



Premium Line Structured Cabling System

Work Area Solutions - Copper Solutions

110 Cross Connect Solutions – Voice

CAT 6A 10G Solutions

Fiber Solutions

25 YEARS

COMMUNICATION CHANNEL WARRANTY

This document describes the warranties covering copper and optical cabling systems supplied by Premium-Line Systems GmbH. It is the exclusive property of Premium-Line Systems GmbH and must not be copied or reproduced in any way whatsoever without the express consent in writing of Premium-Line Systems GmbH. The document is to be used only for the purpose for which it is supplied and must be returned on demand.

Copyright 2019 Premium-Line Systems GmbH

Premium-Line Systems GmbH
Rosenheimer Straße 89
83064 Raubling, Germany
phone: +49 8035 9836 0
fax: +49 8035 9836 22

Managing Director: Robert Grischany
Legal venue: Rosenheim, HRB 17747
Ust-ID-Nr.: DE 260 324 873

Bank: Deutsche Bank Privat-und Geschäftskunden AG
Account N o.: 220/0616722
IBAN: DE 06700700240061672200
BIC: DEUTDEBMUC
BLZ: 700 700 24
www.premiumline-cabling.com

Table of Contents

- 1. INTRODUCTION**
- 2. DEFINITIONS**
- 3. REGISTRATION DOCUMENTS**
- 4. REGISTRATION PROCEDURE**
- 5. WARRANTY COVERAGE**
- 6. TRANSFER OF WARRANTY**
- 7. WARRANTY PERIOD**
- 8. WARRANTY LIMITATIONS**
- 9. TERRITORY**
- 10. ACTIONS IN THE EVENT OF A CLAIM**
- 11. OBLIGATIONS OF OTHER PARTIES**

APPENDIX 1: Premium-Line System Warranty Terms and Conditions

APPENDIX 2: Copper Cable Applications

APPENDIX 3: Extended Distances Supported By Premium Line Fiber System

APPENDIX 4: Extended Distances Supported By Premium Line Copper System

APPENDIX 5: Length Restrictions For Fixed Balanced Cabling Links

Date of revision: March 8th 2019



1. INTRODUCTION

This warranty applies to a Premium-Line Cabling System purchased from an authorized Premium Line distributor and installed and tested by an authorized Premium Line installer in accordance with the Premium-Line Cabling System installation manual, and it is offered between Premium-Line Systems GmbH and the owner of the Premium-Line Cabling System. This warranty supersedes and replaces all warranties formerly available with effect from its date of issue. The warranty terms and conditions contained herein should be read in conjunction with “Premium-Line System Warranty Terms and Conditions” (Appendix 1).

2. DEFINITIONS

2.1. Authorized Installer

A company with one or more employees, holding a valid authorized installer certificate issued by Premium-Line Systems GmbH. An authorized installer is approved to design, install and supervise the installation of Premium Line Cabling System. To obtain the authorized installer certificate, the applicant must have successfully passed the Premium Line Cabling System training. The certificate is issued to a person and a company. The validity of the certificate is limited to 2 years. The company has signed and adheres to the conditions of the “Premium-Line System Warranty Terms and Conditions” (Appendix 1).

2.2. Authorized Distributor

A company, which holds a valid authorized distributor certificate issued by Premium-Line Systems GmbH. The company has signed and adheres to the conditions of the “Premium-Line International Distributor Agreement” and the “Premium-Line System Warranty Terms and Conditions” (Appendix 1).

2.3. Premium Line

The brand name covering sets of copper and optical cables and components supplied by Premium-Line Systems GmbH as part of the Premium Line Cabling System.

2.4. Premium Line Cabling System

A set of cabling components supplied by Premium-Line Systems GmbH, purchased through an authorized distributor and installed by an authorized installer.

2.5. Premium Line International Distributor Agreement

A set of trading terms and conditions between Premium-Line Systems GmbH and the authorized distributor.

