ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

America

C E R T I F I C A T E

No. U10 095726 0012 Rev. 00

Holder of Certificate: **AMO**
Automatisierung Meßtechnik Optik GmbH
Nöfing 4
4963 St. Peter am Hart
AUSTRIA

Certification Mark:

Product: **Electronic measuring equipment (Linear Encoders)**

Tested according to:
UL 61010-1:2012/R:2019-07
CSA C22.2 No. 61010-1:2012/A1:2018-11

This product was voluntarily tested to the relevant safety requirements referenced on this certificate. It can be marked with the certification mark above. The mark must not be altered in any way. The certificate holder shall not transfer this certificate to third parties. This product certification system operated by TÜV SÜD America Inc. most closely resembles system 3 as defined in ISO/IEC 17067. Certification is based on the TÜV SÜD "Testing and Certification Regulations". For Canadian standards TÜV SÜD America Inc. is accredited by the Standards Council of Canada to ISO/IEC 17065.

Test report no.: 713282232

Date, 2023-01-24

Siemon

(Thorsten Siemon)

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Model(s):

LMK abcd.egfi-z; LMKA abcd.ehfi-z; LMB jbckl-m-n-o-z; LMBA jbckl-m-n-o-z; LMT jbckl-m-n-o-z; LMTA jbckl-m-n-o-z; LMF jbckl-m-n-o-z; LMFA jbckl-m-n-o-z; LMF 9310 kl-m-n-o-z; LMS jbckl-m-n-o-z

"a" can be "1, 2 or 3" and defines electronic design (e.g. connector, internal, rail-guided)
"b" can be "0, 1 or 2" and defines classification (e.g. 9200 mm, 32000 mm)
"c" can be "05, 10 or 30" and defines grating period (e.g. 500 µm, 1000 µm, 3000 µm)
"d" can be "S, HA, HD, HT" and defines performance (e.g. standard, high accuracy, high dynamics, high tolerance)
"e" can be "01 to 99" and defines interface (e.g. EnDat, TTL, serial interface, 1Vpp, DRIVE-CLiQ, SSI, BISS C, high speed)
"f" can be ".., FA or FS" and defines safety concept (e.g. safety function, functional safety)
"g" can be "RI, RV, RS, LV" and defines type of reference mark (e.g. 360°el., 90°el.)
"h" can be "01 to 99" and defines digital interpolation factor (in "bit")
"i" can be a combination of 2 characters and defines interpolation / multiplication or support of external sensor
"j" can be "1,2 or 3" and defines mechanical design types (e.g. glued, guide rail, inserted in steel)
"k" can be "B, C, D, E or F" and defines measuring scale carrier (e.g. glued, one piece, multi-part, guide rail)
"l" can be "03, 05, 10 or 20" and defines accuracy class (µm)
"m" can be "00000 to 99999" and defines overall length (mm)
"n" can be ".. or MF" and defines safety concept (e.g. mechanical fault exclusion)
"o" can be "LB, LT or LF" followed by "00 to 99" and defines type of graduation carrier
"z" can be up to "20 characters" and defines non-safety critical configurations (e.g. reference marking, special measuring

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Parameters:

Rated voltage:	Max. 36 V_{dc} (Limited Voltage, Limited Energy)
Input Current:	Max. 300 mA
Protection Class:	III

Remarks:

- When installing requirements of test standards and installation guide must be fulfilled.
- Equipment consists of scanning head and scale.
- If heated up by end-use system and a hazard can occur: Heating test shall be conducted at end-use.
- If equipment is accessible: mechanical enclosure test shall be conducted at end-use.
- Identification shall be marked on equipment; ratings shall be included in documentation.
- All supplies and connected circuits shall fulfil requirements of “Low Voltage, Limited Energy” or “Class 2 power”.
- Functional Safety is not part of this investigation.

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