

# Product Details and Certifications

## Cross Reference RA Part Number: PN-D12822

➔ **Product: 140G-JT13-D15**

Description: Molded Case Circuit Breaker Trip Unit, 250A, J - Frame, Electronic LSIG - Long & Short Time, High Instantaneous, Ground Fault, Rated Current 150 A



Representative Photo Only (actual product may vary based on configuration selections)

### ***CIRCUIT BREAKER DATA***

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Bulletin Number	Bulletin 140G/140MG
Frame Size	J-Frame
Rated Current(A)	150 A
Number of Poles	3 Poles
Protection	Electronic LSIG - Long & Short Time, High Instantaneous, Ground Fault

### ***ACCESSORY ITEMS***

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Trip Unit	Molded Case Circuit Breaker Trip Unit, 250A, J - Frame, Electronic LSIG - Long & Short Time, High Instantaneous, Ground Fault Rated Current 150 A
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Frame Reference	G-Frame	H-Frame	I-Frame	J-Frame	K-Frame	M-Frame	N-Frame	NS-Frame	R-Frame
Rated Current $I_n$	125 A	125 A	225 A	250 A	400 A	800 A	1200 A	1200 A	3000 A
No. of Poles	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4
<b>Interrupting Rating [kA]</b>									
240V	50 65 100	65 100 150 200 200	50 65	65 100 150 200	100 150 200 200	100 200 200	65 100 150	65 100 150	125
480V	25 35 65	25 35 65 100 150	25 35	25 35 65 100	35 65 100 150	50 65 100	50 65 100	50 65 100	125
600Y/347V	10 14 25	—	10 10	—	—	—	—	—	—
600V	—	14 18 25 35	10 10	14 18 25 35	25 35 65 100	25 35 42	25 50 65	25 50 65	100
<b>Breaking Capacity [<math>I_{cu}</math> (kA)]</b>									
220...240V	65 85 100	65 85 100 150 200	65 85	65 85 100 150	85 100 200 200	85 100 200	85 100 200	85 100 200	130
415V	36 50 70	36 50 70 120 150	36 50	36 50 70 120	50 70 120 200	36 70 100	50 70 120	50 70 120	80
440V	36 50 65	36 50 65 100 150	25 40	36 50 65 100	40 65 100 180	35 50 65	50 65 100	50 65 100	80
690V	6 8 10	10 12 15 18 20	5 8	10 12 15 20	25 40 70 80	22 25 30	30 42 50	30 42 50	40
250V DC	36 50 70	36 50 70 85 100	36 50	36 50 70 85	—	36 50 65	—	—	—
500V DC	36 50 70	36 50 70 85 100	36 50	36 50 70 85	36 50 70 100	—	—	—	—
750V DC	—	—	—	—	25 36 70 70	16 36 50	—	—	—
<b>Protection Type</b>									
Thermal Magnetic	✓	✓	✓	✓	✓	✓	—	—	—
Electronic	—	✓	—	✓	✓	✓	✓	✓	✓
Molded Case Switch	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Internal Accessories</b>									
Auxiliary Contact	✓	✓	✓	✓	✓	✓	✓	✓	✓
Alarm Contact	✓	✓	✓	✓	✓	✓	✓	✓	✓
AX/AL Combo	✓	✓	✓	✓	✓	✓	✓	✓	✓
Trip Unit Contact	—	✓	—	✓	—	—	✓	✓	✓
Shunt Trip	✓	✓	✓	✓	✓	✓	✓	✓	✓
Shunt Close	—	—	—	—	—	—	✓	✓	✓
UV Relay	✓	✓	✓	✓	✓	✓	✓	✓	✓
Field Installable	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>External Accessories</b>									
End Cap	STD	STD	STD	STD	STD	STD	STD	STD	—
25 mm Phase Barriers	STD	STD	STD	STD	STD	—	—	—	—
Insulators	STD	STD	STD	STD	STD	STD	—	—	—
Terminal Lugs	✓	✓	✓	✓	✓	✓	✓	✓	✓
Extended Terminal	✓	✓	✓	✓	✓	✓	✓	✓	—
Spreader Terminal	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rear Terminal	—	—	—	—	—	—	✓	✓	✓
Phase barriers	✓	✓	✓	✓	✓	✓	✓	✓	✓
Terminal Cover	✓	✓	✓	✓	✓	✓	✓	✓	—
Direct Rotary	✓	✓	✓	✓	✓	✓	✓	—	—
Variable Depth (Door)	✓	✓	✓	✓	✓	✓	✓	—	—
Internal NFPA 79	✓	✓	✓	✓	✓	✓	✓	—	—
Flange Operator	✓	✓	✓	✓	✓	✓	✓	—	—
Flange Cable	✓	✓	✓	✓	✓	✓	✓	—	—
Motor Operator	✓	✓	✓	✓	✓	✓	—	✓	✓
Field Installable	✓	✓	✓	✓	✓	✓	✓	✓	✓

