



INSULIGN® POLYMER INSULATOR TIE TOP PIN TYPE

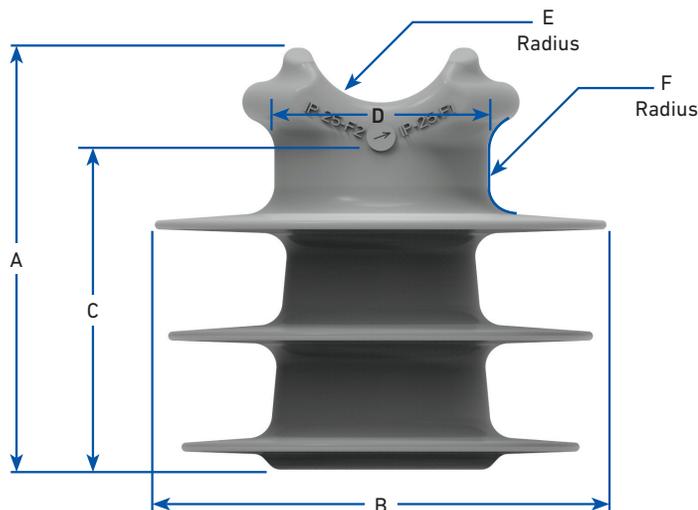
The **INSULIGN Tie Top Pin Type Polymer Insulators** are designed to match the head, neck and mounting pin requirements of the applicable ANSI C29.5 and ANSI C29.6 insulator designs. "C" (2 -1/4" nominal), "F" (2-7/8" nominal) and "J" (3-1/2" nominal) neck sizes are available. By using ANSI head and neck dimensional standards, PLP metal or plastic factory formed ties install easily and will provide superior holding and electrical performance on PLP's INSULIGN Tie Top Polymer Insulators.

They are constructed of a proprietary HDPE formula and are designed for use as direct replacements for porcelain insulators in primary electrical distribution systems. PLP's polymer tie top insulators meet the electrical and mechanical requirements as defined in ANSI C29.5 and C29.6 standards for Classes 55-3, 55-4, 55-5, 55-6, 55-7, and 56-1. These insulators also meet the new ANSI C29.15 standard for polyethylene tie top pin type insulators.

FEATURES AND BENEFITS

- ANSI-compliant head dimensions
- Ideally suited for factory formed ties
- Closely matches the dielectric properties of jacketed covered conductor
- Superior moisture and contamination shedding properties
- UV-stabilized for long-term service
- High-impact resistance – designed to reduce potential breakage due to vandal/gunshot damage, particularly at cold temperatures
- Lightweight design reduces shipping costs and lineworker handling requirements
- Dramatically reduces abrasion damage to conductor
- 100% recyclable

SPECIFICATIONS



INSULIGN Polymer Insulator - Tie Top Pin Type

Nominal Insulator Dimension										
Catalog Number	ANSI Class	Dimension								Number of Skirts
		in								
		A	B	C	D	E (Radius)	F (Radius)	Top Groove, Maximum Conductor OD	Side Groove, Maximum Conductor OD	
IP-15-C	55-3	5.00	5.50	3.75	2.25	0.75	0.65	1.50	1.30	3
IP-15-F	55-4	5.25	5.50	3.75	2.88	1.00	0.65	1.88	1.30	4
IP-25-F1/2	55-5	5.70	6.10	4.30	2.88	1.00	0.65	2.00	1.30	3
IP-25-J1/2	56-1	6.70	7.00	4.90	3.50	1.00	1.00	2.00	2.00	3
IP-35-F1/2	55-6/55-7	7.50	7.50	5.50	2.88	1.00	0.75	2.00	1.50	4
IP-35-J1/2	55-6/55-7	7.50	7.50	5.50	3.50	1.00	1.00	2.00	2.00	4

Maximum Conductor Outer Diameter (in) with Factory Formed Ties*

PLP Tie	Insulator Catalog Number					
	IP-15-C	IP-15-F	IP-25-F1/2	IP-25-J1/2	IP-35-F1/2	IP-35-J1/2
Distribution Tie	1.25	1.75	1.75	1.75	1.75	1.75
WRAPLOCK® Tie	1.25	1.75	1.75	1.75	1.75	1.75
EZ-WRAP™ Twin Tie	1.25	1.75	1.75	1.75	1.75	1.75
Double Support Tie	1.25	1.75	1.75	1.75	1.75	1.75
Side Tie	1.05	1.05	1.38	1.75	1.38	1.75
EZ-WRAP™ Side Tie	1.05	1.05	1.38	1.75	1.38	1.75
Double Side Ties	1.05	1.05	1.38	1.75	1.38	1.75
Coated Top Tie	1.50	2.00	2.00	2.00	2.00	2.00
Coated Side Tie	1.30	1.30	1.63	2.00	1.63	2.00

NOTE: *For most Formed Ties it is necessary to reduce Max Conductor OD that can fit into the insulator groove because allowance needs to be made for tie tube thickness and /or wires of the tie may take up space in the groove.

A factory formed tie may not be available for the full conductor diameter capability of the insulator. See the appropriate catalog page for tie capabilities.



