

Product Details and Certifications

Cross Reference RA Part Number: PN-D12913

Product: 140MG-K8P-D40

Description: 140MG - Motor Circuit Protectors, K frame, 35..65 kA at 480V, MCP (magnetic only), Rated Current 400 A



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

SYSTEM DATA

Supply Voltage	480V 60Hz / 600V 60 Hz
Interrupt Rating[kA] ①	65 kA at 480V / 35kA at 600V

CIRCUIT BREAKER DATA

Bulletin Number	140MG - Motor Circuit Protectors
Number of Poles	3 Poles
Frame Size	K frame
Rated Current(A)	400 A
Protection	MCP (magnetic only)

MANUFACTURING

Assembly	Factory Assembled
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INTERNAL ACCESSORIES

Auxiliaries(AX), Alarm (AL), Auxiliary/Alarm Combination (AX/AL), Right Side Mounting	N/A
Voltage for Aux Alarm Combination	N/A

① The interrupting rating for MCPs is dependent upon the controller used. Please contact your local Rockwell Automation sales office or Allen-Bradley distributor for further information.

Motor Circuit Protectors

Catalog Number Explanation — 400 A, K-Frame & 800 A, M-Frame

Complete Motor Circuit Protector Assemblies with Factory-Installed Options

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



140MG - K 8 P - D40 _____
a *b* *c* *d* *e* *f*

a

Bulletin No.	
Code	Description
140MG	Global Motor Circuit Protector

d

Protection Type	
Code	Description
P	Adjustable magnetic only (less than 13 x I _n)

b

Frame/Rating	
Code	Description
K	400 A
M	800 A

e

Current Range	
Code	Description
D30	e.g., 300 A
D40	e.g., 400 A
D80	e.g., 800 A
Blank	Frame only

c

Interrupting Rating/Breaking Capacity (based on I _c at 480V)	
Code	Description
8	High break

f

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	
Code	Description
AA	1 Aux., 1 Alarm Contact, 250V
CA	3 Aux., 1 Alarm Contact, 250V
AB	1 Aux., 1 Alarm Contact, 400V
FB	2 Aux. Contacts, 400V
CJ	3 Aux., 1 Alarm Contact, 24V

♦ Select up to two internal options: 1 for left side mounting (shunt trip or undervoltage release), 1 for right (auxiliary or alarm contact). Consult your local Rockwell automation sales office or Allen-Bradley distributor for further assistance.

Motor Circuit Protectors

- Short-Circuit Protection — Magnetic Trip
- Overload Protection — None (Magnetic Trip Only)