2.6. Premium-Line System Warranty Terms and Conditions

A set of trading terms and conditions between Premium-Line Systems GmbH, their distributors and their installers. (Appendix 1)

2.7. Channel

A cabling system as described in ISO/IEC 11801, 2nd Ed.

2.8. Permanent Link

A cabling system as described in ISO/IEC 11801, 2nd Ed.

2.9. Fiber Solutions

Fiber optical systems developed by Premium-Line Systems GmbH for the installation of optical fibers within the LAN environment.

2.10. Categories and Classes

The electrical and optical component and system performances as described in ISO/IEC 11801, 2nd Ed.

2.11. Standards

Unless more specifically defined, it refers to ISO/IEC 11801, EN 50173, EN 50174, TIA/EIA 568-C.2, ISO/IEC 61156-5, EN 50288, IEC 61935 latest editions.

REGISTRATION DOCUMENTS

For the proper registration of a Premium Line Cabling System, the installer or distributor is required to provide information to Premium-Line Systems GmbH using following documents. Electronic form is preferred, but paper form is acceptable.

- **System Warranty Request Form** consisting of four parts: summary, list of cable review, list of all components and installer list.
- **Photo of rack.**
- **Scheme of Installation.** In this scheme all connections must be visible, outlet placement and interconnection with racks, schemes of racks with all ports marked.
- **Results of measurement of all installed links.** Accepted are all measuring tools certified for testing CAT5e, CAT6 and/or CAT6A with valid certificate of calibration. Test protocols must be provided in native data format of the testing tool.

All information provided in the documents must be complete and correct. Incomplete or incorrect information provided in the documents will invalidate the warranty.

3. REGISTRATION PROCEDURE

3.1. Within 30 days of completion of the Premium Line Cabling System the cabling system must be 100% tested by the authorized installer according to the requirements specified in the latest edition of the Premium-Line Cabling System installation manual.

3.2. Within 30 days of completion the authorized distributor must send the test results in native data format of the testing tool together with the system warranty request form and complete documents to Premium-Line Systems GmbH. Premium-Line Systems GmbH reserves the right to reject applications submitted with either incorrect format or application form.

3.3. All tests must be performed using an appropriate test instrument that is maintained and calibrated according to the manufacturer's instructions. The authorized distributors must equip themselves with the latest and most appropriate test equipment, which has to be maintained, calibrated and operated with the latest version of the manufacturer's software.

3.4. If requested by the owner or intended owner of the cabling system, Premium-Line Systems GmbH will conduct an audit during installation to ensure compliance with standards and the Premium-Line installation manual and in addition, a non-intrusive audit up to one thousand days after completion of installation. This service is chargeable in advance at the prevailing Premium-Line Cabling System technical consultancy, plus all travel and accommodation expenses unless otherwise agreed in written form.

3.5. Upon successful submission of the test results and 100% scrutiny by Premium-Line Systems GmbH, a Premium Line warranty certificate will be issued by Premium-Line Systems GmbH appertaining to the installation.

4.6. Submissions containing less than fifty links will not be a subject to Premium Line 25 Years Communication Channel Warranty.

4.7. The copper cable system must be 100% tested for permanent or channel performance (as defined in ISO 11801, 2nd Ed.) according to the test requirements of the current editions of TIA/EIA 568-C.2, EN50174 or IEC 61935 with a proper cable tester of minimum Level III. For Cat.6A a Level IV tester is required. The system will guarantee channel performance when Premium Line patch cords are added to the permanent link with no requirement needed for further testing.

Only patch cords supplied by Premium-Line Systems GmbH can be used in an installation submitted for a Premium Line 25 Years Communication Channel Warranty.

4.8. Each year Premium-Line Systems GmbH will, at its discretion, audit a percentage of new installations (re-testing all or a percentage of the installation) to ensure quality and compliance to standards and Premium-Line Cabling System installation guidelines.

4.9. All conditions should be read in conjunction with “Premium-Line System Warranty Terms and Conditions” (Appendix 1).

The use of non Premium Line copper patch cords or work area cables within an installation may seriously compromise the ability of the installed network to support high speed network applications such as Gigabit Ethernet or 10 Gigabit Ethernet and such use will invalidate the channel warranty.