ORDERING INFORMATION

INSULIGN Polymer Insulator – Tie Top Pin Type

Catalog Number	ANSI Class ¹	Description	Mounting Pin	Insulator Weight	Units per Carton	Weight per Carton
			in	lb		lb
15 kV						
IP-15-C	55-3	C-Neck Tie Top	1	1.00	18	20
IP-15-F	55-4	F-Neck Tie Top		1.30		25
25 kV						
IP-25-F1	55-5	F-Neck Tie Top	1	1.45	18	28
IP-25-F2	55-5 ²		1-3/8	1.40		27
IP-25-J1	56-1 ²	J-Neck Tie Top	1	2.00	18	38
IP-25-J2	56-1		1-3/8	2.00		38
35 kV						
IP-35-F1	55-6 ²	F-Neck Tie Top	1	3.00	12	38
IP-35-F2	55-7 ²		1-3/8	3.00		38
IP-35-J1	55-6	J-Neck Tie Top	1	2.50	12	32
IP-35-J2	55-7		1-3/8	2.50		32

¹ Nominal ANSI C29.5 or C29.6 Class designation - These ANSI specifications are for Wet Processed Porcelain

² Meets the electrical requirements of the ANSI Class designation but a physical characteristic differs from the specification.



Catalog Number:
IP-15-C



Catalog Number:
IP-25-F1 or IP-25-F2



Catalog Number:
IP-35-F1 or IP-35-F2



Catalog Number:
IP-15-F



Catalog Number:
IP-25-J1 or IP-25-J2



Catalog Number:
IP-35-J1 or IP-35-J2

ADDITIONAL RESOURCES

For additional information regarding the use and installation of INSULIGN Polymer Insulators - Tie Top Pin Type, use the QR codes listed below.



INSULIGN Polymer Insulator - Tie Top Pin Type
Installation Instructions



INSULIGN Polymer Insulator - Tie Top Pin Type
Website

TESTING RESULTS

INSULIGN Polymer Insulator - Tie Top Pin Type

Test Results Based on ANSI C29 Standard																
Insulator Data	15 kv Applications				25 kv Applications						35 kv Applications					
	PLP	ANSI C29.5 55-3	PLP	ANSI C29.5 55-4	PLP	ANSI C29.5 55-5	PLP	ANSI C29.5 56-1	PLP	ANSI C29.5 55-6	PLP	ANSI C29.5 55-7				
Catalog Number and Application	IP-15-C	N/A	IP-15-F	N/A	IP-25-F1	IP-25-F2	N/A	IP-25-J1	IP-25-J2	N/A	IP-35-F1	IP-35-F2	N/A	IP-35-J1	IP-35-J2	N/A
Nominal ANSI Class	55-3	55-3	55-4	55-4	55-5	55-5	55-5	56-1	56-1	56-1	55-6	55-6	55-6	55-7	55-7	55-7
Neck Size/Style	C	C	F	F	F	F	F	J	J	J	F	F	J	J	J	J
Typical Operating Voltage Application kV (L-L)	15	15	15	15	25	25	25	25	25	25	35	35	35	35	35	35
Leakage Distance (in)	11.8	7	13.8	9	15.2	15	12	17.4	17.2	13	22.8	22.7	15	21.6	21.4	15
Dry Arcing Distance (in)	6.4	4.5	6.2	5	7.5	7.4	6.25	8.7	8.5	7	10	9.8	8	9.6	9.3	8
Pin Hole Diameter (in)	1	1	1	1	1	1.375	1	1	1.375	1.375	1	1.375	1	1	1.375	1.375
Suggested Minimum Pin Length (in)	6	5	6	5	6	6	6	6	6	6	7.5	7.5	7.5	7.5	7.5	7.5
60Hz Dry Flashover (kV)	77	65	93	70	89*	89	85	107*	107	95	126*	126	100	113*	113	100
60Hz Wet Flashover (kV)	45	35	50	40	55*	55	45	71*	71	60	82*	82	50	75*	75	50
Positive Impulse Flashover (kV)	124	100	114	110	142*	142	140	152*	152	150	175*	175	150	157*	157	150
Negative Impulse Flashover (kV)	160	130	144	140	223*	223	170	223*	223	190	238*	238	170	254*	254	170
Low Frequency Puncture (kV)	208	90	160	95	218	201	115	179	184	130	223	235	135	202	194	135
RIV @ 1 MHZ																
10 kV to grd, μ V	<5	<5500 μ V @ 10kV	<5	<5500 μ V @ 10kV	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15 kV to grd, μ V	N/A	N/A	N/A	N/A	<2*	<2	<8000 μ V @ 15kV	<29*	<29	<8000 μ V @ 15kV	N/A	N/A	N/A	N/A	N/A	N/A
22 kV to grd, μ V	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<39*	<39	<8000 μ V @ 22kV	<26	<26	<8000 μ V @ 22kV
Cantilever Strength (lbs)	3,000	2,500	3,000	3,000	3,000	3,000	3,000	3,000	3,000	2,500	3,000	3,000	3,000	3,000	3,000	3,000
Approximate Weight (lbs)	0.9	N/A	1.3	N/A	1.3	1.3	N/A	2	2	N/A	2.8	2.8	N/A	2.5	2.5	N/A
Maximum Operating Temperature (°C)	120	N/A	120	N/A	120	120	N/A	120	120	N/A	120	120	N/A	120	120	N/A

*Electrical test data extrapolated from similar design of Polymer Insulator Pin Hole 1-3/8"

NOTE: If the ANSI standard had Plain and Radio Freed, PLP has listed the Plain value.