# Molded Case Circuit Breakers

Catalog Number Explanation — 250 A, J-Frame

## Complete Circuit Breaker Assemblies — 250 A, J-Frame

Examples given in this section are not intended to be used for product selection. Use ProposalWorks to configure the molded case circuit breaker. Use these configurations only to select all factory-installed options for shunt trips, undervoltage release units, auxiliary contacts, trip units, and alarm contacts. Use the codes from Table g to add on to the molded case circuit breaker cat. no. selected on the previous pages to form a complete cat. no. for a complete assembly with factory-installed options.



**140G - J T I 3 - D15**

*a*
*b*
*c*
*d*
*e*
*f*
*g*

**a**

Bulletin No.	
Code	Description
140G	Global Molded Case Circuit Breaker

**b**

Frame/Rating	
Code	Description
J	250 A

**c**

Interrupting Rating/Breaking Capacity (based on $I_c$ at 480V)	
Code	Description
2	25 kA
3	35 kA
6	65 kA
0	100 kA
T	Trip unit

**d**

Protection Type	
Code	Description
C	Fixed thermal/ fixed magnetic
E	Adjust thermal/ fixed magnetic
F	Adjust thermal/ adjust magnetic
H	Electronic LSI-long, short, instant
I	Electronic LSI -long, short, instant & ground fault
X	Breaker frame
S	Molded case switch (isolator)

**e**

Poles	
Code	Description
3	3 poles
4	4 poles

**f**

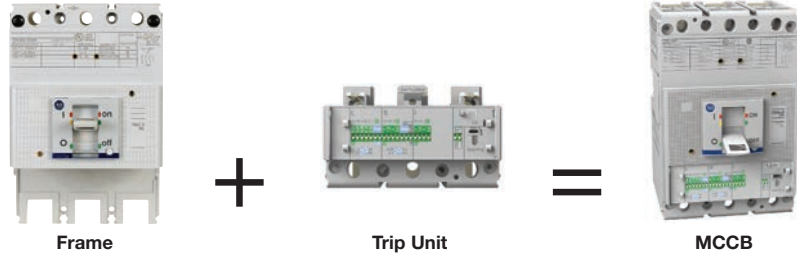
Current Range	
Code	Description
C	e.g., C30 = 30 A
D	e.g., D16 = 160 A
Blank	Frame only

**g**

Factory-Installed Internal Options ♦	
Shunt Trip and Undervoltage Release Units	
Code	Description
SJ	Shunt Trip, 24...30V AC/DC
SK	Shunt Trip, 48...60V AC/DC
SD	Shunt Trip, 110...127V AC; 110...125V DC
SA	Shunt Trip, 220...240V AC; 220...250V DC
SB	Shunt Trip, 380...440V AC
SC	Shunt Trip, 480...525V AC
UJ	Undervoltage Release, 24...30V AC/DC
UR	Undervoltage Release, 48V AC/DC
UD	Undervoltage Release, 110...127V AC; 110...125V DC
UA	Undervoltage Release, 220...240V AC; 220...250V DC
UB	Undervoltage Release, 380...440V AC
UC	Undervoltage Release, 480...525V AC
No Digit	No Selection
Auxiliary and Alarm Contacts, Trip Units	
Code	Description
KA	1 Aux. Contact, 250V
TA	1 Alarm Contact, 250V
AA	1 Aux., 1 Alarm Contact, 250V
BA	2 Aux., 1 Alarm Contact, 250V
DA	1 Trip Unit Alarm Contact, 250V
FB	2 Aux. Contacts, 400V
AB	1 Aux., 1 Alarm Contact, 400V
AJ	1 Aux., 1 Alarm Contact, 24V
DJ	1 Trip Unit Alarm Contact, 24V

