POWR-GARD® Fuse

L70S SERIES HIGH-SPEED ROUND BODY

700 V ac • Very Fast Acting • 650 V dc • 10–800 A

Description

Littelfuse L70S series high-speed fuses are designed to protect today's equipment and systems, and are manufactured with Littelfuse-developed technology that sets tomorrow's standards for accuracy, consistent quality, reliability, and predictable performance.

Littelfuse engineers have redefined high-speed fuse technology by using advanced metallurgical, polymer, and materials research, mathematical modeling, and computerized statistical analysis.

Features/Benefits

- Extremely current limiting
- Low watt losses
- Controlled transient over-voltages
- UL Recognized

Applications

- Ac and dc drives
- Dc common bus protection
- Power converters
- UPS
- Soft-starters

Specifications

Voltage Rating	700 V ac 650 V dc
Amperage Rating	10, 15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100, 125, 150, 175, 200, 225, 250, 300, 350, 400, 450, 500, 600, 700, 800
Interrupting Rating	Ac: 200 kAIC Dc: 20 kAIC
Material	Body: melamine Terminals: copper (silver plated)
Mounting Type	Cylindrical (10–0 A) Bolted tags (35–800 A)
Operating Temperature	-55 °C to +125 °C
Storage Temperature	Up to 35 °C with relative humidity < 65 %
Approvals	UL Recognized (File: E71611) CSA Recognized (File: LR29862)
Environmental	RoHS Compliant
Country of Origin	Mexico

Part Numbering System

L70S xxx .T

Series

Ampere Code
(3 digit minimum amperage in decimal form)

Package Quantity
Refer to Pack Qty. Column in Ordering Information Table

SERIES	AMP	CATALOG NUMBER	ORDERING NUMBER
L70S	10	L70S010	L70S010.T
L70S	500	L70S500	L70S500.X

Recommended Fuse Block

LSCR001 (35–100 A)
LSCR002 (125–800 A)
107/127 Series (10-30A)

Web Resources

Download technical documents: **Littelfuse.com/L70S**

Note: high-speed fuses are designed for fixed installations. They are not intended for use in moving vehicle applications.

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Electrical Specifications

CATALOG NUMBER	AMPERAGE RATING	VOLTAGE RATING		INTERRUPT RATING		MELTING (PRE-ARC) I^2T (A^2s)	TOTAL CLEARING I^2T (A^2s)	TOTAL CLEARING I^2T (A^2s)	TOTAL CLEARING I^2T (A^2s)	WATTS LOSS AT 100 % RATED CURRENT	WATTS LOSS AT 80 % RATED CURRENT
		AC	DC	AC	DC		100 kA @ 700 V AC	200 kA @ 700 V AC	20 kA @ 650 V DC	(W)	(W)
L70S010	10	700	650	200 kA	20 kA	21	160	173	346	2	1
L70S015	15	700	650	200 kA	20 kA	34	330	355	270	2	2
L70S020	20	700	650	200 kA	20 kA	48	550	599	300	5	2
L70S025	25	700	650	200 kA	20 kA	62	810	900	340	7	4
L70S030	30	700	650	200 kA	20 kA	77	1,130	1,220	417	10	5
L70S035	35	700	650	200 kA	20 kA	110	1,470	1,500	500	12	6
L70S040	40	700	650	200 kA	20 kA	150	1,830	2,000	660	13	7
L70S050	50	700	650	200 kA	20 kA	250	2,670	3,200	1,070	16	9
L70S060	60	700	650	200 kA	20 kA	380	3,646	4,674	1,572	18	9
L70S070	70	700	650	200 kA	20 kA	545	4,800	6,000	1,970	16	9
L70S080	80	700	650	200 kA	20 kA	745	6,180	7,550	2,380	21	11
L70S090	90	700	650	200 kA	20 kA	990	7,650	9,250	2,830	25	13
L70S100	100	700	650	200 kA	20 kA	1,266	9,407	11,117	3,266	29	14
L70S125	125	700	650	200 kA	20 kA	2,150	14,700	17,550	4,900	33	17
L70S150	150	700	650	200 kA	20 kA	3,280	21,250	25,700	6,800	51	24
L70S175	175	700	650	200 kA	20 kA	4,700	28,750	34,800	9,000	63	28
L70S200	200	700	650	200 kA	20 kA	6,411	37,300	45,583	11,447	75	33
L70S225	225	700	650	200 kA	20 kA	8,000	46,500	57,000	16,000	43	24
L70S250	250	700	650	200 kA	20 kA	9,900	58,000	69,500	22,000	49	27
L70S300	300	700	650	200 kA	20 kA	14,000	83,000	97,700	37,500	60	33
L70S350	350	700	650	200 kA	20 kA	19,000	113,000	131,000	59,000	71	36
L70S400	400	700	650	200 kA	20 kA	24,373	147,290	169,000	87,875	107	49
L70S450	450	700	650	200 kA	20 kA	33,000	191,000	219,000	119,000	85	47
L70S500	500	700	650	200 kA	20 kA	44,200	240,000	275,000	155,000	92	49
L70S600	600	700	650	200 kA	20 kA	72,000	370,250	405,000	246,182	106	56
L70S700	700	700	650	200 kA	20 kA	110,000	526,000	573,000	255,000	128	67
L70S800	800	700	650	200 kA	20 kA	157,082	735,330	762,333	262,949	156	78

