CB TEST CERTIFICATE

Ref. Certificate No.

NL-9848/M2

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

Issued by:	KEMA Quality B.V.		
Product:	MAGNETIC CONTACTOR WITH THERMAL OVERLOAD RELAY AND ACCESSORIES		
Applicant:	LS Industrial Systems Co., Ltd.	1026-6, HoGye-Dong, DongAn-Gu, AnYang-Si, GyeongGi-Do	Korea, Republic of
Manufacturer:	LS Industrial Systems Co., Ltd.	1026-6, HoGye-Dong, DongAn-Gu, AnYang-Si, GyeongGi-Do	Korea, Republic of
Factory:	LS Industrial Systems Co., Ltd. CheongJu Plant	1, Songjeong-Dong, HeungDeok-Gu Cheongju-si, ChungCheongbuk-do	Korea, Republic of
Rating and principal characteristics:	General product details: Ue/Ui : - 1000 V (for contactors and auxiliaries) - 690 V (for thermal overload relays) Uimp: - 8 kV (contactors and auxiliaries) - 6 kV (overload relays) - See Annex for detailed product specifications.		
Trade mark (if any):	LS		
Model/Type reference:	MC-9, -12, -18, -25, -32, -32a, -35, -40, -50, -50a, -63, -65, -75, -75a, -85, -85a, -95 / MT-32, -63, -95 versions /2H, /3H, /3K, /3D (TOR) / UA-1 (auxiliary contact) / UR-02 (Interlock unit)		
Additional information:	Re-issued due to addition of Models MC-32a, MC-50a, MC-75a and MC-85a (markings only changed) and address change, original CB dated 2005-11-14		
Sample of product tested to be in conformity with IEC:	60947-4-1(ed.2);am1 60947-5-1(ed.2);am1;am2		
Test Report Ref. No:	2084466.50-57 dated November 2005		

This CB Test Certificate is issued by the National Certification Body:

KEMA Quality B.V.
Utrechtseweg 310
P.O. Box 5185
6802 ED Arnhem
The Netherlands

Signed by: F.S.Strikwerda

Date of issue: 2008-12-17

1 **CONTACTOR RATINGS:**

1.1 **MC-9 to MC-32**

Rated operational Voltage (Vac.)	Utilization Categories			
	AC-1	AC-2	AC-3	AC-4
200-240	25	11	11	8
380-440	25	9	9	6
500-550	-	7	7	-
690	-	5	5	-

Table 1: MC-9 ratings

Rated operational Voltage (V ac.)	Utilization Categories			
	AC-1	AC-2	AC-3	AC-4
200-240	25	13	13	11
380-440	25	12	12	9
500-550	-	12	12	-
690	-	9	9	-

Table 2: MC-12 ratings

Rated operational Voltage (Vac.)	Utilization Categories			
	AC-1	AC-2	AC-3	AC-4
200-240	40	18	18	16
380-440	40	18	18	11
500-550	-	13	13	-
690	-	9	9	-

Table 3: MC-18 ratings

Rated operational Voltage (Vac.)	Utilization Categories			
	AC-1	AC-2	AC-3	AC-4
200-240	40	25	25	18
380-440	40	25	25	13
500-550	-	22	22	-
690	-	18	18	-

Table 4: MC-25 ratings

Rated operational Voltage (V ac.)	Utilization Categories			
	AC-1	AC-2	AC-3	AC-4
200-240	50	32	32	20
380-440	50	32	32	17
500-550	-	28	28	-
690	-	20	20	-

Table 5: MC-32 / MC 32a ratings

Type	SCPD	Rated Operational		Ir	Iq
		Power AC3 440V	Current AC3 440V		
MC-9	MMS-32H 6A	4kW	9A	690V 1kA	-
MC-12	MMS-32H 10A	5.5kW	12A	690V 1kA	-
MC-18	MMS-32H 10A	7.5kW	18A	690V 3kA	415V 50kA
MC-25	MMS-32H 22A	11kW	25A	690V 3kA	415V 50kA
MC-32 MC-32a	MMS-32H 22A	15kW	32A	690V 3kA	415V 50kA

Table 6: Short circuit ratings MC-9 ...MC-32

1.2 **MC-35 till MC-63**

Rated operational Voltage (V ac.)	Utilization Categories			
	AC-1	AC-2	AC-3	AC-4
200-240	55	35	35	23
380-440	55	35	35	20
500-550	-	30	30	-
690	-	21	21	-

Table 7: MC-35 ratings

Rated operational Voltage (V ac.)	Utilization Categories			
	AC-1	AC-2	AC-3	AC-4
200-240	60	40	40	25
380-440	60	40	40	24
500-550	-	32	32	-
690	-	23	23	-

Table 8: MC-40 ratings

Rated operational Voltage (V ac.)	Utilization Categories			
	AC-1	AC-2	AC-3	AC-4
200-240	70	55	55	35
380-440	70	50	50	32
500-550	-	43	43	
690	-	28	28	

Table 9: MC-50 / MC-50a ratings

Rated operational Voltage (V ac.)	Utilization Categories			
	AC-1	AC-2	AC-3	AC-4
200-240	75	63	63	40
380-440	75	63	63	35
500-550	-	45	45	
690	-	30	30	