Rated Operational Current (I_e) [A]	Magnetic Trip Current [A]									3-phase Hp Ratings★				Max. kW, 3-Phase — AC-3★				Cat. No.‡
	Cam Setting									200V	230V	460V	575V	230V	400/415V	500V	690V	
	A	B	C	D	E	F	G	H	I									
G-Frame																		
3	9	12	15	18	21	24	27	30	33	0.5	0.5	1.5	2	0.6	0.75	1.1	1.5	140MG-G8P-B30
7	21	28	35	42	49	26	63	70	77	1.5	2	3	5	1.1	2.2	3	4	140MG-G8P-B70
15	45	60	75	90	105	120	135	150	165	3	3	10	10	3	5.5	7.5	11	140MG-G8P-C15
30	90	120	150	180	210	240	270	300	330	7.5	10	20	25	5.5	11	15	22	140MG-G8P-C30
50	150	200	250	300	350	400	450	500	550	15	15	30	40	11	22	22	37	140MG-G8P-C50
70	210	280	350	420	490	560	630	700	770	20	25	50	60	15	30	37	55	140MG-G8P-C70
80	240	320	400	480	560	640	720	800	880	25	30	60	75	22	45	55	75	140MG-G8P-C80
100	300	400	500	600	700	800	900	1000	1100	30	30	75	100	30	55	75	110	140MG-G8P-D10
125	375	500	625	750	875	1000	1125	1250	1375	40	40	100	125	22	45	55	90	140MG-G8P-D12
H-Frame																		
3	9	12	15	18	21	24	27	30	33	0.5	0.5	1.5	2	0.6	0.75	1.1	1.5	140MG-H8P-B30
7	21	28	35	42	49	26	63	70	77	1.5	2	3	5	1.1	2.2	3	4	140MG-H8P-B70
15	45	60	75	90	105	120	135	150	165	3	3	10	10	3	5.5	7.5	11	140MG-H8P-C15
30	90	120	150	180	210	240	270	300	330	7.5	10	20	25	5.5	11	15	22	140MG-H8P-C30
50	150	200	250	300	350	400	450	500	550	15	15	30	40	11	22	22	37	140MG-H8P-C50
70	210	280	350	420	490	560	630	700	770	20	25	50	60	15	30	37	55	140MG-H8P-C70
80	240	320	400	480	560	640	720	800	880	25	30	60	75	22	45	55	75	140MG-H8P-C80
100	300	400	500	600	700	800	900	1000	1100	30	30	75	100	30	55	75	110	140MG-H8P-D10
125	625	703	781	859	938	1016	1094	1172	1250	40	40	100	125	22	45	55	90	140MG-H8P-D12
I-Frame																		
100	600	675	750	825	900	975	1050	1125	1200	30	30	75	100	22	37	45	55	140MG-I8P-D10
110	660	743	825	908	990	1073	1150	1238	1320	30	40	75	100	22	45	55	90	140MG-I8P-D11
125	750	844	938	1031	1125	1219	1313	1406	1500	40	40	100	125	22	45	55	90	140MG-I8P-D12
150	900	1013	1125	1238	1350	1463	1575	1688	1800	50	50	100	150	30	55	75	110	140MG-I8P-D15
J-Frame																		
150	750	844	938	1031	1125	1219	1313	1406	1500	50	50	100	150	30	55	75	110	140MG-J8P-D15
175	875	984	1094	1203	1313	1422	1531	1641	1750	50	60	125	150	37	55	90	132	140MG-J8P-D17
200	1000	1125	1250	1375	1500	1625	1750	1875	2000	60	75	150	200	45	75	90	132	140MG-J8P-D20
225	1125	1266	1406	1547	1688	1828	1969	2109	2250	75	75	150	200	55	90	110	160	140MG-J8P-D22
250	1250	1406	1563	1719	1875	2031	2188	2344	2500	75	100	200	250	55	90	132	160	140MG-J8P-D25

★ The Hp and kW ratings shown are for reference only. They allow for a magnetic trip setting of at least up to 13X the motor FLA. However, the final selection of the MCP should be made based on motor full load current and the requirements of local electrical codes.

‡ The interrupting rating for MCPs is dependent upon the controller used. Please contact your local Rockwell Automation sales office or Allen-Bradley distributor for further information.



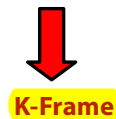
Rated Operational Current (I_e) [A]	Magnetic Trip Current [A]	3-phase Hp Ratings★				Max. kW, 3-Phase — AC-3★				Cat. No.‡
	I_3 (adjustable) [A]	200V	230V	460V	575V	230V	400/415V	500V	690V	
K-Frame										
300	300...3000	75	75	150	200	55	110	160	200	140MG-K8P-D30
400	400...4000	100	100	250	300	90	160	200	250	140MG-K8P-D40
M-Frame										
600	600...6000	125	150	300	400	110	200	250	355	140MG-M8P-D60
800	800...8000	150	200	400	500	160	250	355	500	140MG-M8P-D80
N-Frame										
1200§	1200...12000	250	300	600	700	200	250	500	710	140MG-N8P-E12

★ The Hp and kW ratings shown are for reference only. They allow for a magnetic trip setting of at least up to 13X the motor FLA. However, the final selection of the MCP should be made based on motor full load current and the requirements of local electrical codes.

‡ The interrupting rating for MCPs is dependent upon the controller used. Please contact your local Rockwell Automation sales office or Allen-Bradley distributor for further information.

§ I_3 is adjustable between 1...10x motor FLA. Values based on 1200 A rating plug.