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Ordering Information

SERIES	AMPERAGE RATING	AMP CODE	CATALOG NUMBER	ORDERING NUMBER	PACK QUANTITY	UPC
L70S	10	010	L70S010	L70S010.T	10 Pcs/ Box	07945810161
L70S	15	015	L70S015	L70S015.T	10 Pcs/ Box	07945810163
L70S	20	020	L70S020	L70S020.T	10 Pcs/ Box	07945810164
L70S	25	025	L70S025	L70S025.T	10 Pcs/ Box	07945810165
L70S	30	030	L70S030	L70S030.T	10 Pcs/ Box	07945810166
L70S	35	035	L70S035	L70S035.T	10 Pcs/ Box	07945810152
L70S	40	040	L70S040	L70S040.T	10 Pcs/ Box	07945810167
L70S	50	050	L70S050	L70S050.T	10 Pcs/ Box	07945810168
L70S	60	060	L70S060	L70S060.T	10 Pcs/ Box	07945810169
L70S	70	070	L70S070	L70S070.V	5 Pcs/ Box	07945810170
L70S	80	080	L70S080	L70S080.V	5 Pcs/ Box	07945810171
L70S	90	090	L70S090	L70S090.V	5 Pcs/ Box	07945810172
L70S	100	100	L70S100	L70S100.V	5 Pcs/ Box	07945810173
L70S	125	125	L70S125	L70S125.V	5 Pcs/ Box	07945810174
L70S	150	150	L70S150	L70S150.V	5 Pcs/ Box	07945810175
L70S	175	175	L70S175	L70S175.V	5 Pcs/ Box	07945810176
L70S	200	200	L70S200	L70S200.V	5 Pcs/ Box	07945810177
L70S	225	225	L70S225	L70S225.V	5 Pcs/ Box	07945810188
L70S	250	250	L70S250	L70S250.V	5 Pcs/ Box	07945810178
L70S	300	300	L70S300	L70S300.V	5 Pcs/ Box	07945810179
L70S	350	350	L70S350	L70S350.V	5 Pcs/ Box	07945810180
L70S	400	400	L70S400	L70S400.V	5 Pcs/ Box	07945810181
L70S	450	450	L70S450	L70S450.X	1 Pc/ Box	07945810182
L70S	500	500	L70S500	L70S500.X	1 Pc/ Box	07945810183
L70S	600	600	L70S600	L70S600.X	1 Pc/ Box	07945810184
L70S	700	700	L70S700	L70S700.X	1 Pc/ Box	07945810185
L70S	800	800	L70S800	L70S800.X	1 Pc/ Box	07945810186

Dimensions

AMPERE RATING	FIGURE NO.	DIMENSIONS INCHES (mm)								
		A	B	C	D	E	F	G	H	J
10 – 30	1	2 (50.8)	—	½ (12.7)	9/16 (14.3)	—	—	—	—	—
31 – 60	2	2 7/8 (73.0)	3 7/16 (87.3)	3 3/4 (95.2)	4 3/8 (111.1)	1 (25.4)	43/64 (17.1)	11/32 (8.7)	1/8 (3.2)	—
61 – 100	2	2 7/8 (73.0)	3 9/16 (90.5)	3 11/16 (93.7)	4 3/8 (111.1)	1 7/32 (31.0)	29/32 (22.9)	5/16 (7.9)	3/16 (4.8)	—
101 – 200	2	2 27/32 (72.2)	3 17/32 (89.7)	4 5/32 (105.6)	5 3/32 (129.4)	1½ (38.1)	1 (25.4)	13/32 (10.3)	¼ (6.4)	—
201 – 400	2	2 27/32 (72.2)	3 17/32 (89.7)	4 5/32 (105.6)	5 3/32 (129.4)	2 (50.8)	1½ (38.1)	13/32 (10.3)	¼ (6.4)	—
401 – 600	2	2 27/32 (72.2)	4 29/32 (124.6)	5¼ (133.4)	7 3/32 (180.2)	2½ (63.5)	2 (50.8)	17/32 (13.5)	3/8 (9.5)	—
601 – 800	3	3 5/16 (84.1)	5 5/16 (134.9)	6 13/16 (173.0)	—	2 7/8 (73.0)	2 (50.8)	5/8 (15.9)	3/8 (9.5)	5/16 (7.9)

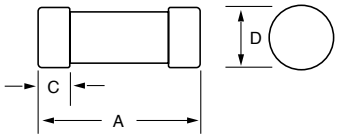

Figure 1

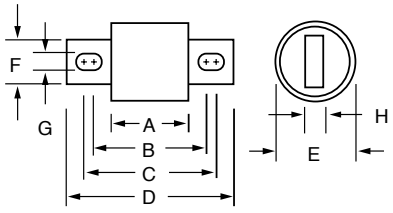

Figure 2

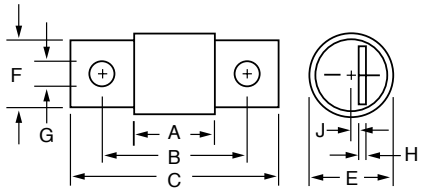

Figure 3

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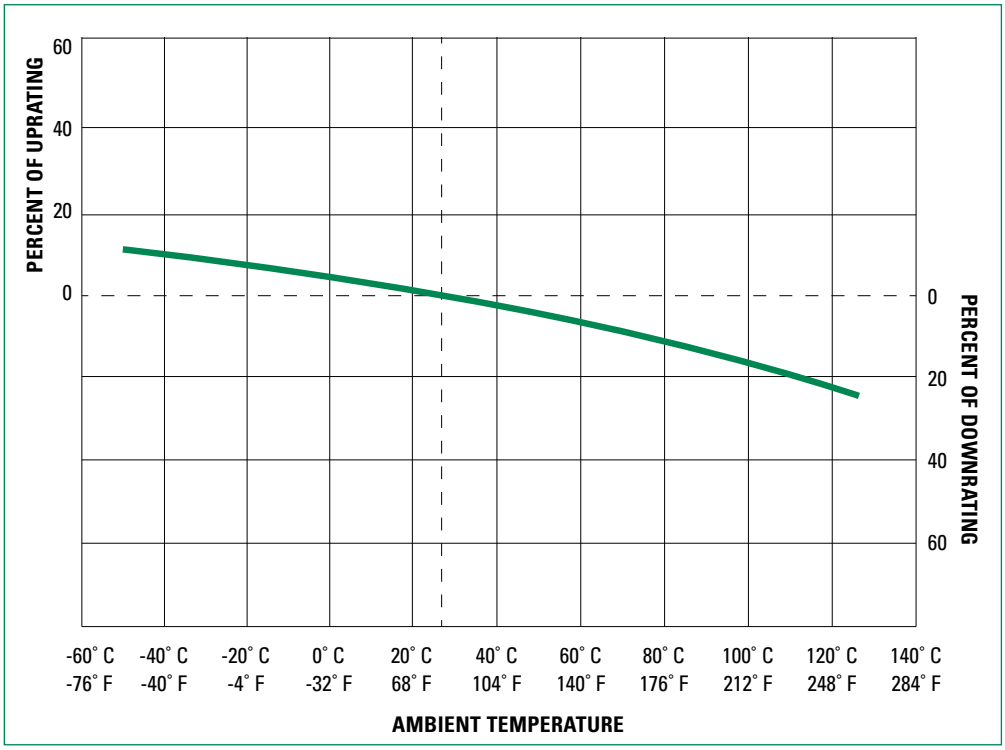
Bus Bar Mounting Recommended Torque Values

