

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Motor Starter

with type designation(s)
PKZM4-...

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) 690
Rated Current (A) 16-63
Frequency (Hz) 50-60

This Certificate is valid until .

Issued at **Hamburg** on

DNV GL local station: **Essen**

for **DNV GL**

Approval Engineer: **Harald Amberger**

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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

Motor starter (circuit breaker /contactor combination) type with the following sizes:

PKZM4-16	PKZM4-25
PKZM4-32	PKZM4-40
PKZM4-50	PKZM4-58
PKZM4-63	

Motor- protected circuit breaker fitted with plug-in trip block including overload release, instantaneous magnetic release. Type of co-ordination: "2" (including 1).

Accessories: Under voltage release, shunt release, remote operator, contact modules, auxiliary contacts.

Technical data PKZ4:

Contactor	
Rated operational voltage AC(V):	500 / 690
Rated current (A):	16 - 63
Rated frequency (Hz):	50 - 60
Interruption medium:	Air
Methode of operation:	100 %
Suitable for operation:	Yes
Intergral non-metalic enclosure:	Yes
Degree of protection:	IP20

Main circuit	
Number of phases:	3
Number of poles:	3
Terminal material:	Line: Copper, covered silver Load: Copper
Rated imulse withstand voltage U_{imp} (kV):	6
Rated insulation voltage U_i (V):	690*
Conventional thermal current I_{th} / I_{thi} (A):	63 / 63
Rated operation current I_e AC-1 (A):	63
Rated operation current I_e AC-3 (A):	63

Rated conditional short circuit current $I_q = 50$ kA, $U_e = 400$ V

Auxiliary circuit	
Number of circuits:	1 - 3
Rated frequency (Hz):	50 - 60
Terminal material:	copper
Rated imulse withstand voltage U_{imp} (kV):	6
Rated insulation voltage U_i :	500
Max rated operation current (A):	3,5

Application/Limitation

Location classes:

Temperature: B, Humidity: B, Vibration: A, EMC: A, Enclosure: IP20

With Uimp=6kV; Overvoltage category II applies for applications in IT systems > 600 V.

Fuse protection according to Eaton Industires GmbH product information

Type Approval documentation

Tests carried out

IEC 60947-4-1:2009+A1:2012, cold, heat, damp heat, vibration, flammability, EMC.

Marking of product

According IEC 60947-4-1 subclause 6.1

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