MCP Performance Characteristics



		G-Frame	H-Frame	K-Frame	
Frame Size	[A]	125	125	400	
Poles		3	3	3	
Instantaneous Trip Settings	[A]	3...125	3...125	300 & 400	
Rated Insulation Voltage, U, IEC	[V]	800	1000	1000	
NEMA, UL, CSA	UL 489 Instantaneous Trip Circuit Breaker (Magnetic Only) Max SCCR. Combination Controller Rating ②				
	480V AC	[kA]	65	65	65
	600/347V AC	[kA]	25	–	–
	600V AC	[kA]	–	25	35
IEC 60947-2 GB14048.2	Rated Ultimate Short-circuit Breaking Capacity, I_{cu}				
	220-230V AC ①	[kA]	65 ⑤	100 ⑥	100
	400-415V AC	[kA]	36 ⑤	70 ⑥	70
	440V AC ①	[kA]	36 ⑤	65 ⑥	65
	500V AC	[kA]	30 ⑤	50 ⑥	50
	525V AC	[kA]	22 ⑤	30 ⑥	40
	690V AC	[kA]	6 ⑤	15 ⑥	40
	(DC) 250V – 2 Poles in Series	[kA]	36 ⑤	36 ⑥	–
	(DC) 500V – 3 Poles in Series	[kA]	–	36 ⑥	–
	Rated Service Short-circuit Breaking Capacity, I_{cs}				
	220-230V AC ①	[kA]	75% ⑤	100% ⑥	100%
	400-415V AC	[kA]	100% ⑤	100% ⑥	100%
	440V AC ①	[kA]	50% ⑤	100% ⑥	100%
	500V AC	[kA]	50% ⑤	100% ⑥	100%
	525V AC	[kA]	50% ⑤	100% ⑥	100%
	690V AC	[kA]	75% ⑤	100% ⑥	100%
	(DC) 250V – 2 Poles in Series	[kA]	100% ⑤	100% ⑥	–
(DC) 500V – 3 Poles in Series	[kA]	–	100% ⑥	–	
Mechanical Life	[No. of Operations]	25000	25000	20000	
	[Operations per Hour]	240	240	120	
Electrical Life @ 415V (AC)	[No. of Operations]	8000	8000	7000	
	[Operations per Hour]	120	120	60	
Wire Temperature Rating ④	[°C]	Cu 75 °C	Al or Cu 75 °C	Al or Cu 75 °C	
Ambient Temperature w/out derating	°F [°C]	104 °F [40 °C]	104 °F [40 °C]	104 °F [40 °C]	
Operating Temperature	°F [°C]	-13...+158 °F [-25...+70 °C]	-13...+158 °F [-25...+70 °C]	-13...+158 °F [-25...+70 °C]	
Storage Temperature	°F [°C]	-40...158 °F [-40...+70 °C]	-40...158 °F [-40...+70 °C]	-40...158 °F [-40...+70 °C]	
Dimensions	[mm]	76.2x70x130	90x82.5x130	140x108.5x205	
[Width/Depth/Height]	[inches]	3x2.76x5.12	3.54x3.25x5.12	5.51x4.27x8.07	
Weight (approximate)	lb [kg]	2.4 [1.1]	2.6 [1.2]	7.2 [3.25]	

① These ratings have not been tested for the CCC listing.

② The Short Circuit value is based on a combined of MCP, motor contactor and overload relay as a UL60497-4-1 Type D Combination Motor Controller. Refer to the AB Global Short Circuit Current Ratings Tables, or contact your local Allen Bradley Representative.

③ Adjustable between 1...10x motor FLA. Value based on 1200A rating plug.