RECOMMENDED TORQUE VALUES FOR BUS BAR MOUNTING FUSE		
CATALOG NUMBER	FUSE TORQUE–METRIC (STANDARD)	HARDWARE SIZE–METRIC (STANDARD)
L70S035	15 N m (132.76 in-lb)	M8 (5/16")
L70S040	15 N m (132.76 in-lb)	M8 (5/16")
L70S050	15 N m (132.76 in-lb)	M8 (5/16")
L70S060	15 N m (132.76 in-lb)	M8 (5/16")
L70S070	8 N m (70.81 in-lb)	M6 (¼")
L70S080	8 N m (70.81 in-lb)	M6 (¼")
L70S090	8 N m (70.81 in-lb)	M6 (¼")
L70S100	8 N m (70.81 in-lb)	M6 (¼")
L70S125	15 N m (132.76 in-lb)	M8 (5/16")
L70S150	15 N m (132.76 in-lb)	M8 (5/16")
L70S175	15 N m (132.76 in-lb)	M8 (5/16")
L70S200	15 N m (132.76 in-lb)	M8 (5/16")
L70S225	15 N m (132.76 in-lb)	M8 (5/16")
L70S250	15 N m (132.76 in-lb)	M8 (5/16")
L70S300	15 N m (132.76 in-lb)	M8 (5/16")
L70S350	15 N m (132.76 in-lb)	M8 (5/16")
L70S400	15 N m (132.76 in-lb)	M8 (5/16")
L70S450	54 N m (477.94 in-lb)	M12 (½")
L70S500	54 N m (477.94 in-lb)	M12 (½")
L70S600	54 N m (477.94 in-lb)	M12 (½")
L70S700	75 N m (663.81 in-lb)	M14 (9/16")
L70S800	75 N m (663.81 in-lb)	M14 (9/16")

Temperature De-rating Curve (temperature of air immediately surrounding fuse)



