

## **SYS-D90-ITE INSTALLATION, USE AND WARNINGS MANUAL**

**Edition: 07/2024**

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# 1. Preliminary information

## 1.1 Device description

The **SYS-D90-ITE** device is a new CONSOLE that included of HMI + Electronic Board + Enclosure + OS, used to control and setup the weaving machine.

The technology developed by **SECO S.p.A.** can be used and applied in various fields, such as:



HMI



Industrial  
Automation

## 1.2 Recipients

This manual is intended for ordinary people and installers (expert users).



### IMPORTANT

**The user must read this manual before start with any kind of operation.**

## 1.3 Warranty

The warranty shall be **voided** in the event of:

- failure to comply with safety regulations;
- tampering with the device;
- changes to the safety conditions established by the Manufacturer in the device management software;
- improper use of the device;
- use of the device by untrained and/or unauthorized personnel or failure to respect duties, as indicated in the manual;
- changes or repairs carried out by the user without written authorization from the Manufacturer;
- partial or total failure to comply with the instructions;
- defects in the mains power supply (electricity, power supply, etc.);
- poor maintenance;
- use of non-original spare parts;
- exceptional events such as floods, fires (if not triggered by the device).

The complete warranty terms are set out in the sales contract.



### IMPORTANT

**The Manufacturer is not liable for improper use of the device.**

2. Identification

2.1 Manufacturer identification

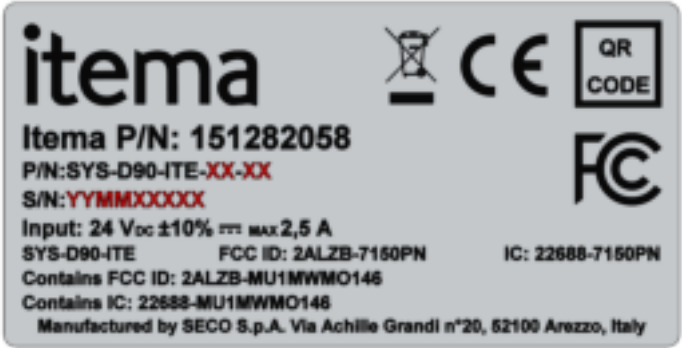
MANUFACTURER	SECO S.p.A
Address	Via Achille Grandi n°20 52100 Arezzo – Italy Tel: +39 0575 26979 Fax: +39 0575 350210

2.2 Device identification

Device	SYS-D90-ITE
Serial number	YYMMXXXXX
Year of manufacturing	2023

2.3 Device identification plate

The device is equipped with an **identification plate** located on the side. The plate features the device identification information to be reported to **SECO S.p.A.** if necessary, as shown in the table:



SYS-D90-**ITE**-XX-C0

**ITE** - Code that identifies the Client.

SYS-**D90**-ITE-XX-C0

**D90** - Code that identifies the electronic board inside the device.



**CAUTION**

It is strictly forbidden to remove the identification plate and/or replace it with other plates.

### 3. Technical specifications

#### 3.1 SYS-D90-ITE device hardware specifications

The table below features the board hardware specifications:

Processor	i.MX 8M Mini Quad – Full featured, 4x Cortex®-A53 cores up to 1.8GHz
Memory	2GB LPDDR4
Mass Storage	16GB eMMC
USB	3x USB 2.0 TypeA
Serial Ports	RS-232 and CANBus on DB9 connectors
Other Interfaces	RTC
Power	24VDC +/- 10% Max 2,5 A

Operating System

Linux Yocto  
Runtime: Phyton support  
SDK: QT creator with kit configured for sysroot  
Boot: from eMMC or from external USB for recovery  
Debug: Possibility of Debug over Serial or USB (MicroAB)  
Desktop Environment: minimal for Filesystem accessibility  
Server WEB: Lighttpd with HTML and css  
Remote Access: ssh, ftp, mount remote file system  
DBMS: Installed MySQL, PostgreeSQL, SQLite  
System OS: Text Editor, PDF viewer, Browser WEB, image (jpeg, bmp, png) viewer and video, specifically pdfviewer = evince, browser = Chromium, video = VLC  
Security: OpenSSL  
International Characters/Font: Possibility to display any Unicode character (Japanese, Chinese, Russian, Indian ...) and Unicode font  
Filesystem: Any damage to Filesystem in case of accidentally power off or power interruption will be prevented, by using EXT4 with integrity check at boot time and mounting the filesystem in read-only mode. When needed the file system will be temporary remounted in write mode and the user will be prompted by SW application not to switch-off the system power. Partition for system in RO mode, data partition in RW mode.



Peripheral USB memory: automatic mount and unmount of USB memory. Unpredicted disconnection of the USB memory or the peripheral, has not to create instability or damage to the Filesystem console

I/O User devices: Possibility to connect USB keyboard and mouse

System SW upgrade: Possibility to upgrade system SW separately from the BSP (if allowed and compatible)

BSP upgrade: Possibility to upgrade the BSP (eg boot from USB) restoring the user state of user filesystem (application, data, etc) (two partitions: one for file system and the other for user space plus two hidden partition for boot and recovery)

Restore: possibility to restore the system to factory state/condition from eMMC or USB in case of failure

First installation of Application SW: Automatic or helped procedure, to drive the first installation of the application SW (will be part of the development of application SW)

Autotest/SelfTest SW: Presence of Application/s act to verify automatically the correct HW functionalities and troubleshooting (touchscreen, display, I/O). Library to be present for multitouch support and gesture.

VNC Server enable only if required. Or Remote access ssh, ftp.

