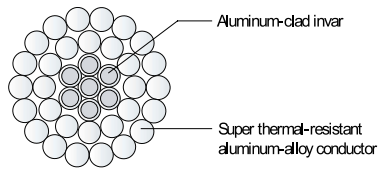
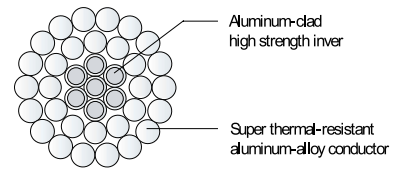




STACIR/AW



HSTACIR/AW



Description

Aluminum conductor INVAR reinforced is a completely different conductor compared to conventional ACSR in capacity and thermal expansion, while keeping its size, weight, and tensile strength. Aluminum conductor INVAR reinforced can carry twice as much conductor as ACSR of the same size, while maximum sag and maximum working tension are the same as those of ACSR.

Application

HSTACIR/AW, STACIR/AW is normally used to up-rate an existing transmission line by simply replacing the existing conductor without tower modification or reinforcement.

Standards

KEPCO and other International Standards as well as the customized solutions to meet customer requirements.

High Strength Aluminum Clad Invar Steel Wire (Thermal Resistant ACS Wire)

Nominal Diameter	Diameter Tolerance	Ultimate Tensile Strength	Elongation	Torsion	Conductivity	Aluminum Thickness		Calculated Weight	Nominal Cross-section
						Min.	Ave.		
mm	mm	Kgf/mm ²	%	times	%	mm	mm	kg/km	mm ²
2.47	±0.05	125	1.5	20	14	0.06	0.15	34.02	4.790
3.10	±0.06	120	1.5	20	14	0.07	0.17	53.48	7.548
3.20	±0.06	120	1.5	20	14	0.07	0.17	57.10	8.042
3.50	±0.07	120	1.5	20	14	0.08	0.18	68.31	9.621

※ Physical Constants

- Density : 7.1g/cm³
- Coefficient of linear expansion : 3.7x10⁻⁶ / at 15~230, 10.8x10⁻⁶ / at 230~290
- Elastic Coefficient : 15,500kg/mm²

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Nominal Cross Sectional Area	No. and Dia. of Strands		Tensile Load	Reference											
				Calculated Cross Sectional Area		Outside Dia.		Weight	Electric Resistance	Modulus of Elasticity (kg/mm ²)		Coefficient of Linear Expansion (×10-6/°C)			Standard Length
	(mm)	(mm)		(mm)	(kg/km)	(Ω/km, 20°C)	Up to Transition Point Temper- ature			Above Transition Point Temper- ature	Up to Transition Point Temper- ature	Above Transition Point Temper- ature to 230°C	Above 230°C	(m)	
	ST-Al Alloy	Al-clad Invar	(kgf)	ST-Al Alloy	Al-clad Invar	ST-Al Alloy	Al-clad Invar								
240	30/3.2	7/3.2	9,170	241.3	56.29	22.4	9.6	1,070	0.1159	8,040	15,500	16.0	3.7	10.8	2,000
330	26/4.0	7/3.1	10,000	326.8	52.84	25.3	9.3	1,285	0.0869	7,580	15,500	17.5	3.7	10.8	2,000
410	26/4.5	7/3.5	12,720	413.4	67.35	28.5	10.5	1,625	0.0686	7,580	15,500	17.5	3.7	10.8	2,000
480	45/3.70	7/2.47	10,500	483.84	33.54	29.61	7.41	1,580	0.0600	6,900	15,500	20.0	3.7	10.8	2,000

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Nominal Cross Sectional Area	No. and Dia. of Strands		Tensile Load	Reference												
				Calculated Cross Sectional Area		Outside Dia.		Weight	Electric Resistance	Modulus of Elasticity (kg/mm ²)		Coefficient of Linear Expansion (×10-6/°C)			Standard Length	
	(mm)	(mm)		(mm)	(mm)	(kg/km)	(Ω/km, 20°C)			Up to Transition Point Temperature	Above Transition Point Temperature	Up to Transition Point Temperature	Above Transition Point Temperature to 230°C	Above 230°C		(m)
	ST-Al Alloy	Al-clad High-Strength Invar	(kgf)	ST-Al Alloy	Al-clad High-Strength Invar	ST-Al Alloy	Al-clad High-Strength Invar									
240	30/3.2	7/3.2	9,700	241.3	56.29	22.4	9.6	1,070	0.1159	8,041	15,500	15.96	3.7	10.8	2,000	
330	26/4.0	7/3.1	10,500	326.8	52.84	25.3	9.3	1,285	0.0869	7,581	15,500	17.51	3.7	10.8	2,000	
410	26/4.5	7/3.5	13,300	413.5	67.35	28.5	10.5	1,625	0.0686	7,589	15,500	17.48	3.7	10.8	2,000	
480	45/3.7	7/2.47	11,000	483.8	33.54	29.61	7.41	1,580	0.0600	6,896	15,500	20.19	3.7	10.8	2,000	