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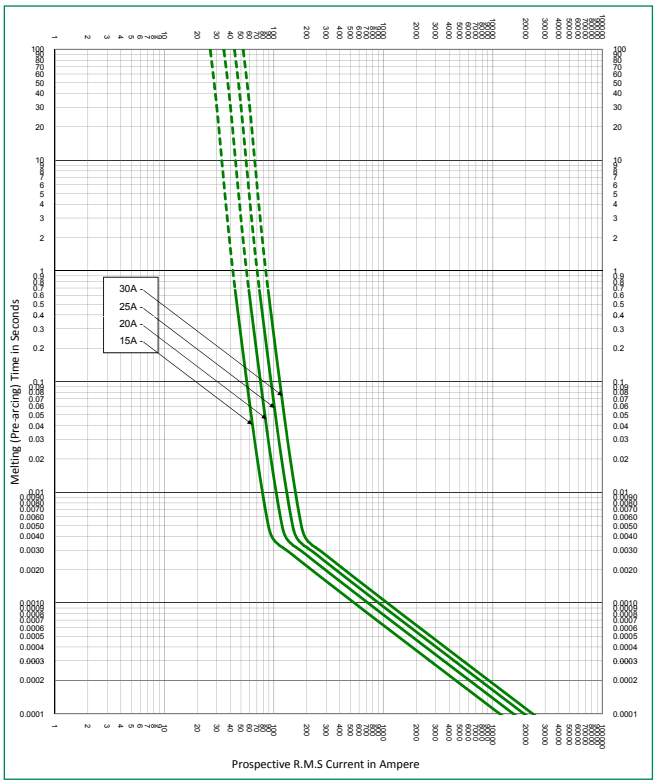
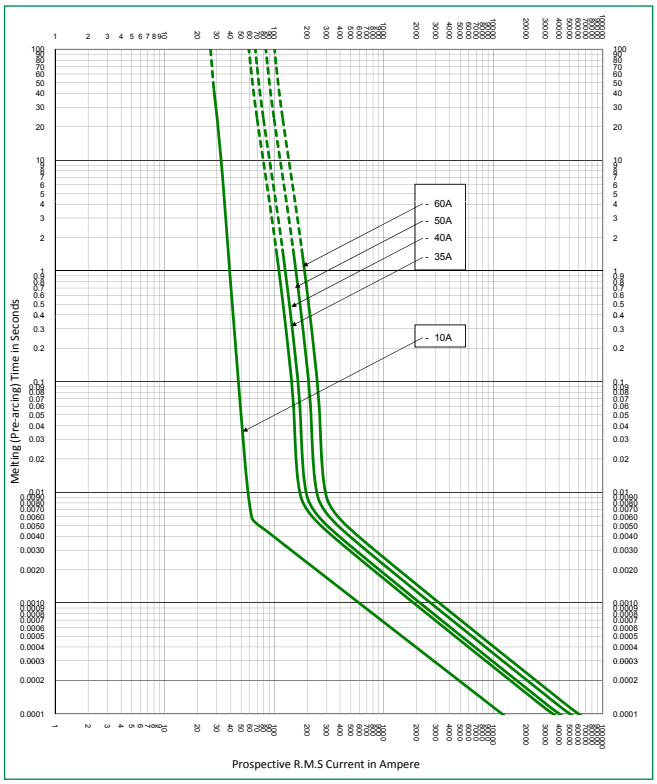
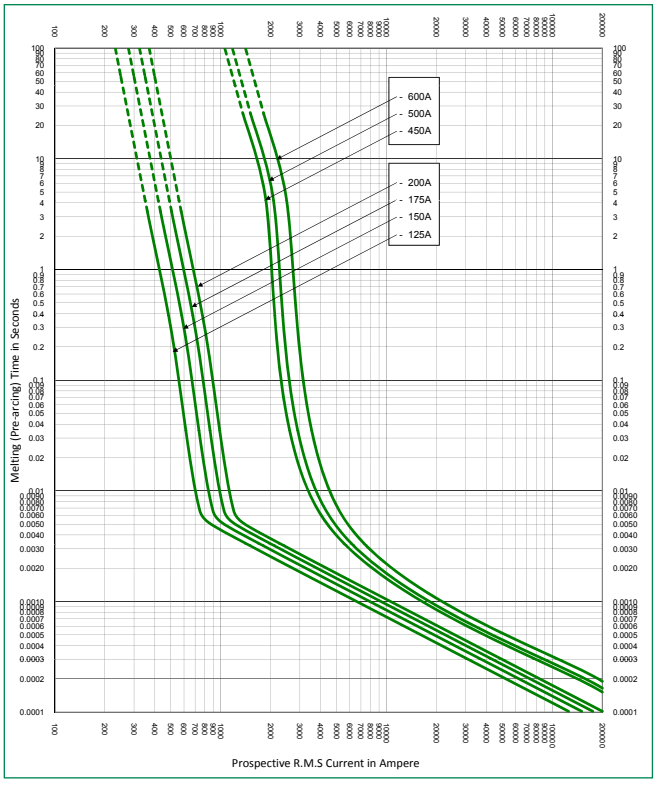
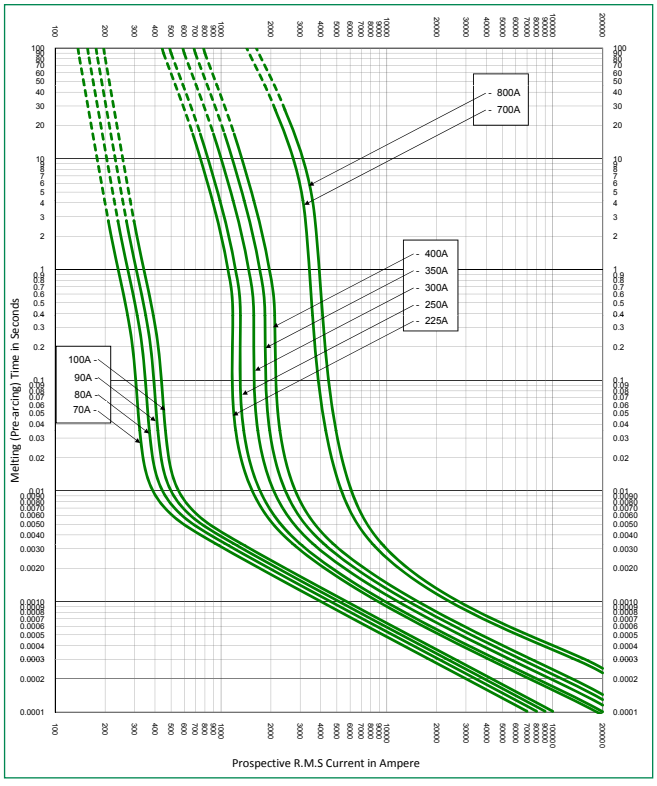
Time Current Curves









