Loadbreak Cutouts

Functional Specification for Polymer-Insulated and Porcelain Insulated Interchangeable Loadbreak Cutouts

1.0 **Scope:**

1.1 This specification covers the electrical and mechanical characteristics of polymer-insulated and porcelain interchangeable loadbreak cutouts.

2.0 **Applicable Standards:**

2.1. The loadbreak cutouts shall meet the requirements of IEEE Std C37.40™-2003, IEEE Std C37.41™-2008, and IEEE Std C37.42™-2009 standards.

3.0 **Construction:**

3.1. Polymer cutouts shall be UltraSIL polymer-insulated loadbreak type. The housing should contain a minimum of 75% silicone rubber. Housings which are primarily porcelain, EPDM, EPR or other carbon-based materials, are not acceptable.

3.2. Porcelain cutouts shall be of primarily porcelain construction. Housings which are primarily polymer, EPDM, EPR, or other carbon-based materials, are not acceptable.

3.3. The fuseholder shall be constructed of an epoxy impregnated glass filament wound tube over an arc-quenching inner liner material.

4.0 **Interchangeability:**

4.1. The UltraSIL polymer-insulated and porcelain loadbreak Type LB cutouts should be physically and electrically interchangeable with the Chance® Type C polymer and porcelain loadbreak cutouts from Hubbell Power Systems.

5.0 **Loadbreak Functionality:**

5.1. The loadbreak portion of the cutout consists of a heavy-duty arc reducing load interrupter mounted to the cutout frame. The interrupter together with a spring-loaded contact blade mounted on the fuse holder provides a reliable load interruption and visible break.

6.0 **Terminals:**

6.1. Terminals shall have solderless clamp-type connections suitable to accept up to .575” diameter conductors.

7.0 **Mounting Provisions:**

7.1. The UltraSIL polymer-insulated Type LB cutout crossarm mounting shall include a heavy-duty NEMA® Type B crossarm mounting bracket to withstand the mechanical forces generated during fault current interruptions when using an expulsion fuse link.

8.0 **Nameplate:**

8.1. Nameplate shall clearly state the kV rating of the cutout assembly, the current rating of the fuse holder, the asymmetric interrupting rating, the material part number and the manufacturing date.

9.0 **Cree Distance:**

Table 1. Polymer-Insulated and Porcelain Type LB Open Cutout Mounting Frames Only (Without Fuseholder or Disconnect Blade)

Base Catalog Number Type LB Cutout		Maximum Design Voltage (kV)	BIL (kV)	Creep Distance Inches (mm)		Approximate Weight lbs. (kg)	
Polymer	Porcelain			Polymer	Porcelain	Polymer	Porcelain
YS4B0	YL4B0	15.5	110	14.2 (362)	8.5 (216)	6.6 (3.0)	12.6 (5.7)
YS9C0	YL9C0	27	125	22.3 (566)	11.0 (279)	10.3 (4.71)	20.45 (9.3)

10.0 **Electrical Ratings:**

10.1. Electrical insulation ratings for the polymer and porcelain loadbreak Type LB cutouts are shown in the table below

Table 2. 15 and 27 kV Polymer and Porcelain Loadbreak Type LB Interchangeable Cutout Specifications

Base Catalog Number*		Maximum Voltage Rating (kV)	BIL (kV)	Continuous Current (A)	Loadbreak (A)	Interrupting Rating (A rms)		Creep Distance Inches (mm)		Approximate Weight*** lbs. (kg)	
Polymer	Porcelain					Symmetrical	Asymmetrical	Polymer	Porcelain	Polymer	Porcelain
YS4B1	YL4B1	15.5	110	100	300	7,100	10,000	14.2 (362)	8.5 (216)	11.6 (5.3)	17.9 (8.1)
YS4BA**	YL4BA**	15.5	110	100	300	10,600	16,000	14.2 (362)	8.5 (216)	11.7 (5.4)	18.0 (8.2)
YS4B2**	YL4B2**	15.5	110	200	300	8,000	12,000	14.2 (362)	8.5 (216)	12.1 (5.5)	18.4 (8.3)
YS9C1	L9C1	27	125	100	50	5,300	8,000	22.3 (566)	11.0 (279)	13.6 (6.1)	20.1 (9.0)
YS9CA**	L9CA**	27	125	100	50	8,000	12,000	22.3 (566)	11.0 (279)	13.7 (6.2)	20.2 (9.1)
YS9C2**	L9C2**	27	125	200	50	7,100	10,000	22.3 (566)	11.0 (279)	14.1 (6.4)	20.8 (9.4)

* Base catalog number for standard polymer-insulated and porcelain Type LB unit.

** These units include an arc shortening rod and must be used with removable buttonhead fuse links.

*** Includes a standard NEMA® Type B bracket assembly.

11.0 **Testing:**

11.1. All cutouts shall be tested in accordance with IEEE Std C37.40™-2003, IEEE Std C37.41™-2008 and IEEE Std C37.42™-2009 standards.

12.0 **Quality Assurance:**

12.1. Any polymer-insulated or porcelain interchangeable loadbreak cutout that does not comply with the requirements of these specifications shall be rejected.