

Definition

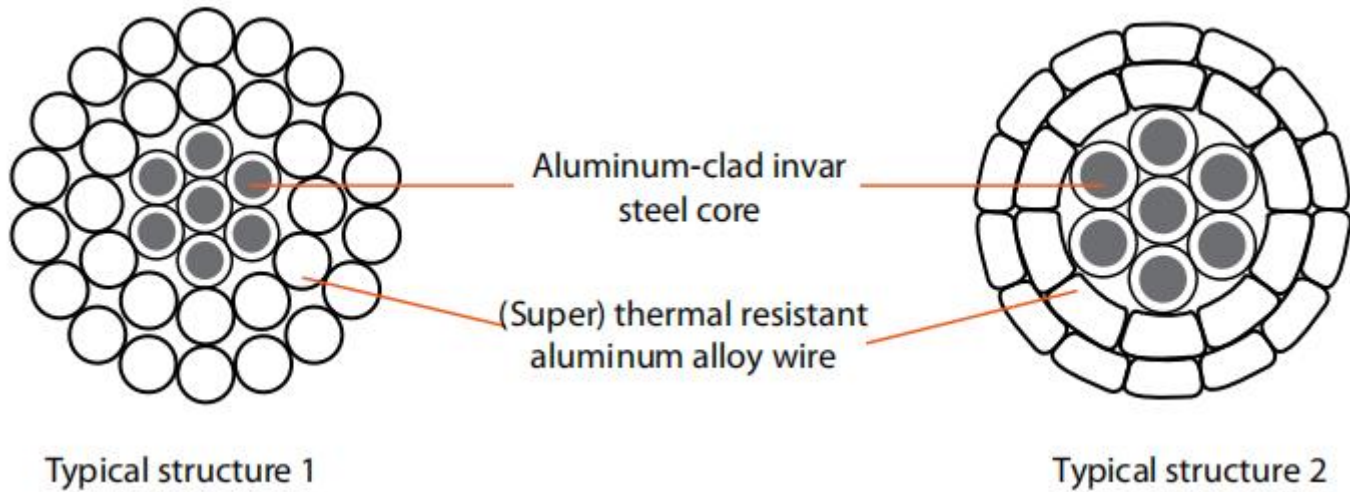
Super thermal-resistant aluminum-alloy conductors, Aluminum-clad invar reinforced

INVAR conductor is composed of aluminum clad invar core and thermal-resistant aluminum alloy wires. This conductor is suitable for old line modification. It can keep the same sag while increasing capacity.

Standard

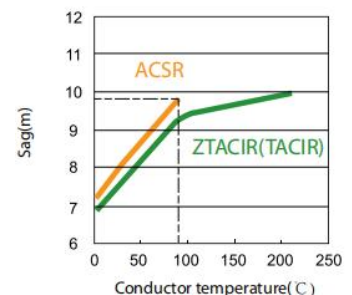
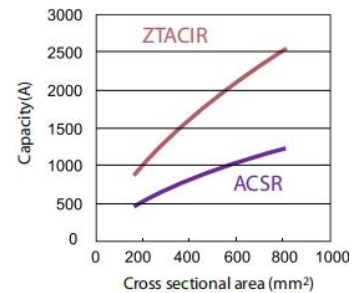
IEC 62004
IEC 61089
JCS 1404
Q/320623 AP 25

Structure



Technical characteristics

- The current-carrying capacity of INVAR conductor in 210°C is more than twice that of ACSR with same area in 90°C.
- The sag of INVAR conductor is kept in the same with that of ACSR with same overall diameter.
- The aluminum-clad invar has good performance of resistance to electrochemical corrosion, and the working life of conductor can reach more than 40 years.



Typical Parameters (Round structure)

Code	Structure		Areas	Diameter	Breakingload	DCresistance at20°C	Weight	Current capacity	
	Al	Steel						TACIR	ZTACIR
	Nos./mm							mm2	mm
135/30	30/2.38	7/2.38	164.61	16.66	53.97	0.2117	600	698	866
160/35	30/2.60	7/2.60	196.44	18.20	64.41	0.1774	716	784	974
210/40	28/3.07	7/2.7	207.26	20.38	73.78	0.1386	870	910	1135
200/45	30/2.90	7/2.90	244.39	20.30	78.81	0.1441	891	910	1135
230/45	28/3.24	7/2.85	275.51	21.51	82.19	0.1245	969	986	1231
255/40	26/3.54	7/2.75	297.48	22.41	82.83	0.1116	1015	1055	1318
240/55	30/3.20	7/3.20	297.57	22.40	93.82	0.1171	1085	1030	1165
220/55	30/3.05	7/3.05	270.33	21.35	85.23	0.1303	985	962	1088
290/55	28/3.64	7/3.20	347.67	24.16	101.53	0.0976	1226	1155	1447
300/50	26/3.85	7/3.00	352.16	24.40	95.55	0.0944	1203	1179	1476
340/65	28/3.92	7/3.45	403.36	26.03	117.90	0.0842	1423	1274	1599
345/55	26/4.11	7/3.20	401.24	26.04	108.80	0.0828	1370	1285	1612

Note:

1. Ambient temperature 40°C, Wind velocity 0.5m/s, Wind direction: 0 Degree, Solar radiation 0.1w/cm², Absorptivity of conductor surface 0.9.
2. Continuous operating temperature: TACIR 150°C, ZTACIR 210°C.
3. Other designs according to customers' requirements.

Typical Parameters (Trapezoid structure)

Code	Structure		Areas	Diameter	Breakingload	DC resistanceat 20°C	Weight	Current capacity	
	Al	Steel						TACIR	ZTACIR
	Nos./mm							mm2	mm
160/40	18/3.37	7/2.65	199.16	17.04	65.06	0.1759	730	771	957
200/45	17/3.87	7/2.85	244.62	18.87	76.87	0.1412	883	890	1105
200/50	17/3.87	7/2.95	247.81	19.01	80.39	0.1409	906	892	1110
250/45	18/4.20	7/2.85	294.04	20.64	82.64	0.1141	1019	1017	1268
250/40	18/4.13	7/2.75	290.96	20.51	81.12	0.1143	996	1014	1264
240/55	18/4.13	7/3.20	297.43	20.82	93.12	0.1169	1083	1007	1138
240/50	18/4.71	7/3.00	290.62	20.55	88.13	0.1157	1032	1000	1131

Code	Structure		Areas	Diameter	Breakingload	DC resistanceat 20°C	Weight	Current capacity	
	Al	Steel						TACIR	ZTACIR
	Nos./mm							mm2	mm
315/55	18/4.71	7/3.20	396.92	23.15	104.06	0.0907	1266	1182	1479
315/50	18/4.71	7/3.00	363.10	22.91	97.20	0.0910	1232	1176	1471
330/60	18/4.81	7/3.30	386.95	23.68	109.70	0.0869	1329	1216	1522
350/55	20/4.71	7/3.20	404.77	24.19	109.33	0.0819	1379	1262	1580

Note:

1. Ambient temperature 40°C, Wind velocity 0.5m/s, Wind direction: 0 Degree, Solar radiation 0.1w/cm², Absorptivity of conductor surface 0.9.
2. Continuous operating temperature: TACIR 150°C, ZTACIR 210°C .
3. Other designs according to customers' requirements.