♦ Select up to two internal options: 1 for left side mounting, 1 for right. Consult your local Rockwell automation sales office or Allen-Bradley distributor for further assistance.

Breaker Frames & Trip Units



Breaker Frames, 250 A Rated Current

Interrupting Rating (50/60 Hz), UL 489/CSA C22.2-5, No. 5-02 [kA]			Breaking Capacity (50/60 Hz), IEC 60947-2								Breaking Capacity (DC), IEC 60947-2 ‡				Cat. No.	
240V	480V	600V	220V★		415V		440V★		690V		250V DC (2-pole in series)		500V DC (3-pole in series)		3 Poles	4 Poles
			$I_{cu}$ [kA]	$I_{cs}$ [% $I_{cu}$ ]	$I_{cu}$ [kA]	$I_{cs}$ [% $I_{cu}$ ]	$I_{cu}$ [kA]	$I_{cs}$ [% $I_{cu}$ ]	$I_{cu}$ [kA]	$I_{cs}$ [% $I_{cu}$ ]	$I_{cu}$ [kA]	$I_{cs}$ [% $I_{cu}$ ]	$I_{cu}$ [kA]	$I_{cs}$ [% $I_{cu}$ ]		
65	25	14	65	100	36	100	36	100	10	100	36	100	36	100	140G-J2X3	140G-J2X4
100	35	18	85	100	50	100	50	100	12	100	50	100	50	100	140G-J3X3	140G-J4X4
150	65	25	100	100	70	100	65	100	15	100	70	100	70	100	140G-J6X3	140G-J6X4
200	100	35	150	100	120	100	100	100	20	100	85	100	85	100	140G-J0X3	140G-J0X4

★ These ratings have not been tested for the CCC listing.

‡ DC rating is applicable for thermal-magnetic trip unit only.

Trip Units, Thermal-Magnetic

Rated Current $I_n$ [A]	Thermal Trip [A] $I_r = I_n$ (Fixed)	Magnetic Trip [A] $I_m$	Protection Type	Cat. No.	
				3 Poles	4 Poles
25	25	400	C (Fixed)	140G-JTC3-C25	140G-JTC4-C25
30	30	400	C (Fixed)	140G-JTC3-C30	140G-JTC4-C30
32	32	400	C (Fixed)	140G-JTC3-C32	140G-JTC4-C32
35	35	400	C (Fixed)	140G-JTC3-C35	140G-JTC4-C35
40	40	400	C (Fixed)	140G-JTC3-C40	140G-JTC4-C40
50	50	500	C (Fixed)	140G-JTC3-C50	140G-JTC4-C50
60	60	600	C (Fixed)	140G-JTC3-C60	140G-JTC4-C60
63	63	630	C (Fixed)	140G-JTC3-C63	140G-JTC4-C63
70	70	700	C (Fixed)	140G-JTC3-C70	140G-JTC4-C70
80	56...80	400...800	F (Adjustable)	140G-JTF3-C80	140G-JTF4-C80
90	63...90	450...900	F (Adjustable)	140G-JTF3-C90	140G-JTF4-C90
100	70...100	500...1000	F (Adjustable)	140G-JTF3-D10	140G-JTF4-D10
110	77...110	550...1100	F (Adjustable)	140G-JTF3-D11	140G-JTF4-D11
125	87.5...125	625...1250	F (Adjustable)	140G-JTF3-D12	140G-JTF4-D12
150	105...150	750...1500	F (Adjustable)	140G-JTF3-D15	140G-JTF4-D15
160	112...160	800...1600	F (Adjustable)	140G-JTF3-D16	140G-JTF4-D16
175	122.5...175	875...1750	F (Adjustable)	140G-JTF3-D17	140G-JTF4-D17
200	140...200	1000...2000	F (Adjustable)	140G-JTF3-D20	140G-JTF4-D20
225	157.5...225	1125...2250	F (Adjustable)	140G-JTF3-D22	140G-JTF4-D22
250	175...250	1250...2500	F (Adjustable)	140G-JTF3-D25	140G-JTF4-D25