Table 10: MC-63 ratings

Type	SCPD	Rated Operational		Ir	Iq
		Power AC3 440V	Current AC3 440V		
MC-35	MMS-63H 22A	18.5kW	35A	690V 3kA	415V 50kA
MC-40	MMS-63H 26A	18.5kW	40A	690V 3kA	415V 50kA
MC-50 MC-50a	MMS-63H 32A	22kW	50A	690V 3kA	415V 50kA
MC-63	MMS-63H 32A	25kW	63A	690V 3kA	415V 50kA

Table 11: Short circuit ratings of MC-35 ...MC-63

1.3 **MC-65 to MC-95**

Rated operational Voltage (V ac.)	Utilization Categories			
	AC-1	AC-2	AC-3	AC-4
200-240	100	65	65	50
380-440	100	65	65	47
500-550	-	60	60	
690	-	35	35	

Table 12: MC-65 ratings

Rated operational Voltage (V ac.)	Utilization Categories			
	AC-1	AC-2	AC-3	AC-4
200-240	110	75	75	55
380-440	110	75	75	52
500-550		64	64	
690		42	42	

Table 13: MC-75 / MC-75a ratings

Rated operational Voltage (V ac.)	Utilization Categories			
	AC-1	AC-2	AC-3	AC-4
200-240	135	85	85	65
380-440	135	85	85	62
500-550		75	75	
690		45	45	

Table 14: MC-85 / MC-85a ratings

Rated operational Voltage (V ac.)	Utilization Categories			
	AC-1	AC-2	AC-3	AC-4
200-240	140	95	95	68
380-440	140	95	95	65
500-550		85	85	
690		50	50	

Table 15: MC-95 ratings

Type	SCPD	Rated Operational		Ir	Iq
		Power AC3 440V	Current AC3 440V		
MC-65	MMS-100H 40A	30kW	65A	690V 5kA	415V 50kA
MC-75 MC-75a	MMS-100H 50A	37kW	75A	690V 5kA	415V 50kA
MC-85 MC-85a	MMS-100H 50A	45kW	85A	690V 5kA	415V 50kA
MC-95	MMS-100H 50A	45kW	95A	690V 5kA	415V 50kA

Table 16: Short circuit ratings of MC-65 ....MC-95

2 THERMAL OVERLOAD RELAYS

FRAME		Rating Current Range(A)					
MT-32	MT-32/2H	0.14(0.1~0.16)	0.21(0.16~0.25)	0.33(0.25~0.4)	0.52(0.4~0.63)	0.82(0.63~1)	1.3(1~1.6)
	MT-32/3H	2.1(1.6~2.5)	3.3(2.5~4)	5(4~6)	6.5(5~8)	7.5(6~9)	8.5(7~10)
	MT-32/3K	11(9~13)	15(12~18)	19(16~22)	21.5(18~25)	27(22~32)	-
	MT-32/3D	1.3(1~1.6)	2.1(1.6~2.5)	3.3(2.5~4)	5(4~6)	6.5(5~8)	7.5(6~9)
		8.5(7~10)	11(9~13)	15(12~18)	19(16~22)	21.5(18~25)	27(22~32)

FRAME		Rating Current Range(A)					
MT-63	MT-63/2H	5(4~6)	6.5(5~8)	7.5(6~9)	8.5(7~10)	11(9~13)	15(12~18)
	MT-63/3H MT-63/3K	19(16~22)	21.5(18~25)	30(24~36)	34(28~40)	42(34~50)	55(45~65)
	MT-63/3D	5(4~6)	6.5(5~8)	7.5(6~9)	8.5(7~10)	11(9~13)	15(12~18)
		19(16~22)	21.5(18~25)	30(24~36)	34(28~40)	42(34~50)	55(45~65)

FRAME		Rating Current Range(A)					
MT-95	MT-95/2H	8.5(7~10)	11(9~13)	15(12~18)	19(16~22)	21.5(18~25)	30(24~36)
	MT-95/3H MT-95/3K	34(28~40)	42(34~50)	55(45~65)	65(54~75)	74(63~85)	83(70~95)
	MT-95/3D	8.5(7~10)	11(9~13)	15(12~18)	19(16~22)	21.5(18~25)	30(24~36)
		34(28~40)	42(34~50)	55(45~65)	65(54~75)	74(63~85)	83(70~95)

3 AUXILIARIES:

3.1 UA-01 ratings:

	AC-15					
	120V	240V	380V	480V	500V	600V
UA-1	6	3	1.9	1.5	1.4	1.2

Table 17: AC15 rating of UA-01

	DC-13					Operational
	125V	250V	400V	500V	600V	Current (A)
UA-1	1.1	0.55	0.31	0.27	0.2	16

Table 18: DC-13 rating of UA-01

Spec.	SCPD	Ir
UA-1	gLgG 690V 16A	600V 1kA

Table 19: short circuit rating of UA-01

3.2 UR-02 ratings:

	AC-15					
	120V	240V	380V	480V	500V	600V
UR-02	6	3	1.9	1.5	1.4	1.2

Table 20: AC-15 rating of UR-02

	DC-13					Operational
	125V	250V	400V	500V	600V	Current (A)
UR-02	0.55	0.27	-	-	-	16

Table 21: DC-13 rating of UR-02

Spec.	SCPD	Ir
UR-02	gLgG 690V 16A	600V 1kA

Table 22: Short circuit rating of UR-02