensure pressure contact efficiency and contact reliability. Avoids bolts seizure during tightening operation.
Standards	ANSI/NEMA & DIN compliant
Expansion connectors	Expansion type connectors are equipped with multiple 721 SAL or 910 SAL conductor arrangements

ALUMINUM BUS SIZES

BUSBAR SIZE	Imperial	2.5 "	3"	3.5"	4"	5"	6"
O/D IPS	(Inch)	2.875	3.5	4	4.5	5.563	5.625
I/D (SPS or Sch 40)	(Inch)	2.469	3.068	3.548	4.026	5.047	6.065
I/D (EHPS or Sch 80)	(Inch)	2.323	2.9	3.364	3.826	4.813	5.761

ELECTRICAL DUTY (GIVEN BY THE ANSI/NEMA CC1 STANDARD)

In (min) Sch 40	(A)	1550	1895	2170	2460	3080	3735
In (Max) Sch 80	(A)	1780	2195	2530	2880	3635	4490

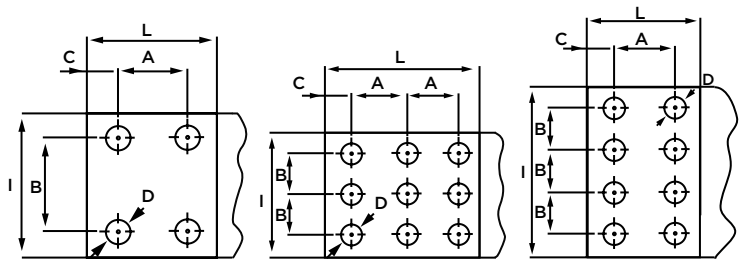
TERMINAL STUDS

Available from 1-1/2", 2", 2-1/2", 3" Dia in both Aluminum or Copper material

TERMINAL PADS CONNECTIONS

Available from 3"x3 " through 4"x4", 4"x5", 4"x6" NEMA Standards and up to 4"x8" according to DIN Standards

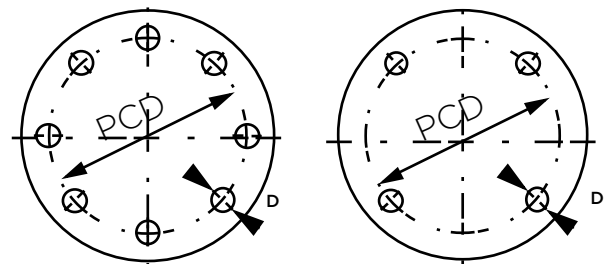
STANDARD	N° HOLES	L	I	A	B	C	D
NEMA	4	3"	3"	1.75"	1.75"	0.63"	0.56"
		4"	4"	1.75"	1.75"	1.13"	0.56"
	6	5"	4"	1.75"	1.75"	1.13"	0.56"
		6"	4"	1.75"	1.75"	1.13"	0.56"
DIN	8	4"	8"	1.97"	1.97"	1"	0.57"



POST INSULATOR FIXING

Available from 3"PCD through 5"PCD, 7" PCD, 8.86" (225) PCD, 10" PCD and up to 10.8" (275) PCD

PCD (mm)	N° HOLES	D
3 Inch	4	0.56"
5 Inch		0.7"
7 Inch		0.86"
8.86 Inch (225 mm)	8	0.7"
10 Inch		0.7"
10.8" (275 mm)		0.7"



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Philippines	+63 2-988-9445
Singapore	+65 65-90-5151
Thailand	+66 2-834-6294
Vietnam	+84 28-3911-5025 (ext. 105)

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