Trip Units, Electronic LSI (Long, Short, Instantaneous)

Rated Current $I_n$ [A]	Protection Type					Cat. No. 3 Poles	Cat. No. 4 Poles
	L		S		I		
	$I_1=0.4...1 \times I_n$	$t_1=sec.$	$I_2=1...10 \times I_n$	$t_2=sec.$	$I_3=1...10 \times I_n$		
40	16...40	3, 12, 36, 60	40...400	0.05, 0.1, 0.2, 0.4	40...400	140G-JTH3-C40	140G-JTH4-C40
60	24...60	3, 12, 36, 60	60...600	0.05, 0.1, 0.2, 0.4	60...600	140G-JTH3-C60	140G-JTH4-C60
100	40...100	3, 12, 36, 60	100...1000	0.05, 0.1, 0.2, 0.4	100...1000	140G-JTH3-D10	140G-JTH4-D10
150	60...150	3, 12, 36, 60	150...1500	0.05, 0.1, 0.2, 0.4	150...1500	140G-JTH3-D15	140G-JTH4-D15
250	100...250	3, 12, 36, 60	250...2500	0.05, 0.1, 0.2, 0.4	250...2500	140G-JTH3-D25	140G-JTH4-D25

Trip Units, Electronic LSI (Long, Short, Instantaneous, Ground Fault)

Rated Current $I_n$ [A]	Protection Type								Cat. No. 3 Poles	Cat. No. 4 Poles
	L		S		I		G			
	$I_1=0.4...1 \times I_n$	$t_1=sec.$	$I_2=1...10 \times I_n$	$t_2=sec.$	$I_3=1...10 \times I_n$	$I_4=0.2...1 \times I_n$	$t_4=sec.$			
40	16...40	3, 12, 36, 60	40...400	0.05, 0.1, 0.2, 0.4	40...400	8...40	0.1, 0.2, 0.4, 0.8	140G-JTI3-C40	140G-JTI4-C40	
60	24...60	3, 12, 36, 60	60...600	0.05, 0.1, 0.2, 0.4	60...600	12...60	0.1, 0.2, 0.4, 0.8	140G-JTI3-C60	140G-JTI4-C60	
100	40...100	3, 12, 36, 60	100...1000	0.05, 0.1, 0.2, 0.4	100...1000	20...100	0.1, 0.2, 0.4, 0.8	140G-JTI3-D10	140G-JTI4-D10	
150	60...150	3, 12, 36, 60	150...1500	0.05, 0.1, 0.2, 0.4	150...1500	30...150	0.1, 0.2, 0.4, 0.8	140G-JTI3-D15	140G-JTI4-D15	
250	100...250	3, 12, 36, 60	250...2500	0.05, 0.1, 0.2, 0.4	250...2500	50...250	0.1, 0.2, 0.4, 0.8	140G-JTI3-D25	140G-JTI4-D25	

Bulletin 140G  
**Molded Case Circuit Breakers**  
 Specifications — I- and J-Frame