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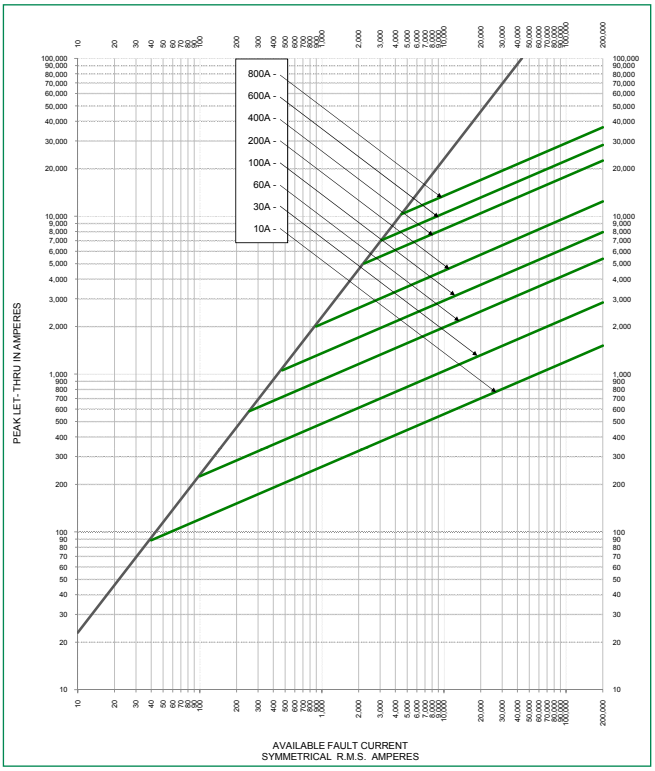
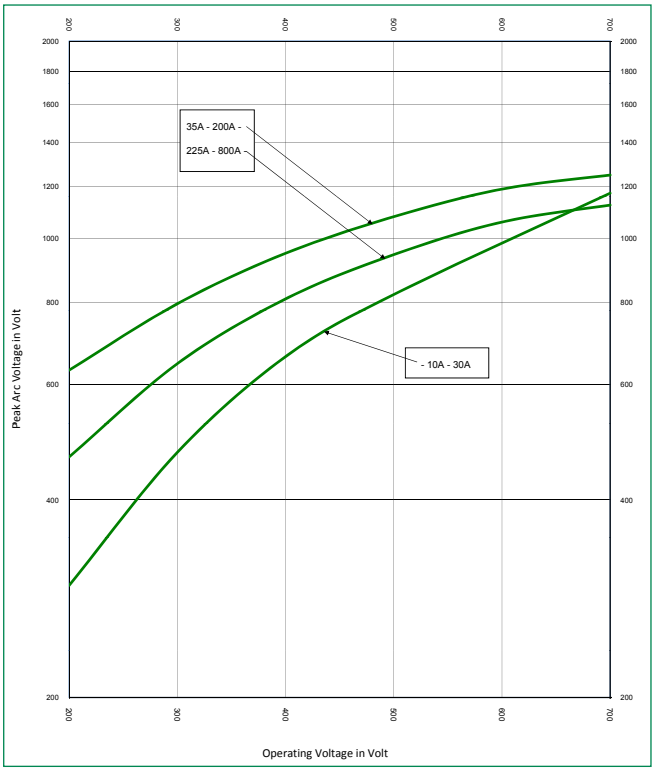
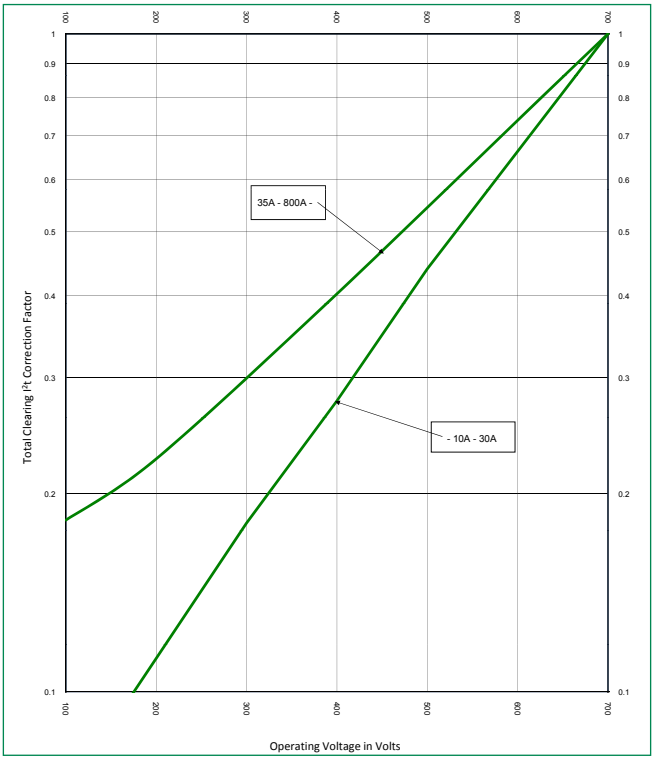
Peak Let-Thru Curve



