

Bulletin 141A MCS Mounting System

- Modularity makes planning easy
- Factory-assembled starters
- Easy starter exchange
- Flexible field assembly of starters
 - DOL starters
 - Reversing starters
 - Star-Delta starters
 - Soft starters
 - Inverter
 - Complete range of accessories
- 3 mounting methods
 - On busbars
 - On 35 mm and 75 mm top hat rails
 - Screw fixing

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Standards Compliance

UL 508
 CSA 22.2 No. 14
 EN 60947

Certifications

CE
 cULus

Examples given in this section are for reference purposes. This basic explanation should not be used for product selection; not all combinations will produce a valid catalog number.

141A – G S 45 R R 25
 a b c d e f g

a

Type	
Code	Description
C	Compact standard busbar module with wires
G	Standard busbar module with wires

c

Width	
Code	Description
45	45 mm
54	54 mm
63	63 mm
72	72 mm
81	81 mm
90	90 mm
180	180 mm
270	270 mm

d

Top Hat Rail	
Code	Description
R	RA-specific plastic rail
S	Standard plastic rail
M	Metal rail

f

Current Rating	
Code	Description
Blank	0 A (no wires)
16	16 A
25	32 A
45	63 A
125	125 A

b

Length	
Code	Description
C	Compact (160 mm)
S	Short (200 mm)
M	Medium (260 mm)

e

Bottom Hat Rail	
Code	Description
R	RA-specific rail
S	Standard rail
H	Rail carrier
Blank	No bottom rail

g

Frame Size	
Code	Description
H	For 140U-H or 140M-H

141A – F S 45 R S 25
 a b c d e f g

a

Type	
Code	Description
F	Standard busbar module with terminals

c

Width	
Code	Description
45	45 mm
54	54 mm
63	63 mm
72	72 mm
81	81 mm
108	108 mm
110	110 mm

d

Top Hat Rail	
Code	Description
R	RA-specific plastic rail
S	Standard plastic rail
V	Screw mounting variable positions

e

Bottom Hat Rail	
Code	Description
S	Standard rail
Blank	No bottom rail

b

Length	
Code	Description
S	Short (200 mm)
M	Medium (260 mm)
L	Long (320 mm)

f

Current Rating	
Code	Description
25	32 A
63	63 A
200	200 A
250	250 A

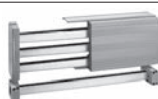
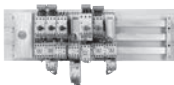
g

Terminal Location	
Code	Description
Blank	Terminals on top
T	Terminals on top
B	Terminals on bottom

Busbar Components, Continued

	Description	Busbar [mm]	Pkg. Qty.	Cat. No.
	Supply Module 3-pole For use with Compact Busbar Supports, Cat. No. 141A-CTU3 6...50 mm² (10...1/0 AWG) round conductors and flat conductors up to 6 x 9 x 0.8 54 mm wide (meets feeder circuit spacings per UL 508A)	12 x 5 or 12 x 10	1	141A-CVN350
	Supply Module 3-pole For use with Compact Busbar Supports, Cat. No. 141A-CTU3 35...150 mm² (2 AWG...300 MCM) round conductors and flat conductors up to 10 x 20 x 1 90 mm wide (meets feeder circuit spacings per UL 508A)	12 x 5 or 12 x 10	1	141A-CVN3150
	Supply Module 3-pole 6...50 mm² (10...1/0 AWG) 54 mm wide (meets feeder circuit spacings per UL 508A)	12...30 x 5 or 12...30 x 10 or TT	1	141A-VN370
	Supply Module 3-pole 35...120 mm² (2 AWG...250 MCM) 81 mm wide (meets feeder circuit spacings per UL 508A)		1	141A-VN3120
	Supply Module 3-pole 95...185 mm² (3/0 AWG...350 MCM) 135 mm wide	20...30 x 5 or 20...30 x 10 or TT	1	141A-VN3185
	Supply Module 3-pole for round conductors 120...300 mm² (250...600 MCM) 135 mm wide		1	141A-VN3300R
	Supply Module 3-pole for flat conductors up to 32 x 20 mm equivalent to 300 mm² (300...600 MCM) round conductor ampacity 135 mm wide		1	141A-VN3300F
	Supply Module 3-Pole (set of 3 terminals) for round conductors 120...300 mm² (250...600 MCM) 153 mm wide (3 single poles of 51 mm each) (meets feeder circuit spacings per UL 508A) Requires Cat. No. 141A-BK180, 141A-BK228 or 141A-BK250 terminal cover	20...30 x 5 or 20...30 x 10 or TT	1	141A-VU3300R
	Supply Module 3-Pole (set of 3 terminals) for flat conductors up to 32x20 mm equivalent to 300 mm² (600 MCM) 153 mm wide (3 single poles of 51 mm each) (meets feeder circuit spacings per UL 508A) Requires Cat. No. 141A-BK180, 141A-BK228 or 141A-BK250 terminal cover		1	141A-VU3300F
	Single Terminals Single terminals for supplying busbars 2.5...16 mm² (#14...6 AWG)	12...30 x 5	25	141A-VS116
		12...30 x 10		141A-VS216
	Single Terminals Single terminals for supplying busbars 4...35 mm² (#12...2 AWG)	12...30 x 5		141A-VS135
		12...30 x 10		141A-VS235
	Single Terminals Single terminals for supplying busbars 16...70 mm² (#6...2/0 AWG)	12...30 x 5		141A-VS170
		12...30 x 10		141A-VS270
	Single Terminals Single terminals for supplying busbars 16...120 mm² (#6...250 MCM)	12...30 x 10		141A-VS2120
				

