

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Contactor

with type designation(s)

DILM580, DILM650, DILM750, DILM820, DILM1000, DILM1600, DILH1400, DILH2000, DILH2200

Issued to

Eaton Industries GmbH
Bonn Nordrhein-Westfalen, Germany

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Rated Voltage (V) 1000

Rated Current (A) 580 to 2200

Frequency (Hz) 50 / 60

Issued at **Hamburg** on **2017-02-01**

This Certificate is valid until **2022-01-31**.

DNV GL local station: **Essen**

for **DNV GL**

Approval Engineer: **Harald Amberger**

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Duy Nam Le
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Product description

Contactor DILM.../ DILH... Ratings			
Operational voltage max U _e		1000V	
Insulation voltage U _i		1000V	
Impulse withstand voltage U _{imp}		8kV	
Frequency		50/60Hz	
	Rated operational current I _e (40°)		
Types:	DILM580	DILM650	DILM750
AC-1 operation			
At 40°C [A]	980	1041	1102
At 50°C [A]	876	931	986
AC-3 operation			
At 230 V [A]	580	650	750
At 400 V [A]	580	650	750
At 500 V [A]	580	650	750
At 690 V [A]	580	650	750
At 1000 V [A]	435	435	580
AC-4 operation			
At 230 V [A]	456	512	576
At 400 V [A]	456	512	576
At 500 V [A]	456	512	576
At 690 V [A]	456	512	576
At 1000 V [A]	348	348	464
	Rated operational current I _e (40°)		
Types:	DILM820	DILM1000	DILM1600
AC-1 operation			
At 40°C [A]	1225	1225	2200
At 50°C [A]	1095	1095	1970
AC-3 operation			
At 230 V [A]	820	1000	1600
At 400 V [A]	820	1000	1600
At 500 V [A]	820	1000	1600
At 690 V [A]	820	1000	1600
At 1000 V [A]	580	750	-
AC-4 operation			
At 230 V [A]	656	800	1280
At 400 V [A]	656	800	1280
At 500 V [A]	656	800	1280
At 690 V [A]	656	800	1280
At 1000 V [A]	464	700	-

Job Id: **262.1-007183-6**
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	Rated operational current I _e		
Types:	DILH1400	DILH2000	DILH2200
AC-1 operation			
At 40°C [A]	1714	2450	2700
At 50°C [A]	1533	2190	2400
AC-1 operation 3-pole at 60 °C			
Up to 690 V [A]	1400	2000	2200
At 1000 V [A]	1200	1600	1800
AC-1 operation 1-pole at 60 °C			
Up to 690 V [A]	3500	5000	5000
At 1000 V [A]	3000	4000	4000

Coil voltages: 48 - 500V 50/60Hz, 24 - 250VDC

Types of actuation:

- Conventionally via the A1-A2 coil connections
- Directly from the PLC via the A3-A4 connections
- By a low-consumption sensor via A10-A11

Auxiliary contacts ratings: 10A/500VAC

Contactors may be equipped with additional clip-on auxiliary contacts according to Manufacturer's data sheet.

Application/Limitation

Location Classes:

Temperature: B, Humidity: B, Vibration: A, EMC: A

The produced plastic materials are free of halogen as defined in DIN VDE 0472 part 815.

Type Approval documentation

Tests carried out

IEC 60947-4-1, IEC 60947-5-1, IEC 60092-504, EN 61000 (EMC), CISPR 16 /IEC 60533 (EMC), cold, dry heat, damp heat, vibration, flame retardancy

Marking of product

Acc. IEC 60947-4-1 subclause 6.2, IEC 60947-5-1 subclause 5.5

Name and place of manufacturer

Eaton Electric Productie s.r.l
Str. Independentei No. 8
RO 437157 Sarbi/ Maramures
Romania

Periodical assessment

Job Id: **262.1-007183-6**
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The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE