



complex network solutions



MAINTENANCE AND USE OF
SOLARIX STRUCTURED CABLING
(ACCORDING TO EN 50174-1)

Installation cables – copper cabling

- Where cables may be damaged (e.g. unprotected cable routes), installation cables should be checked regularly. In case of any signs of physical or other visible damage (e.g. damaged cable sheath), such cables should be replaced.

Frequency: at least 1 x per year, visual inspection

- In the case of protected cable routes, these routes should be inspected and, where damaged, checked for any damage to the cables. Damaged routes and cables need to be replaced.

Frequency: at least 1 x per year, visual inspection

- It is necessary to check all fixing points of all individual cable routes and support systems, protected or unprotected, and repair their possible loosening so as not to cause stress or gradual damage to the cables.

Frequency: at least 1 x per year, visual inspection

- During the use of the cabling, the Solarix installation cables must not be exposed to temperatures other than those specified in the technical specifications of the individual cables.

Frequency: valid all the time

- Solarix cables must also not be exposed to moisture, water, chemicals or other undesirable phenomena (e.g. vibration, pressure, tensile stress, UV radiation in the case of internal cables, etc.) that could damage the cables or affect their properties.

Frequency: valid all the time

- Solarix installation cables are designed to transmit voltages lower than 50 V (AC) and 75 V (DC) - i.e. they must serve only for the transmission of digital signals in computer networks and their related technologies (e.g. PoE power supply 802.3af/at/bt).

Frequency: valid all the time

- Solarix installation cables are intended only for fixed (i.e. permanent) installation. It is not possible to manipulate the cables in any way after the installation has been completed.

Frequency: valid all the time

- Only components and connecting hardware that meet the cabling standards EN 50173 and EN 60603-7 can be connected to the Solarix cables.

Frequency: valid all the time

- Repairs, possible service interventions or cabling expansion can only be carried out by a trained employee or technician from an installation company with a valid certificate from the Solarix training. All these operations must be carried out in accordance with the installation standard EN 50174 and its sub-parts.

Frequency: valid all the time

- At the end of their service life or when replaced, Solarix cables must be recycled or returned to a place where they will be properly disposed of in accordance with the local environment requirements.

Frequency: valid all the time

Components – copper cabling

- Solarix components must be inspected regularly. In case of any signs of physical or other visible damage (e.g. damaged RJ45 connector pins), such component should be replaced.

Frequency: at least 1 x per year, visual inspection

- During the use of cabling, components and connecting hardware must not be exposed to temperatures other than those specified in the technical specifications of the individual products.

Frequency: valid all the time

- Solarix components must also not be exposed to moisture, water, chemicals or other undesirable phenomena (e.g. vibration, pressure, tensile stress, UV radiation, increased dustiness, etc.) that could damage the components or affect their properties.

Frequency: valid all the time

- In the case of normal contamination of components (e.g. usual dust in the room), these contaminants can be carefully removed by conventional means designed for this purpose (e.g. vacuum cleaner, compressed air spray, etc.).

Frequency: valid all the time

- Solarix components are designed to transmit voltages lower than 50 V (AC) and 75 V (DC) - i.e. they must serve only for the transmission of digital signals in a computer network and related technologies (e.g. PoE power supply 802.3af/at/bt).

Frequency: valid all the time

- Solarix components in the permanent link topology (i.e. not patch cables) are intended for fixed (i.e. permanent) installation only. It is not possible to manipulate these products in any way after the installation have been completed.

Frequency: valid all the time

- Only cables and other products that meet the cabling standards EN 50173 and EN 60603-7 can be connected to Solarix components and connecting hardware, otherwise the pins inside the RJ45 connector may be damaged.

Frequency: valid all the time

- It is also not possible to connect a connector type other than the RJ45 (e.g. RJ11, RJ12, etc.) to the Solarix components and connecting hardware.

Frequency: valid all the time

- Repairs, possible service interventions or cabling expansion can only be carried out by a trained employee or technician from an installation company with a valid certificate from the Solarix training. All these operations must be carried out in accordance with the installation standard EN 50174 and its sub-parts.

Frequency: valid all the time

- For shielded cabling, it is necessary to check the proper conductive connection of the patch panels with the ground point to which the rack with these patch panels is connected.

Frequency: at least 1 x per year

- For easy management and use of cabling, we also strongly recommend maintaining the legibility of the marking of individual ports on the termination points (i.e. patch panels and data outlets).
Frequency: valid all the time

- At the end of their service life or when replaced, Solarix components and connecting hardware must be recycled or returned to a place where they will be properly disposed of in accordance with the local environment requirements.
Frequency: valid all the time

Cables – fibre optics

- Where fibre optic cables may be damaged (e.g. unprotected cable routes), the cables should be checked regularly. In case of any signs of physical or other visible damage (e.g. damaged cable sheath), such fibre optic cables should be replaced.
Frequency: at least 1 x per year, visual inspection

- In the case of protected cable routes, these routes should be inspected and, where damaged, checked for any damage to the cables. Damaged routes and cables need to be replaced.
Frequency: at least 1 x per year, visual inspection