Busbar Components, Continued

	Description		Busbar [mm]	Pkg. Qty.	Cat. No.
	Terminal Cover Finger protection when busbars supplied with single terminals. Attaches directly to busbars. Height: 180 mm, Width: 54 mm		12...30 x 5 or 12...30 x 10	1	141A-BK1
	Terminal Cover Finger protection when bus bars are supplied by Cat. No. 141A-VU3300_ supply module Attaches directly to bus bars Height: 200 mm Depth: 90 mm		Width: 180 mm	1	141A-BK180
			Width: 228 mm	1	141A-BK228
			Width: 250 mm	1	141A-BK250
	Terminal Cover Kit Customized terminal cover width using end supports, front shroud and top/bottom shroud Shrouds can be cut to desired width Attaches directly to bus bars		Left and right support	1	141A-BKH
			Front shroud, 1100 mm	1	141A-BKC
	Busbar Connector System distance: 5...10 mm		12...20 x 5 or 12...20 x 10	12	141A-VC3A
	Busbar Connector System distance: 13...20 mm		20...30 x 5 or 20...30 x 10	6	141A-VC3B
	Busbar Connector System distance: 50...60 mm			3	141A-VC3C
	Busbar Connector System distance: 100...110 mm			3	141A-VC3D
	Double-T Busbar Connectors For connection of double-T busbar racks with same dimensions, Width: 50 mm		Double-T	6	141A-VC5E
	Double-T Busbar Connectors For connection of double-T busbar racks with same dimensions, Width: 95 mm			3	141A-VC5F
	Double-T Busbar Connectors For connection of double-T busbar racks with same dimensions, Width: 150 mm			3	141A-VC5G
	Phase Separator For UL installation of end-to-end busbar connections 3-pole, including two mounts For use with Busbar Connectors	For use with Cat. No. 141A-VC3A, -VC3B, -VC5E, -VC3C, -VC5F, -VC3D, -VC5G	Width: 105 mm	1	141A-PS105
			Width: 145 mm		141A-PS145
			Width: 200 mm		141A-PS200
	Busbar Shroud Cover — Compact 160 x 700 mm Covers all three busbars For use with Compact Busbar Supports, Cat. No. 141A-CTU3		12 x 5 or 12 x 10	2	141A-CBCF1
	Busbar Shroud Holder — Compact Two required per section of Busbar Shroud Cover For use with Busbar Shroud Cover — Compact, Cat. No. 141A-CBCF1			10	141A-CBCF1H
	Busbar Shroud Cover 200 x 1100 mm Covers all three busbars		12...30 x 5 or 12...30 x 10	2	141A-BCF1
	Busbar Shroud Holder Two required per section of Busbar Shroud Cover			10	141A-BCF1H
	Single Pole Busbar Covers Snap-on profile for single busbars for protection against electric shock. Length: 1 m, can be cut to length.		12...30 x 5	10	141A-BS5
			12...30 x 10		141A-BS10
	Busbar Cover For double-T busbars Length: 1 m; can be cut to length		—	5	141A-BCT1
	Compartment Section Fits to 141A-T13 double-T busbar supports Adjusts the installation depth	48 mm	Double-T	1	141A-BST48
		76 mm		1	141A-BST76
	Panel Busbar Shroud Provides isolation between busbar and panel (required for feeder-circuit applications per UL 508A) 230 x 810 mm		All	2	141A-BCR