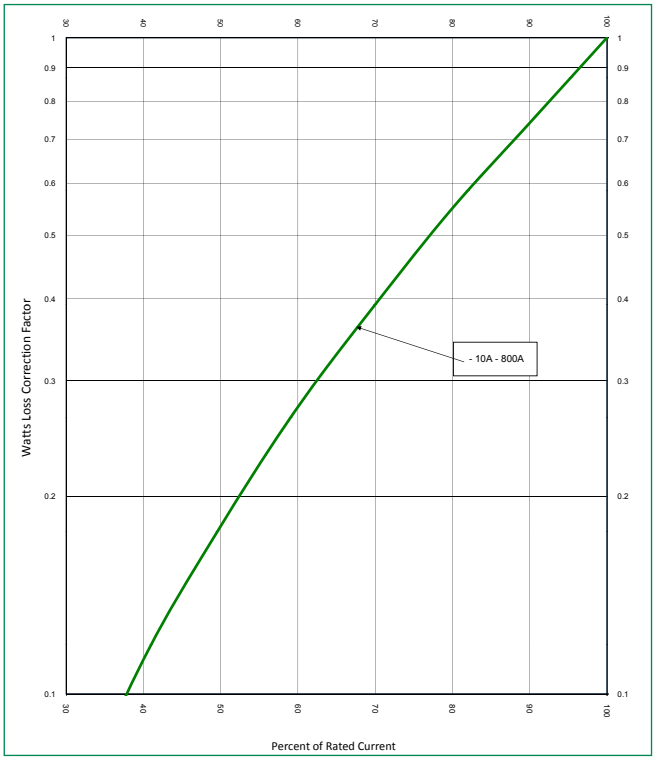
Peak Arc Voltage Curve



Total Clearing I²t Correction Factor Curve



Watts Loss Correction Factor Curve



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