C E R T I F I C A T E

This certifies, that the company

Auma India Private Limited
38A & 39B, 2nd Phase, Peenya Industrial Area
Bengaluru-560058 – Karnataka, India

Is authorized to provide the product mentioned below

Description of product: **ELECTRIC ACTUATORS WITH EPAC CONTROLS IN SIL VERSION**
SA3 - SA100
SAR3 - SAR100

In accordance with: **IEC 61508:2010 Parts 1, 2, 3, 4, 5, 6, 7**

Please also pay attention to the information stated overleaf

ANNEX

To Certificate-Nr. 20 21041 01

Type	A
HFT	0
Safety functions	See below
Mode of operation	Low Demand Mode

Random failure rates					
SAFETY FUNCTION	λ_s (FIT)	λ_{dd} (FIT)	λ_{du} (FIT)	DC	SFF
Safe STOP with contactor	402	310	278	53%	72%
Safe STOP with thyristor	392	310	227	58%	76%
Safe ESD CLOSE with contactor	230	853	374	70%	74%
Safe ESD CLOSE with thyristor	183	880	383	70%	74%
Safe ESD OPEN with contactor	226	857	354	71%	75%
Safe ESD OPEN with thyristor	179	884	363	71%	75%

Systematic capability	**3** (Route 1_S applied)

Architectural constraints	**Route 1_H:**	Applied	**Route 2_H:**	-

	The product can be used in:
	 • single channel configuration (1oo1):
	   o up to SIL 2 considering diagnostic tests
	 • double channel configuration (1oo2):
	   o up to SIL 3 considering diagnostic tests			

Remarks:	• For further details, including environmental conditions, limitations of use, lifetime, failure rates traceability, mean repair times, common cause factors and systematic capability constraints, make reference to Safety Manual. • EMC requirements are not considered in the assessment • 1 FIT = 1 failure in time = 10^{-9} h^{-1}