Short-Circuit Current Ratings (support spacing at 800 mm)

Cat. No.	Description	Max. Circuit Bkr. Cat. No.	C. B. Rating	SCCR		Max. Class CC, J or T Fuse	SCCR	Max. Class CC, J or T Fuse	SCCR
				480V	600V		480V		600V
141A-B125*	12x5 Copper Bus Bar	140U-J6D3-D25	250 A	65 kA	25 kA	400 A	100 kA	400 A	100 kA
141A-B1210*	12x10 Copper Bus Bar	140U-J6D3-D25	250 A	65 kA	25 kA	400 A	100 kA	400 A	100 kA
141A-B205*	20x5 Copper Bus Bar	140U-K6D3-D40	400 A	65 kA	35 kA	500 A	100 kA	400 A	100 kA
141A-B2010*	20x10 Copper Bus Bar	140U-K6D3-D40	400 A	65 kA	35 kA	500 A	100 kA	400 A	100 kA
141A-B305*	30x5 Copper Bus Bar	140U-K6D3-D40	400 A	65 kA	35 kA	500 A	100 kA	500 A	100 kA
		140U-L6D3-D60	600 A	—	35 kA	500 A	100 kA	500 A	100 kA
141A-B3010*	30x10 Copper Bus Bar	140U-K6D3-D40	400 A	65 kA	35 kA	600 A	100 kA	600 A	100 kA
		140U-L6D3-D60	600 A	65 kA	35 kA	600 A	100 kA	600 A	100 kA
141A-BT1*NZ	TT Copper Bus Bar	140U-M6D3-D80	800 A	65 kA	30 kA	800 A Class T	100 kA	600 A	100 kA
141A-TU3	Bus Bar Support	140U-K6D3-D40	400 A	65 kA	35 kA	600 A	100 kA	600 A	100 kA
		140U-L6D3-D60	600 A	65 kA	35 kA	600 A	100 kA	600 A	100 kA
141A-T13	Bus Bar Support	140U-M6D3-D80	800 A	65 kA	30 kA	800 A Class T	100 kA	600 A	100 kA
141A-TR3E	BB Support End Cover	140U-K6D3-D40	400 A	65 kA	35 kA	600 A	100 kA	600 A	100 kA
		140U-L6D3-D60	600 A	65 kA	35kA	600 A	100 kA	600 A	100 kA
141A-T13E	BB Support End Cover	140U-M6D3-D80	800 A	65 kA	30 kA	800 A Class T	100 kA	600 A	100 kA
141A-VN370	Supply Module	140U-J6D3-D25	250 A	65 kA	25 kA	400 A	100 kA	400 A	100 kA
141A-VN3120	Supply Module	140U-K6D3-D40	400 A	65 kA	35 kA	600 A	100 kA	600 A	100 kA
		140U-L6D3-D60	600 A	65 kA	35 kA	600 A	100 kA	600 A	100 kA
141A-VN3185	Supply Module	140U-K6D3-D40	400 A	65 kA	35 kA	500 A	100 kA	300 A	100 kA
141A-VN3300R	Supply Module	140U-K6D3-D40	400 A	65 kA	35 kA	500 A	100 kA	300 A	100 kA
141A-VU3300R	Supply Module	140U-K6D3-D40	400 A	65 kA	35 kA	500 A	100 kA	300 A	100 kA
141A-VS54136F	Profile Terminals	140U-M6D3-D80	800 A	65 kA	30 kA	800 A Class T	100 kA	600 A	100 kA
141A-CUH125B	Circuit Breaker Module	140U-H6C3-D12	125 A	65 kA	25 kA	N/A	N/A	N/A	N/A
141A-CUH125T	Circuit Breaker Module	140U-H6C3-D12	125 A	65 kA	25 kA	N/A	N/A	N/A	N/A
141A-CUJ250	Circuit Breaker Module	140U-J6D3-D25	250 A	65 kA	25 kA	N/A	N/A	N/A	N/A
141A-CUL600	Circuit Breaker Module	140U-K6D3-D40	400 A	65 kA	35 kA	N/A	N/A	N/A	N/A
		140U-L6D3-D60	600 A	65 kA	35 kA	N/A	N/A	N/A	N/A
141A-SS*25	Bus Bar Module	140M-C2E-B16	1.6 A	65 kA	47 kA	30 A	100 kA	30 A	100 kA
141A-SM*25		140M-C2E-C10	10 A	65 kA	30 kA	30 A	100 kA	30 A	100 kA
141A-GS*25		140M-C2E-C25	25 A	30 kA	30 kA	30 A	100 kA	30 A	100 kA
141A-GM*25		140M-D8E-C25	25 A	65 kA	30 kA	30 A	100 kA	30 A	100 kA
141A-FS*25									
141A-FM*25									
141A-SS*45	Bus Bar Module	140M-F8E-C32	32A	65 kA	30 kA	—	—	—	—
141A-SM*45									
141A-GS*45		140M-F8E-C45	45 A	65 kA	18 kA	—	—	—	—
141A-GM*45									