5. WARRANTY COVERAGE

5.1. The Premium Line Cabling System is guaranteed to meet the permanent or channel electrical (or optical as appropriate) performances defined in the standards at the time of installation for 25 years from the issue date of the warranty certificate. The relevant standards are: TIA/EIA 568-C.2, ISO 11801, 2nd Edition and EN 50173-1:2011.

5.2. For the lifetime of the Premium Line Structured Cabling System

- An application requiring a Class C performance is guaranteed to operate adequately over Voice products.
- Any application requiring a Class D performance is guaranteed to operate adequately over Cat.5e.
- Any application requiring a Class E performance is guaranteed to operate adequately over CAT.6.
- Any application requiring a Class E/A performance is guaranteed to operate adequately over CAT.6A.
- Any application requiring channel performance is guaranteed to operate adequately using the appropriate optical fiber type (OM1, OM2, OM3) using Premium Line Fiber System.

A list of applications, supported by a Premium Line Cabling System is included in Appendix 2

- 5.3.** Defective materials supplied by Premium-Line Systems GmbH under the terms of this warranty scheme will be repaired or replaced by either the original installer or one of Premium Line's choosing.
- 5.4.** An IT network is compliant with the EMC directive when the active equipment complies with the requirements of EN 50081, EN 50082, EN 55022 and EN 55024 and the cabling system is designed, installed and maintained to the requirements of EN 50173 and EN 50174. Premium Line cabling products and installation and maintenance programs comply with the standards. Compliance of the IT network with the EMC directive is assured when the active equipment used on the network is compliant with the EMC/EMI standards.
- 5.5.** The Standards define a horizontal copper cabling channel that contains no more than four connection points. CAT.6/CAT.6A may be used with five or six connectors and will still achieve an overall Class E channel performance when all other Class E/Cat.6 design rules and other Premium Line instructions are observed.
- 5.6.** The length of cable calculated by the planner or installer for fixed cable installations must not be exceeded under any circumstances, even for possible expansions, otherwise an error-free of the transmission links cannot be guaranteed. The table to calculate the minimum and maximum lengths of Permanent and Channel Links is included in Appendix 5.
- 5.7.** If during the test, the installer got the results/margin lower than 1dB at Permanent Link Test, which is we think it's possible strict node, please let installer contacts with Premium Line for further consultation, before leaving the site and sending applications for 25 years with the test results attached.

6. TRANSFER OF WARRANTY

The owner of the warranted cabling system may transfer the remaining lifetime of the warranty to a new owner upon written request to Premium-Line Systems GmbH. It is however recommended that a system audit be completed to ensure standards compliance has been maintained during the change of ownership.

7. WARRANTY PERIOD

The warranty period starts from the issue date of the Premium Line warranty certificate and covers a period of 25 years thereafter.

8. WARRANTY LIMITATION

8.1. Authorized installer of Premium-Line Cabling System must install and test the cabling system, providing the defined test data and documentation for the project.

8.2. All products, including patch cords, must be exclusively the brand of Premium Line. Product substitution may only be made with the written permission of Premium-Line Systems GmbH in advance of the installation. Substituted products are not warranted by Premium-Line Systems GmbH. Approved alternative products must have a concession number, valid only for one specific project obtained from Premium-Line Systems GmbH in advance of the installation. This should be quoted on the warranty application form.

8.3. All cabling systems must be designed and tested as well as installed according to the latest issue of the Premium-Line installation manual. The products must be used within the environmental limits defined in the appropriate product data sheet. Other rules and instructions may be published by Premium-Line Systems GmbH from time to time.

8.4. The products must all be brand new and purchased from an authorized distributor of the respective region.



8.5. Any product moved, re-terminated or modified in any way must be re-tested and resubmitted for warranty validation.

8.6. All products must be used within the electrical and environmental limits for which they were designed throughout their whole working life.