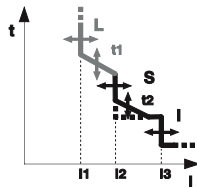
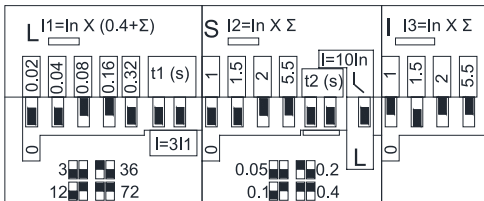
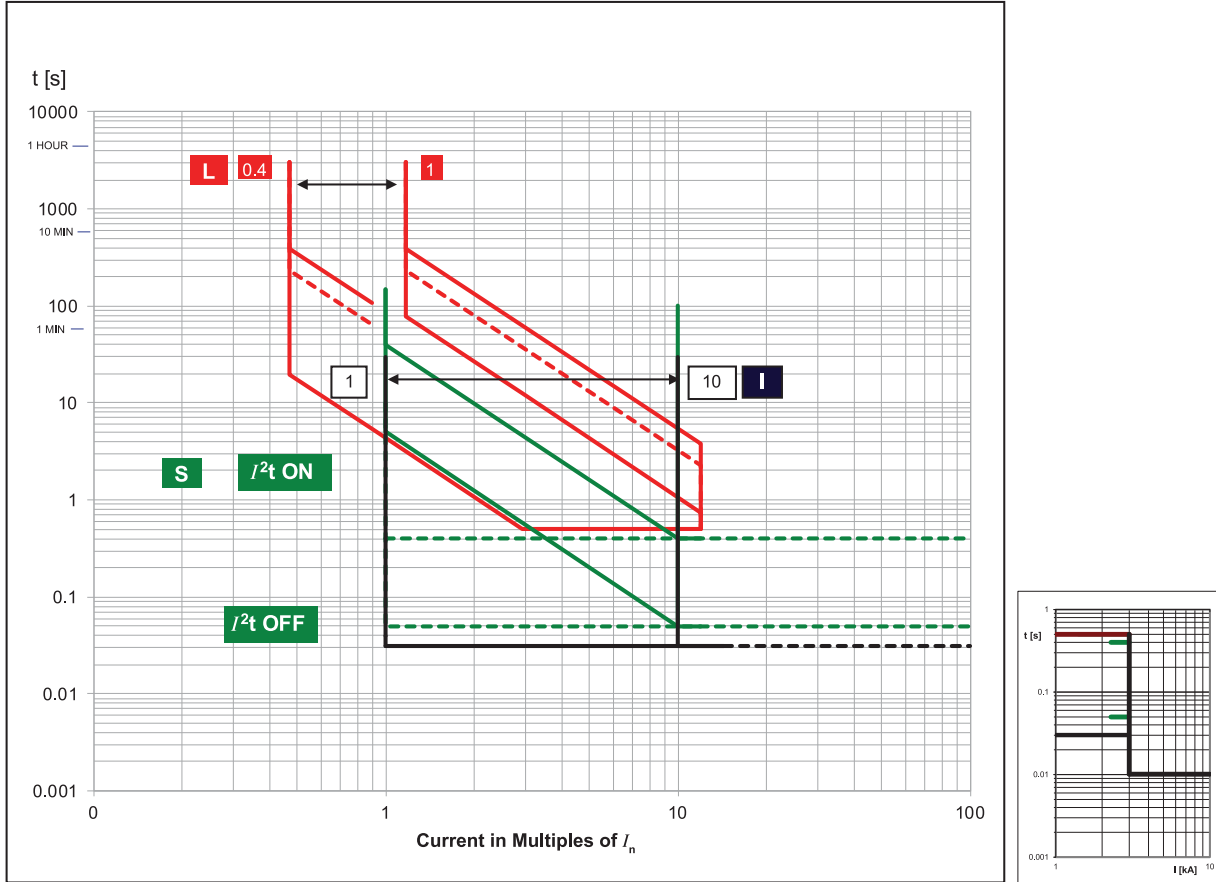
	I-Frame	J-Frame†				
Max. Rated Current [A]	225	250				
Rated insulation voltage, U <sub>i</sub> , IEC [V]	800	1000				
NEMA, UL, CSA						
Interrupting Rating Code	I2	I3	J2	J3	J6	J0
240V AC, 50/60Hz [kA]	50	65	65	100	150	200
480V AC, 50/60Hz [kA]	25	35	25	35	65	100
600Y/347V AC, 50/60Hz [kA]	10	10	—	—	—	—
600V AC, 50/60 Hz [kA]	—	—	14	18	25	35
IEC 60947-2						
Rated ultimate short-circuit breaking capacity, I <sub>cu</sub>						
220/230/240V AC, 50/60Hz [kA]	50	85	65	85	100	150
380V AC, 50/60Hz [kA]	36	50	36	50	70	120
415V AC, 50/60Hz [kA]	36	50	36	50	70	120
440V AC, 50/60Hz [kA]	25	40	36	50	65	100
500V AC, 50/60Hz [kA]	20	30	30	36	50	60
525V AC, 50/60Hz [kA]	13	20	20	25	45	50
690V AC, 50/60Hz [kA]	5	6	10	12	15	20
250V DC, 2 Poles in Series [kA]	36	50	36	50	70	85
500V DC, 2 Poles in Series [kA]	—	—	36	50	70	85
500V DC, 3 Poles in Series [kA]	36	50	36	50	70	85
750V DC, 3 Poles in Series [kA]	—	—	—	—	—	—