Busbars (required quality)

Material		E-CU blank or tinned
Busbar widths 5 or 10 mm thick	[mm]	12, 15, 20, 25, 30
Tolerance of thickness	[mm]	+0.1/-0.3
Corner radius	[mm]	0.5
Tolerance of center spacing	[mm]	60 +0.5/-0.5
Standard		DIN 46433

General Data

Main Circuits

Rated insulation voltage U_i		
Acc. to IEC, EN	[V]	690
Acc. to UL, NEMA, CSA, EEMAC	[V]	600
Rated impulse withstand voltage U_{imp}	[kV]	8
Rated frequency	[Hz]	50...60
Pollution degree		3
Ambient temperature		
Operation	[°C]	-25...+60
Transport and storage	[°C]	-50...+80

Protection class	
- Modules and busbars	IP00
- Modules and busbars mounted on plate, connected conductors and usage of busbar covers	IP20
- Iso-Modules with device adapter plate removed, from front	IP20 B (finger proof)
Standards and Norms	IEC/EN 60439-1
Certifications	CE, cULus Recognized

Control Circuits

Control plugs		
Rated insulation voltage U_i		
Acc. to IEC, EN	[V]	250
Acc. to UL, NEMA, CSA, EEMAC	[V]	300
Rated impulse withstand voltage U_{imp}	[kV]	4
Rated current at 40 °C ambient temperature I_{th}	[A]	12

Micro switch		
Rated insulation voltage U_i		
Acc. to IEC, EN	[V]	250
Acc. to UL, NEMA, CSA, EEMAC	[V]	300
Rated current		Suitable for switching contactors 100-C AC-coil-voltage ≤ 250 V DC-coil-voltage ≤ 120 V

Weight [g]

MCS Iso Busbar Module	[g]
141A-SM45RS25	402
141A-SM45S	300
141A-SM54RS25	418
141A-SM54RS45	494
141A-SM54S	327
141A-SM63RS45	502
141A-SM63S	405
141A-SS45R	279
141A-SS45RR25	381
141A-SS54R	305
141A-SS54RR25	396
141A-SS54RR45	472
141A-SS63RR45	480

MCS Standard Busbar Module	[g]
141A-CC45R32	198
141A-CC54R63	218
141A-FM45SS25	293
141A-FM54SS63	349
141A-FM63SS63	370
141A-FM72SS63	408
141A-FM81SS63	429
141A-FS45S25	272
141A-FS54S63	328
141A-FS63S63	349
141A-FS72S63	387
141A-FS81S63	408
141A-GM45RS25	313
141A-GM54RS25	368
141A-GM54RS45	379
141A-GM63RS45	400
141A-GM45S	211
141A-GM54S	277
141A-GM63S	298
141A-GS45R	200
141A-GS45RR25	302
141A-GS54R	226
141A-GS54RR25	347
141A-GS54RR45	358
141A-GS63RR45	379
141A-GS72S	268
141A-GS81S	289
141A-GS90M125	781
141A-GS180M125	1021
141A-GS270M125	1271

MCS Standard Busbar Module >100 A	[g]
141A-FL110V250T	1200
141A-FS108V200B	1000
141A-FS108V200T	1000

MCS Mounting Module	[g]
141A-WL45RR	211
141A-WL45RRP	240
141A-WL54RR	222
141A-WL54RRP	251
141A-WM45RR	189
141A-WM45RRP	212
141A-WM54RRP	211
141A-WM54RRP	234
141A-WS45RR	163
141A-WS45RRP	180
141A-WS54RR	204
141A-WS54RRP	221

Busbar Components	[g]	Busbar Components	[g]
141A-BCF1	750	141A-NFHCC30	185
141A-BCF1H	40	141A-NFHCC30L	187
141A-BCR	800	141A-NFJ100	3280
141A-BCT1	380	141A-NFJ200	4500
141A-BK1	144	141A-NFJ400	6900
141A-BK180	395	141A-NFVF1150	116
141A-BK228	425	141A-NFVF2240	199
141A-BK250	440	141A-NFVF3300	247
141A-BKC	420	141A-PS105	172
141A-BKH	90	141A-PS145	196
141A-BKS	150	141A-PS200	218
141A-BS10	101	141A-T11	158
141A-BS5	87	141A-T13	591
141A-BST48	700	141A-T13E	20
141A-BST76	1050	141A-TR1	59
141A-CBCF1	420	141A-TR3	203
141A-CBCF1H	18	141A-TR3E	21
141A-CTS3	52	141A-TR3F16	285
141A-CTU3	68	141A-TR4	256
141A-CVN3150	575	141A-TR4E	28
141A-CVN350	206	141A-TS3	131
141A-N160SB	2160	141A-TU3	127
141A-N320SB	5650	141A-VB710528F	840
141A-ND1	130	141A-VB75528F	500
141A-ND2	220	141A-VB76828F	630
141A-NDN66	570	141A-VC3A	185
141A-NDRY66	570	141A-VC3B	251
141A-NF0102	759	141A-VC3C	565
141A-NF1038	760	141A-VC3D	870
141A-NFAC00A	124	141A-VC5E	494
141A-NFAC1A	107	141A-VC5F	943
141A-NFAC2A	109	141A-VC5G	1461
141A-NFAC3A	156	141A-VN3120	485
141A-NFAD	61	141A-VN3185	1140
141A-NFAFR5	65	141A-VN3300F	1619
141A-NFAR	1	141A-VN3300R	1540
141A-NFASNC0	11	141A-VN370	360
141A-NFASNC1	11	141A-VS116	21
141A-NFASNF	7	141A-VS135	46
141A-NFASNFD	11	141A-VS170	71
141A-NFD125SB	2190	141A-VS2120	109
141A-NFD160	1300	141A-VS216	23
141A-NFD250	3760	141A-VS235	47
141A-NFD250SB	2460	141A-VS270	74
141A-NFD400	5500	141A-VU3300F	1325
141A-NFD630	7840	141A-VU3300R	1550

Accessories	[g]
141A-AHR45	15
141A-AHR54	16
141A-AHR63	16
141A-AHS72	17
141A-AHS81	18
141A-AK	1
141A-APC10	35
141A-APC12	40
141A-APC8	29
141A-APH	5
141A-AS	75
141A-AS9B	20
141A-AS9S	38
141A-AS9W	20
141A-CAS9B	20
141A-FTS63	8

Bulletin 141A
MCS Mounting System
Approximate Dimensions

Dimensions are in millimeters. Dimensions are not intended for manufacturing purposes.

Supply Modules, Continued

Cat. Nos. 141A-VU3300R and -VU3300F

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