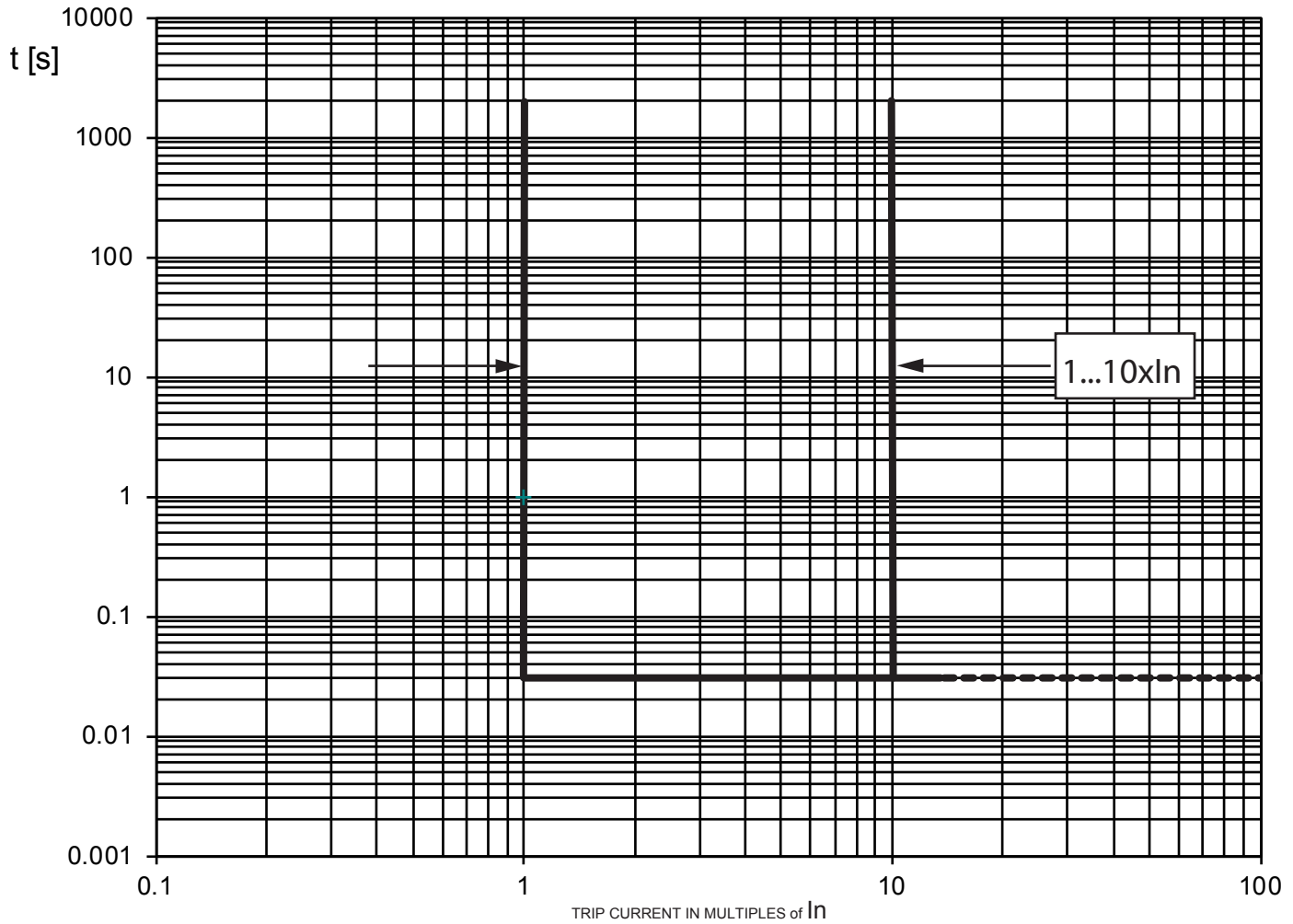
④ Wire temperature Rating is determined by testing the Motor Circuit Protector under full load current with the conductors sized for 75 °C.

3A–7A, G Frame

		230V	415V	440V	500–525V	690V	250V DC
⑤	I_{cu} [kA]	5	5	3	3	3	5
	I_{cs} [kA]	100%	100%	100%	100%	100%	100%

Time-Current Curves for Bulletin 140MG-K
Motor Circuit Protectors

Maximum Current
300, 400 A.



Notes: Motor circuit protectors are for use only in combination controllers. For high fault current levels an additional fixed instantaneous override is provided at 5 kA.

