

CERTIFICATE OF COMPLIANCE

Certificate Number 20171201-E345003
Report Reference E345003 -20150206
Issue Date 2017-DECEMBER-01

Issued to: ABB Stotz-Kontakt GmbH
Eppelheimer Str 82
69123 Heidelberg GERMANY

**This is to certify that
representative samples of**

COMBINATION MOTOR CONTROLLERS

Type E – Cat. No. MS165 followed by -16, -20, -25, -32, -42, -54, or -65.

Type F – Cat. No. MS165 or MO165 followed by -16, -20, -25, -32, -42, -54, or -65.

(See Addendum for Additional Information.)

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

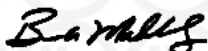
Standard(s) for Safety:

UL 60947-1 & CSA C22.2 No. 60947-1, "Low-Voltage Switchgear and Controlgear - Part 1: General Rules."

UL 60947-4-1 & CSA C22.2 No. 60947-4-1, "Low-Voltage Switchgear and Controlgear - Part 4-1: Contactors and Motor-Starters - Electromechanical Contactors and Motor-Starters."

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program

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This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements

Addendum –

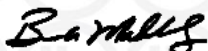
Ratings:

Electrical Ratings for Single Phase AC Motors:

FLA Range	AC motor rating, hp, Breaking-All-Lines			
	Single phase, 50/60 Hz			
	110-120 Vac	200 Vac	208 Vac	220-240 Vac
10 – 16	1	2	2	2
14 - 20	1-1/2	3	3	3
18 – 25	2	3	3	3
23 – 32	2	3	5	5
30 – 42	3	5	5	7-1/2
40 - 54	3	7-1/2	7-1/2	10
52 - 65	5	10	10	10

Electrical Ratings for Three Phase AC Motors:

FLA Range	AC motor rating, hp, Breaking-All-Lines					
	Three phase, 50/60 Hz					
	110-120 Vac	200 Vac	208 Vac	220-240 Vac	440-480 Vac	550-600 Vac
10 – 16	2	3	3	5	10	10
14 - 20	3	5	5	5	10	15
18 – 25	3	5	7-1/2	7-1/2	15	20
23 – 32	5	7-1/2	10	10	20	30
*30 – 42	5	10	10	15	30	40
*40 - 54	7-1/2	15	15	20	40	50
*52 - 65	10	20	20	20	50	60



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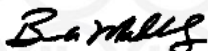
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Electrical Ratings for AC General Use:

Cat. No.	General Use, Max. Current, A, Breaking-All-Lines
	600 Vac
*MS165-16 / MO165-16	16
*MS165-20 / MO165-20	20
*MS165-25 / MO165-25	25
*MS165-32 / MO165-32	32
*MS165-42 / MO165-42	42
*MS165-54 / MO165-54	54
*MS165-65 / MO165-65	65

Current Element Sizes:

Cat. No.	FLA Range, Dial Setting	Magnetic Trip	Cat. No.	FLA Range	Magnetic Trip
	Thermal Tripping at 125% of				
	A	A		A	A
MS165-16	10 - 16	240	MO165-16	16	240
MS165-20	14 - 20	300	MO165-20	20	300
MS165-25	18 - 25	375	MO165-25	25	375
MS165-32	23 - 32	480	MO165-32	32	480
MS165-42	30 - 42	630	MO165-42	42	630
MS165-54	40 - 54	810	MO165-54	54	810
MS165-65	52 - 65	975	MO165-65	65	975



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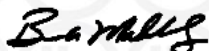


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Short Circuit Current Ratings for Manual Self-protected Combination Motor Controller (Type E):

Cat. No.	FLA Range	Voltage	Trip Class	Short Circuit Rating
				High-Fault, RMS Symmetrical
	A	V ac		A
MS165-16	10 - 16	480Y/277	10	65,000
MS165-20	14 - 20	480Y/277	10	65,000
MS165-25	18 - 25	480Y/277	10	65,000
MS165-32	23 - 32	480Y/277	10	65,000
MS165-42	30 - 42	480Y/277	10	65,000
MS165-54	40 - 54	480Y/277	10	65,000
MS165-65	52 - 65	480Y/277	10	65,000
MS165-16	10 - 16	600Y/347	10	30,000
MS165-20	14 - 20	600Y/347	10	30,000
MS165-25	18 - 25	600Y/347	10	30,000
MS165-32	23 - 32	600Y/347	10	30,000
MS165-42	30 - 42	600Y/347	10	30,000
MS165-54	40 - 54	600Y/347	10	30,000
MS165-65	52 - 65	600Y/347	10	30,000



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Short Circuit Current Ratings for Manual Self-protected Combination Motor Controller (Type F):

Combination Motor Controller Type F Type 2 Coordination				
Type	480Y/277V kA	Contactor	600Y/347V kA	Contactor
MS165-16	65	AF26...AF38	30	AF09...AF38
MS165-20	65	AF26...AF38	30	AF09...AF38
MS165-25	65	AF26...AF38	30	AF40...AF65
MS165-32	65	AF26...AF38	30	AF40...AF65
MS165-42	65	AF40...AF65	30	AF40...AF65
MS165-54	65	AF40...AF65	30	AF40...AF65
MS165-65	65	AF40...AF65	30	AF40...AF65

Combination Motor Controller Type F Type 1 Coordination				
Type	480Y/277V kA	Contactor	600Y/347V kA	Contactor
MS165-16	65	AF09...AF38	50	AF09...AF38
MS165-20	65	AF26...AF38	50	AF26...AF38
MS165-25	65	AF26...AF38	50	AF26...AF38
MS165-32	65	AF26...AF38	50	AF26...AF38
MS165-42	65	AF40...AF65	30	AF40...AF65
MS165-54	65	AF40...AF65	30	AF40...AF65
MS165-65	65	AF40...AF65	30	AF40...AF65

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Combination Motor Controller Type F Type 1 Coordination						
Type	480Y/277V kA	OL	Contactor	600Y/347V kA	Contactor	OL
MO165-16	65	EF19-18.9	AF09...AF38	50	AF09...AF38	EF19-18.9
MO165-20	65	EF45-30	AF26...AF38	50	AF26...AF38	EF45-30
MO165-25	65	EF45-30	AF26...AF38	50	AF26...AF38	EF45-30
MO165-32	65	EF45-45	AF26...AF38	50	AF26...AF38	EF45-45
MO165-42	65	EF65	AF40...AF65	30	AF40...AF65	EF65
MO165-54	65	EF65	AF40...AF65	30	AF40...AF65	EF65
MO165-65	65	EF65	AF40...AF65	30	AF40...AF65	EF65

Combination Motor Controller Type F Type 1 Coordination						
Type	480Y/277V kA	OL	Contactor	600Y/347V kA	Contactor	OL
MO165-16	65	TF42	AF09...AF38	30	AF09...AF38	TF42
MO165-20	65	TF42	AF26...AF38	30	AF09...AF38	TF42
MO165-25	65	TF42	AF26...AF38	50	AF26...AF38	TF42
MO165-32	65	TF42	AF26...AF38	50	AF26...AF38	TF42
MO165-42	65	TF65	AF40...AF65	30	AF40...AF65	TF65
MO165-54	65	TF65	AF40...AF65	30	AF40...AF65	TF65
MO165-65	65	TF65	AF40...AF65	30	AF40...AF65	TF65

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