

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Contactor Relay**

with type designation(s)
DILE(E)M..., ZE12

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.

Issued at **Hamburg** on **2017-03-20**

This Certificate is valid until **2022-02-17**.

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

Mini contactor relay DILE(E)M..., Overload relay ZE12 Ratings			
Operational voltage max U _e		690V	
Insulation voltage U _i		690V	
Impulse withstand voltage U _{imp}		6kV	
Frequency		50/60Hz	
	Rated operational current I _e (40°C)		
Types:	DILEEM	DILEM	DILEM12
AC-1 operation			
I _{th} At 40°C [A]	22	22	22
I _{th} At 50°C [A]	20	20	20
I _{th} At 55°C [A]	19	19	19
AC-3 operation			
At 230 V [A]	6,6	9	12
At 400 V [A]	6,6	9	12
At 440 V [A]	6,6	9	12
At 500 V [A]	5	6,4	9
At 690 V [A]	3,5	4,8	5,2
AC-4 operation			
At 230 V [A]	5	6,6	6,6
At 400 V [A]	5	6,6	6,6
At 440 V [A]	5	6,6	6,6
At 500 V [A]	3,7	5	5
At 690 V [A]	2,9	3,4	3,4
Overload relay	ZE12		
Setting range [A]	0,1...12		
Further ratings and coil voltages acc. manufacturer documentation			

Application/Limitation

Location Classes:
Temperature: C, Humidity: B, Vibration: A

With $U_{imp}=6kV$; Overvoltage category II applies for applications in IT systems > 600 V.

Type Approval documentation

Job Id: **262.1-025156-1**
Certificate No: **TAE00001UY**

Tests carried out

IEC 60947-4-1, IEC 60947-5-1, cold, dry heat, damp heat, vibration, flame retardancy

Marking of product

Acc. IEC 60947-4-1 subclause 6.2.

Periodical assessment

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