

VDMA LIBRARY

USER DOCUMENTATION

1S/2S/3S and 1S/2S/3S Systems

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1 SCOPE

This document serves as an aid for the use of the NTI AG - LinMot VDMA library.

To simplify hazard assessments, NTI AG - LinMot offers this VDMA library.

The library is based on VDMA 66413 "Functional Safety - Universal database for safety-related characteristic values of components or parts of control systems".

Thus, this library can be used in common calculation tools such as Sistema, Siemens TIA Selection Tool, Pilz PASCAL, ABB FSDT, and other VDMA supporting programs.

1.1 OBJECTIVE

This document is intended to make it easier to find relevant and up-to-date information on products with safety functions.

1.2 PURPOSE OF DOCUMENT

The document provides a link list to the LinMot E-Catalog, where the product-specific data sheets and installation instructions with all safety-relevant information can be viewed on a daily basis.

2 DISCLAIMER

The information and values listed in the NTI AG – LinMot VDMA library have all been carefully prepared and checked. However, the NTI AG - LinMot VDMA library may be presented in simplified form and is therefore intended solely for information purposes and to support the provision of probabilistic verification according to EN ISO 13849-1.

The correct use of the information and values listed in the NTI AG - LinMot VDMA library is the responsibility of the user. NTI AG - LinMot therefore does not assume any responsibility for incorrect calculations made by the user of the VDMA library and any resulting malfunctions of the overall system. This applies in particular to responsibility for engineering, installation and startup. NTI AG - LinMot assumes no responsibility for such services or for any information and

NTI AG - LinMot cannot be held liable for personal injury, property damage or financial losses that resulting from the integration of components, insofar as this damage is not directly caused by faulty products or objectively products or objectively incorrect information provided by NTI AG - LinMot.

Yours sincerely

Your NTI AG - LinMot

3 APPLICABLE PRODUCT LINKS

The link list provide a direct hyperlink to the safety product, where all product related documents are available.

Ref	Referenced Product Link
[1]	C1100-GP-XC-1S-000 0150-2381
[2]	C1150-EC-XC-1S-000 0150-2383
[3]	C1150-DS-XC-1S-000 0150-2418
[4]	C1150-SE-XC-1S-000 0150-2626
[5]	C1150-PN-XC-1S-000 0150-2385

Table 1: Available Drives C1100 Series

Ref	Referenced Product Link
[6]	C1250-EC-XC-1S-000 0150-2345
[7]	C1250-DS-XC-1S-000 0150-2416
[8]	C1250-SE-XC-1S-000 0150-2350
[9]	C1250-PN-XC-1S-000 0150-2348
[10]	C1250-PD-XC-1S-000 0150-2619
[11]	C1250-IP-XC-1S-000 0150-2346
[12]	C1250-CM-XC-1S-000 0150-2901
[13]	C1250-CC-XC-1S-000 0150-4146
[14]	C1250-SC-XC-1S-000 0150-2349
[15]	C1250-PL-XC-1S-000 0150-2347
[16]	C1250-LU-XC-1S-000 0150-2492

Table 2: Available Drives C1200 Series

Ref	Referenced Product Link
[17]	C1250-EC-XC-1S-C00 0150-4126
[18]	C1250-DS-XC-1S-C00 0150-4124
[19]	C1250-SE-XC-1S-C00 0150-4145
[20]	C1250-PN-XC-1S-C00 0150-4141
[21]	C1250-PD-XC-1S-C00 0150-4137
[22]	C1250-IP-XC-1S-C00 0150-4128
[23]	C1250-CM-XC-1S-C00 0150-4122
[24]	C1250-CC-XC-1S-C00 0150-4147
[25]	C1250-SC-XC-1S-C00 0150-4143
[26]	C1250-PL-XC-1S-C00 0150-4139
[27]	C1250-LU-XC-1S-C00 0150-4135

Table 3: Available Drives C1200 Series with Calibrated Measuring Amplifier

Ref	Referenced Product Link
[28]	C1250-MI-XC-1S-000 0150-5589
[29]	C1250-MI-XC-1S-OPD 0150-5732
[30]	C1250-MI-XC-1S-OCM 0150-5733
[31]	C1250-MI-XC-1S-OLU 0150-5734
[32]	C1250-MI-XC-1S-OPL 0150-5735
[33]	C1250-MI-XC-1S-OSC 0150-5736
[34]	C1250-MI-XC-1S-ODS 0150-5737
[35]	C1250-MI-XC-1S-OCC 0150-5738