Rated service short-circuit breaking capacity, I <sub>cs</sub>						
220/230/240V AC, 50/60Hz [kA]	75%	50%	100%	100%	100%	100%
380V AC, 50/60Hz [kA]	75%	50% (27)	100%	100%	100%	100%
415V AC, 50/60Hz [kA]	75%	50% (27)	100%	100%	100%	100%
440V AC, 50/60Hz [kA]	75%	50%	100%	100%	100%	100%
500V AC, 50/60Hz [kA]	75%	50%	100%	100%	100%	100%
525V AC, 50/60Hz [kA]	75%	50%	100%	100%	100%	100%
690V AC, 50/60Hz [kA]	50%	50%	100%	100%	100%	100%
250V DC, 2 Poles in Series [kA]	100%	75%	100%	100%	100%	100%
500V DC, 2 Poles in Series [kA]	—	—	100%	100%	100%	100%
500V DC, 3 Poles in Series [kA]	100%	75%	100%	100%	100%	100%
750V DC, 3 Poles in Series [kA]	—	—	—	—	—	—
Mechanical Life	[No. Ops]	25 000		25 000		
	[Ops/hr]	240		240		
Electrical Life @ 415V AC	[No. Ops]	8000		8000		
	[Ops/hr]	120		120		
Ambient Temp. w/out derating	°F [°C]	104 °F [40 °C]		104 °F [40 °C]		
Storage Temperature	°F [°C]	-40...+176 °F [-40...+80 °C]		-40...+176 °F [-40...+80 °C]		
Dimensions [Width/Depth/Height]	[mm]	3 poles: 105x70x150		3 poles: 105x82.5x160		
	[mm]	4 poles: 140x70x150		4 poles: 140x82.5x160		