8.7. Any form of accidental or malicious damage to the cabling system is outside the scope of the warranty.

8.8. Any unauthorized tampering or modification of the cabling system will invalidate the warranty.

8.9. Connectors have a guaranteed number of mating cycles. Performance is not guaranteed beyond the number of cycles detailed in the relevant product description sheets or standards. Warranty time and environmental limits may also be placed upon optical connectors containing index-matching gels and other products identified from time to time.

8.10. Premium-Line Systems GmbH accepts no liability for consequential or liquidated damages arising from the performance, late or non-delivery of any Premium Line product or service.

8.11. There is only one warranty period and one warranty certificate per site. Any products added to and installed at the same site after the initial installation can be included in the same warranty period (starting from the date on the original warranty certificate); but must be installed and tested by a authorized installer with appropriate test data and documentation forwarded to Premium-Line Systems GmbH. The additional links will be added to the original warranty providing they are tested in the same manner and submitted as an addition to warranty on the correct application form.

9. TERRITORY

The world-wide Premium Line warranty scheme is only available through authorized distributors selling Premium Line products within their agreed territories of operation.

10. ACTIONS IN THE EVENT OF A CLAIM

10.1. In the event of a claim against the warranty, the owner or user of the cabling system must inform the original installer, in writing, within 28 days of the occurrence of the fault. If the original installer is no longer available then the claim should be directed to the Premium Line distributor that serviced the original installer or the nearest Premium-Line Systems GmbH office.

10.2. The installer or distributor will inspect the installation and decide if the problem is a fault of the product or the installation method. If the latter, then the installer is responsible for rectifying the problem. If the installer believes the problem to be caused by the product, then they will inform Premium-Line Systems GmbH, in writing, within a further 14 days. Premium-Line Systems GmbH will dispatch an engineer to the site to report on the problem and recommend appropriate action. If, in the opinion of the engineer, the Premium Line products are not at fault, then a fee will be chargeable at the prevailing Premium Line technical consultancy, plus all travel and accommodation expenses.

11. OBLIGATIONS OF OTHER PARTIES

11.1. Nothing in this agreement shall entitle any other party to use any Premium Line logo, trade name, livery or trademark.

11.2. This agreement is the full extent of the warranty and its remedies, and no other party may offer any extension beyond the terms defined herein.

11.3. The installer and owner of the cabling system must expedite access to any site involved in a warranty claim.



APPENDIX 1: Premium-Line System Warranty Terms and Conditions

Premium-Line Systems GmbH guarantees that all products sold as a part of the Premium-Line Cabling System and approved for the country for which they were purchased (onward just products), are at the moment of sale:

- 1. free of mechanical defects**
- 2. free of electrical defects**
- 3. free of optical defects**
- 4. tested at production**

Warranty Coverage:

The technical parameters of the products specified in the company documentation, the installation guide or the standards appropriate to each product in priority as written for a basic warranty time.

System warranty time is twenty-five (25) years and the warranty time starts from the date stated on the Premium-Line System Warranty.

Warranty Conditions:

1. System warranty can be offered only by an authorized Premium-Line Cabling System installer with valid installation and warranty agreement at the time of installation.
2. System warranty will be issued by Premium-Line Systems GmbH to the end-user of the installation.
3. System warranty will be issued only for installations done in the area where Premium-Line Cabling System authorised installer is approved to operate.
4. This warranty will be issued only for installations done in the country/region where the products have been bought.