Table 4: Available Drives C1250 Multi Interface Series

Ref	Referenced Product Link
[36]	C1250-MI-XC-1S-C00 0150-5590
[37]	C1250-MI-XC-1S-CPD 0150-5725
[38]	C1250-MI-XC-1S-CCM 0150-5726
[39]	C1250-MI-XC-1S-CLU 0150-5727
[40]	C1250-MI-XC-1S-CPL 0150-5728
[41]	C1250-MI-XC-1S-CSC 0150-5729
[42]	C1250-MI-XC-1S-CDS 0150-5730
[43]	C1250-MI-XC-1S-CCC 0150-5731

Table 5: Available Drives C1250 Multi Interface Series with Calibrated Measuring Amplifier

Ref	Referenced Product Link
[44]	C1450-EC-VS-1S-000 0150-2657
[45]	C1450-DS-VS-1S-000 0150-2665
[46]	C1450-SE-VS-1S-000 0150-2660
[47]	C1450-PN-VS-1S-000 0150-2658
[48]	C1450-PD-VS-1S-000 0150-2664
[49]	C1450-IP-VS-1S-000 0150-2666
[50]	C1450-SC-VS-1S-000 0150-2659
[51]	C1450-PL-VS-1S-000 0150-2656
[52]	C1450-LU-VS-1S-000 0150-2667

Table 6: Available Drives C1400 Series

Ref	Referenced Product Link
[53]	E1400-GP-QN-1S 0150-2351
[54]	E1430-DP-QN-1S 0150-2352
[55]	E1450-EC-QN-1S 0150-2353
[56]	E1450-DS-QN-1S 0150-2412
[57]	E1450-SE-QN-1S 0150-2358
[58]	E1450-PN-QN-1S 0150-2356
[59]	E1450-PD-QN-1S 0150-2622
[60]	E1450-IP-QN-1S 0150-2354
[61]	E1450-SC-QN-1S 0150-2357
[62]	E1450-PL-QN-1S 0150-2355
[63]	E1450-LU-QN-1S 0150-2495

Table 7: Available Drives E1400 Series

Ref	Referenced Product Link
[64]	ETHERCAT DS402 DRIVE (72V/32A), STO

Table 8: Available Drives F1150 Series

Ref	Referenced Product Link
[65]	F1250 MI DRIVE (72V/32A), STO

Table 9: Available Drives F1250 Series

4 USAGE OF THIS LIBRARY

The VDMA 66413 "Functional Safety - Universal database for safety-related characteristic values of components or parts of control systems" is an independent database, which can be used in several safety evaluation tools. For proper use of this database, please follow the instructions of your used safety evaluation tool, how to import this library.

4.1 ADDITIONAL INFORMATION FOR 1S DRIVES

By usage of 1S Drives, keep in mind, the safety characteristics are based on the assumption that the safety function is requested every 60s for a machine running 24 hours a day, 7 days a week, and that the feedback contacts are checked at each change of state.

4.2 ADDITIONAL INFORMATION FOR 3S DRIVES

By usage of 3S Drives, keep in mind, the safety characteristics assume that the diagnostic test by the feedback contacts has to be done at least once per year.

The required Diagnostic Test Interval is $\leq 8760\text{h}$ (1 year).

4.3 ADDITIONAL INFORMATION FOR CUSTOMER SPECIFIC ARTICLES

The last three digits of each article code shows drive/customer specific configurations (-XXX). The article itself is not changed under safety related view. So, if you do not find your item in the tables in chapter 3, because the last digits in the article code is different, please choose the article with ending -000 or ask your machine supplier or LinMot technical support.

5 USED SOFTWARE TOOLS FOR LIBRARY TESTS

This table shows the used software tools for testing the import of the NTI AG – LinMot VDMA library.

Ref	Manufacture/Developer	Calculation Tool	Version
[66]	IFA	Sistema	3.0.4 Build 5
[67]	Siemens AG	TIA Selection Tool	2026.7.0.31198
[68]			
[69]			
[70]			
[71]			
[72]			
[73]			
[74]			
[75]			
[76]			

Table 10: Software tools tested with NTI AG - LinMot VDMA library

6 APPENDIX

6.1 TERMS AND ABBREVIATIONS

For the application of this document, the terms and abbreviations are used according to IEC 61508-4.

6.1.1 ADDITIONAL ABBREVIATIONS

Abbreviation	Description

Table 11: Additional abbreviations

6.2 CHANGE HISTORY

Version	Description of changes	Date/ Signature
1.0	Initial Version	16.11.2022 / mr
	Review and approved	17.11.2022 / FM
2.0	F1150 & F1250 (3S) series added	29.06.2026 / mr
	Reviewed and approved	04.08.2026 / FM

Table 12: Change History