- It is necessary to check all fixing points of all individual cable routes and support systems, protected or unprotected, and repair their possible loosening so as not to cause stress or gradual damage to the cables.
Frequency: at least 1 x per year, visual inspection

- During the use of the cabling, the Solarix fibre optic cables must not be exposed to temperatures other than those specified in the technical specifications of the individual cables.
Frequency: valid all the time

- Solarix fibre optic cables must also not be exposed to moisture, water, chemicals or other undesirable phenomena (e.g. vibration, pressure, tensile stress higher than stated in the technical specification, etc.) that could damage the cables or affect their properties.
Frequency: valid all the time

- Solarix fibre optic cables (i.e. not patch cords) are intended only for fixed (i.e. permanent) installation. It is not possible to manipulate the cables in any way after the installation has been completed.
Frequency: valid all the time

- Repairs, possible service interventions or cabling expansion can only be carried out by a trained employee or technician from an installation company with a valid certificate from the Solarix training. All these operations must be carried out in accordance with the installation standard EN 50174 and its sub-parts.
Frequency: valid all the time

- At the end of their service life or when replaced, Solarix fibre optic cables must be recycled or returned to a place where they will be properly disposed of in accordance with the local environment requirements.
Frequency: valid all the time

Components – fibre optics

- Solarix fibre optic components must be checked regularly. In case of any signs of physical or other visible damage, such components should be replaced.
Frequency: at least 1 x per year, visual inspection

- During the use of the fibre optic cabling, its components must not be exposed to temperatures other than those specified in the technical specifications of the individual products.
Frequency: valid all the time

- Solarix fibre optic components must also not be exposed to moisture, water, chemicals or other undesirable phenomena (e.g. vibration, pressure, tensile stress, UV radiation, increased dustiness, etc.) that could damage the components or affect their properties.
Frequency: valid all the time

- In the case of normal contamination of components (e.g. usual dust in the room), these contaminants can be carefully removed by conventional means designed for this purpose (e.g. vacuum cleaner, compressed air spray, isopropyl alcohol for cleaning fibre optics, etc.).
Frequency: valid all the time

- Solarix fibre optics components (not patch cords) are intended for fixed (i.e. permanent) installation only. It is not possible to manipulate these products in any way after the installation have been completed.
Frequency: valid all the time

- Repairs, possible service interventions or cabling expansion can only be carried out by a trained employee or technician from an installation company with a valid certificate from the Solarix training. All these operations must be carried out in accordance with the installation standard EN 50174 and its sub-parts.
Frequency: valid all the time

- For easy management and use of cabling, we also recommend maintaining the legibility of the marking of individual ports on the termination points (e.g. fibre optic patch panels, outlets etc.).
Frequency: valid all the time

- At the end of their service life or when replaced, Solarix fibre optic components must be recycled or returned to a place where they will be properly disposed of in accordance with the local environment requirements.
Frequency: valid all the time

Addition or extension of existing cabling

To maintain the Solarix system warranty for both copper and fibre optic cabling, the following conditions must be met during any intervention in routes containing Solarix cabling:

- The integrity of the existing Solarix cabling must be preserved – i.e. when installing additional links or systems, no mechanical damage may occur to existing Solarix cables or components (e.g. outlets, patch panels, couplers, etc.).


- No manipulating, shifting, disconnecting, or any other physical interference or modification of the existing and already installed cabling is permitted.
- Cable routes must remain free, without excessive pressure on cables or components, and no overload, bending, strain or interference is permitted.
- Newly added cables must be routed separately from existing cables within the same path. Ideally, this should be done using a separate spacer in the tray or a dedicated cable duct and always according to the conditions and recommendations from the EN 50174 installation standard and its relevant parts.
- When adding additional cables to trays or ducts, the recommended maximum cable fill capacity must be observed (again according to EN 50174) to avoid compression, overheating (in the case of PoE), or other stress on the existing cables and cable bundles.
- All interventions in cable routes containing certified Solarix cabling must be carried out by a qualified installation company holding a valid Solarix authorized installer certificate.
- All modifications or extensions must be carefully documented – including updated routing plans and cable labelling – and archived for possible future verification.
- The installation company must comply with all conditions of the Solarix system warranty when adding or extending the current Solarix cabling, especially concerning the routing of new paths and protection of the existing cabling, in order to maintain the validity of the warranty.
- The installation company must follow the installation procedures and other recommendations for information technology cabling as specified in the EN 50174 standard and its individual parts when adding or extending the current Solarix cabling.

NOTES

- Compliance with this document affects the validity of both the standard and the system warranty of Solarix products. The standard warranty for copper cabling is 5 years, the system warranty is 30 years. Additional terms and details for these Solarix warranties can be found at www.solarix.cz, in INTELEK's terms and conditions available at www.intelek.cz, and the RMA instructions available there as well.
- INTELEK LTD, as the manufacturer of the Solarix structured cabling system, reserves the right to change the content of this document at any time in the future. This change will take effect by publication of the new version at www.solarix.cz at least one month before the effective date.
- This document is the version from 5/2025.



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