5. All goods for installation must be bought from a Premium-Line Cabling System authorised distributor.
6. All system components must be of Premium-Line brand or alternatives approved by Premium-Line Systems GmbH.
7. System must be installed in accordance with the latest version of Premium-Line Cabling System installation manual.
8. Each installation must be supervised by an authorized Installer trained for Premium-Line Cabling System installations and this person is fully responsible for the installation quality.
9. Installation must be fully and successfully tested according to the latest version of valid standards, not later than 30 days after the completion of the installation.
10. Complete registration documents must be filled in using the appropriate form and sent for certification to the place of purchase of the goods not later than 30 days after testing.
11. Any additionally installed products must be certified under the same conditions as the original installation. These new products will have the same system warranty time as the original installation and will become part of the original installation.
12. Warranty claim can be applied not later than 10 working days after the expiration of the system warranty time (see below). If no claim is applied, it means that the products and complete system fully comply with all parameters for full warranty time and the customer automatically confirms this.
13. Faulty goods must be returned back to the place of purchase.
14. Premium-Line Systems GmbH will not be liable, under this system warranty or otherwise, for any cost of loss or damages due to malfunction of Premium-Line Cabling System.
15. No communication from Premium-Line Systems GmbH or its offices or representatives shall have any effect on system warranty or any system warranty conditions unless confirmed by Premium-Line Systems GmbH in written form.
16. Premium-Line Systems GmbH has 30 days for approval of the registration documents and issuing of the warranty certificate.

Warranty does NOT cover:

1. Physical Damage

Especially: Cables - Crossed tensile load, crush load, torsional load, bend radius

Components - Incorrectly used installation tool. Installation of any non-approved cables

2. Usage outside of environmental limits

Especially: Indoor cables used in outdoor environment.

3. Usage that varies with documentation

4. Connectors, sockets and plugs beyond rated lifetime

5. Parameter changes under external influence

Especially: Electromagnetic or other radiation

6. Consequential damages

7. Any NON-Premium-Line Cabling System products and all products connected with these products

8. System parameters loose caused by insufficient maintenance

Especially: Optical system without maintenance

9. Inappropriate connections

10. Any products installed other than by Premium-Line Cabling System authorised installer

11. Any additionally installed products without certification

Warranty Claim Resolve:

1. The documents required for warranty claim are the System Warranty Certificate and the confirmed installation registration form.

2. The user of the installation will notify the installer of any and all problems. If warranty claim needs to be applied, the installer will contact the authorized Premium-Line Cabling System distributor without delay.

3. End-User shall contact Premium-Line Systems GmbH or the authorized Premium-Line Cabling System distributor directly only if installer is not active anymore.

4. If Premium-Line Systems GmbH recognizes a claim, all necessary repairs will be done to fulfil all technical specifications and product standards and to restore full functionality of the system.

APPENDIX 2: Copper Cable Applications

Data systems protocols supported on Premium Line include, but are not limited to:

ATM	ATM Forum, af-phy-0015.000	155 Mb/s
Ethernet	IEEE 802.3 10BASE-T	10 Mb/s
Ethernet	IEEE 802.3 100BASE-TX	100 Mb/s
ISO Ethernet	IEEE 802.9a	16 Mb/s
Ethernet	IEEE 802.12	100 Mb/s
Gigabit Ethernet	IEEE 802.ab 1000BASE-T	1000 Mb/s
10 Gigabit Ethernet *	IEEE 802.an 10GBASE-T	10,000 Mb/s
Token Ring	IEEE 802.5	4/16 Mb/s
TP-PMD	ISO/IEC 9314-1, ANSI X3.263-1995	100 Mb/s
ISDN	CCITT I.430	64 Kb/s, 2 Mb/s

*using appropriate CAT.6A products as defined in Premium Line Technical Brief.

The following protocols can be connected via a suitably wired to RJ45 connector

EIA-232-D	19.2 Kb/s
EIA-422-A	100 Kb/s

APPENDIX 3: Extended Distances Supported By Premium Line Fiber System

Minimum transmission distances, in meters, for different fibers at different LAN protocols (presuming attenuation requirements are not exceeded)

Optic System Lan Protocol Transmission Distance					
Fiber Type Ethernet	OM1	OM2	OM3	OS1	Speed
100BASE-FX	2000m	2000m	2000m		100Mb/s
1000BASE -SX	300m	600m	1000m		1000Mb/s
1000BASE -LX	550m	550m	550m		1000Mb/s
10GBASE-SR	33m	82m	300m		10Gb/s
10GBASE-LR				10,000m	10Gb/s
10GBASE-ER				40,000m	10Gb/s

More details of the transmission distances and number of connectors allowed in links for all Premium Line fibers is contained in Premium Line Installation Manual.