† Cannot be reverse fed above 600V

## Bulletin 140G-J

Available Sensors ( $I_n$ ): 40 A, 60 A, 100 A, 150 A, 250 A

Electronic Trip Unit. Long Delay Response, Short Delay with  $I^2t$  Response, and Instantaneous Curve



### Tolerance Values

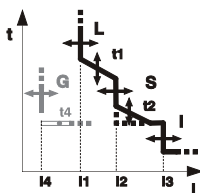
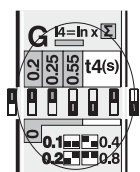
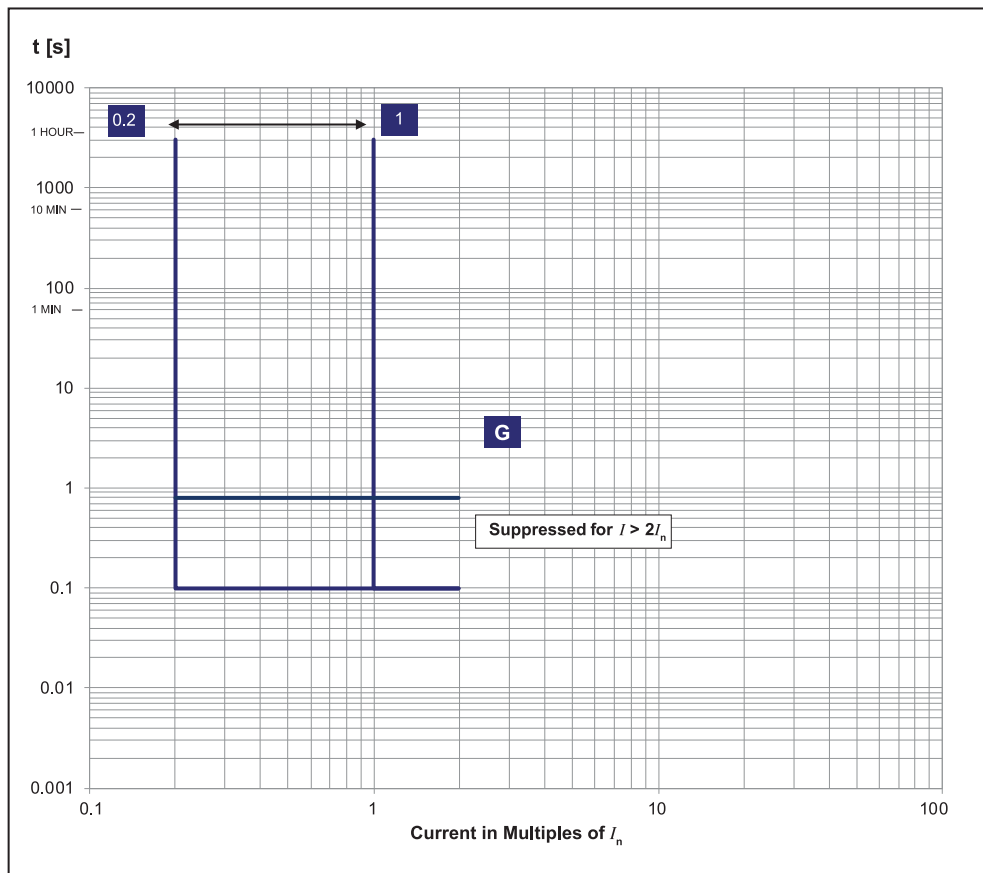
Protection	Trip Threshold	Trip Time
L	$1.05 \leq xI_1 \leq 1.25$	$\pm 20\%$
S	$\pm 10\%$	$\pm 20\%$
I	$\pm 15\%$	$\leq 60$ ms
Others	$\pm 20\%$	

### Notes:

1. Curve accuracy applies from  $-20^\circ\text{C}$  to  $+55^\circ\text{C}$  ( $-4^\circ\text{F}$  to  $+131^\circ\text{F}$ ) ambient temperature. For possible continuous ampere derating for ambient temperature above  $40^\circ\text{C}$  ( $104^\circ\text{F}$ ), consult your local Rockwell Automation sales office or Allen-Bradley distributor.
2. The right portion of the curve is determined by the interrupting rating of the circuit breaker.
3. Total clearing times shown include the response times of the trip unit, the breaker opening, and the interruption of the current.
4. For high fault current levels an additional fixed instantaneous hardware override is provided at 3 kA.

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### Ground Fault Protection Curve for LSI G MCCBS



Example:

$$I_n = 100 \text{ A}$$

$$I_4 = 100 \times (0.2 + 0.25) = 45 \text{ A}$$

$$t_4 = 0.2 \text{ s @ } I > I_4$$

		$I_4 [I_n]$						
$I_n [A]$		0.2	0.25	0.45	0.55	0.75	0.8	1
140G-J	40	8	10	18	22	30	32	40
	60	12	15	27	33	45	48	60
	100	20	25	45	55	75	80	100
	150	30	37.5	67.5	82.5	113	120	150
	250	50	62.5	113	138	188	200	250

### Tolerance Values

Protection	Trip Threshold	Trip Time
G	± 10%	± 20%

For L-S-I trip curve see Pub. 140G-TD023.