APPENDIX 4: Extended Distances Supported By Premium Line Copper System

<u>PROTOCOL</u>	<u>SPEED</u>	<u>DISTANCE</u>
ATM	155 Mb/s	150 m
IEEE 802.3 10BASE -T	10 Mb/s	185 m
IEEE 802.3 100BASE - TX	100 Mb/s	140 m
IEEE 802.12	100 Mb/s	160 m
Gigabit Ethernet 1000BASE -T*	1000 Mb/s	100 m
ETHERNET 10GBASE-T**	10000 Mb/s	100 m
TP -PMD	100 Mb/s	140 m
TOKEN RING 802.5	4/16 Mb/s	180 m
ISDN	64 kb/s	500 m

*1000BASE-TX TIA/EIA-854, 100m on Cat.6

**Using CAT.6A as defined in technical brief

Note that Class D and E horizontal cabling, up to 100 meters, will be tested and classified as such. For lengths over 100 meters the electrical performance of Categories 5, 6 and 6A cabling is downgraded to the next appropriate class according to the length; i.e.

	Class A	Class B	Class C	Class D	Class E	Class E/A
Frequency	100kHz	1MHz	16MHz	100MHz	250MHz	600MHz
Class 5	2000m	240m	160m	90m	X	X
Class 6	2000m	250m	175m	90m	90m	X
Class 6A	2000m	250m	175m	90m	90m	90m

Note: the above are permanent link figures and assume no more than a total of 10m of patch cord to form the channel.

APPENDIX 5: Length Restrictions For Fixed Balanced Cabling Links

Five channel link modeling configurations based on the TIA/EIA 568-C.2 standard that are used for worst-case analysis:



ID	Description	Channel configuration				
		1	2	3	4	5
A	Work area cord	5 m	2 m	1 m	1 m	1 m
TO	Telecommunications outlet / connector	P	P	P	P	P
B	Consolidation point cabling	5 m	5 m	5 m	NP	NP
CP	Consolidation point connector	P	P	P	NP	NP
C	Horizontal cabling	35 m	15 m	15 m	15 m	10 m
C1	Horizontal cross-connect or interconnect	P	P	P	P	P
D	Patch cord or jumper cable	2 m	1 m	1 m	1 m	1 m
C2	Horizontal cross-connect or interconnect	P	P	P	P	NP
E	Telecommunications room equipment cord	3m	2 m	2 m	2 m	NP

Four permanent link modeling configurations that are used for worst-case analysis:



ID	Description	Permanent link configuration			
		1	2	3	4
TO	Telecommunications outlet / connector	P	P	P	P
B	Consolidation point cabling	5 m	5 m	NP	NP
CP	Consolidation point connector	P	P	NP	NP
C	Horizontal cabling	35 m	15 m	15 m	10 m
C1	Horizontal cross-connect or interconnect	P	P	P	P

Short length supported by Cat. 6A system

ISO/IEC 11801 Amendment 2 from 2010 promises compliance with class EA when Cat. 6A components are used only if the minimum length of 15 m is maintained for the permanent link (PL). The standard allows the use of shorter PLs if the manufacturer has guaranteed the PL requirement will be observed.

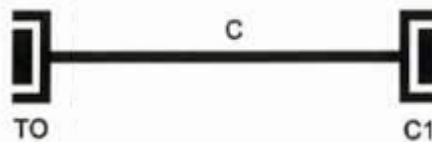
Premium Line Cabling System has guaranteed the PL requirement will be observed for next KJ

109824010 Cat.6A, 180 ° Shielded Die-casting Keystone Jack

108524010 Cat.6A+ 180° Shielded Die-casting Keystone Jack, De-embedded Type

109324010 Cat.6A 180° Unshielded Toolless Keystone Jack, Slim Type, White

it's for all our Cat.6A/7 U/UTP, U/FTP and S/FTP cables.



ID	Description	Min length PL Cat. 6A
TO	Telecommunications outlet / connector	P
C	Horizontal cabling	2 m
C1	Horizontal cross-connect or interconnect	P