Added library nxp-nfc for NFC USB devices

Storage Condition	0°C to +50°C *
Transport Condition	- 25°C to +55°C **
Humidity	95%
Type of installation	Industrial

ATTENTION

**\*The values indicated refer to the maximum temperature of the environment of use of the device. It is the customer's responsibility to verify that the temperature remains within the admissible range indicated in this manual and, if necessary, adopt any passive cooling solution together with an application-dependent cooling system that can ensure that the heat sink temperature will not damage the device itself and/or the connected mechanical parts.**



ATTENTION

**\*\* Incase the transport conditions may exceed the temperature and time range indicated, corrective measures must be taken to avoid exposure of the device and its possible damage.**

## 3.2 Software Specifications

The software version released on the website <https://www.seco.com/it/products>, which is always updated and available, even in later versions.

## 3.3 CE reference directives

The device has been designed according to the following Directives:

- **2014/30/EU** Electromagnetic Compatibility Directive.
- **2009/125/CE** Ecodesign
- **2012/19/EU** (WEEE)
- **2011/65/EU** (RoHS)
- 2014/53/UE (RED), especially to the following standards:
  - ETSI EN 301 489-1, ETSI EN 301 489-17, ETSI EN 300 328.

The device also meets the requirements of the following standards:

- **EN 60204-1:2018.**

## 3.4 Product Documentation

**SECO S.p.A.** places the device on the market, equipping and providing it with:

- **CE marking as IT device**
- **Declaration of Conformity\***
- **User manual\***
- **FCC - Part 15 Certification\*\***

\*These documents are available after a request to the manufacturer.

## 3.5 FCC disclaimer

FCC references to product certification:

FCC ID: 2ALZB-7150PN, Contains FCC ID: 2ALZB-MUIMWMO146

This device complies with Part 15 of FCC Rules, Operation is Subject to following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received including interference that cause undesired operation.

\*\* This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device,

pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. Consult the dealer or an experienced radio/TV technician for help.

**CAUTION**

**No changes shall be made to the equipment without the manufacturer's permission as this may void the user's authority to operate the equipment**

## 3.6 Industry Canada (IC) Disclaimer

ISED references to product certification:

IC: 22688-7150PN, Contains IC: 22688-MUIMWMO146

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

**IMPORTANT**

**The Manufacturer is not liable for improper use of the device.**

## 4. Safety devices

### 4.1 Warnings

**CAUTION**

It is the user's responsibility to apply preventive and protective measures, in accordance with the legislation of the country of installation and use of the device.

**CAUTION**

Only use the accessories supplied by the manufacturer.

**CAUTION**

Only connect certified peripherals / devices to the device.

**CAUTION**

Always disconnect the electrical power supply before carrying out any work on the device.

**CAUTION**

Check that the electrical voltage meets the values indicated in this manual before connecting the device.

**CAUTION**

Disconnect the device from any power source before cleaning.

**CAUTION**

Do not use liquid detergents or sprays for cleaning the device.

**CAUTION**

Do not pour liquids of any kind on the device. This may cause fires and/or electric shocks.

**CAUTION**

Keep the device away from exposure to moisture values outside the admissible range indicated in this manual.

**CAUTION**

To avoid the risk of electric shock, this equipment must only be connected to a supply main with protective earth supply mains.

**CAUTION**




It is strictly forbidden to modify the appliance in order not to compromise the characteristics relating to the declared requirements.

**CAUTION**

No changes shall be made to the equipment without the manufacturer's permission as this may void the user's authority to operate the equipment.

## 4.2 Safety pictograms affixed on the device and used in the manual

The device and the manual are equipped with symbols, as indicated in the table below:

PICTOGRAM	DESCRIPTION
	<b>CE marking</b>
	<b>RAEE</b> Indicates the separate collection of electronic and electrical equipment according to Directive 2012/19/EU.
	Symbol used to indicate the need to consult the instruction manual before using the equipment.

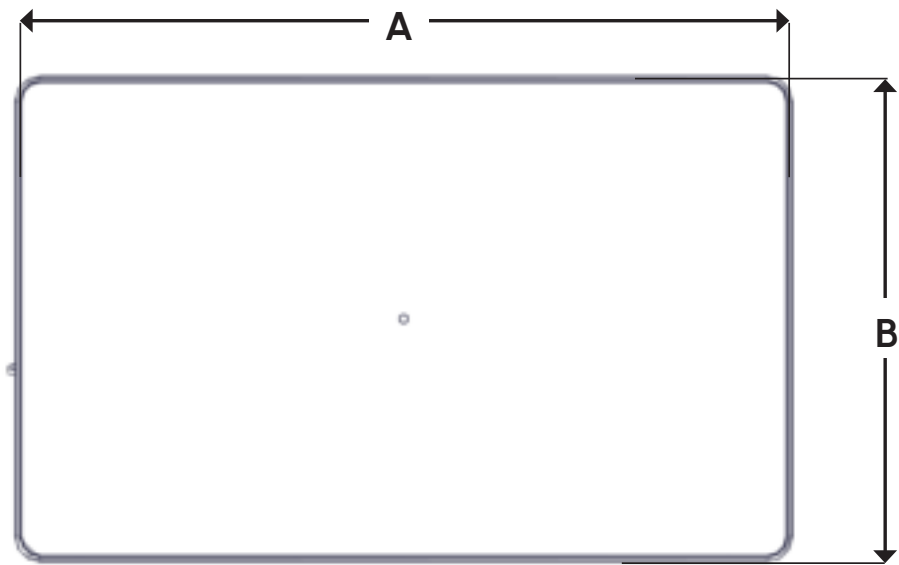
## 5. Characteristics and components of the device

The **SYS-D90-ITE** device is a new CONSOLE that included of HMI + Electronic Board + Enclosure + OS, used to control and setup the weaving machine.

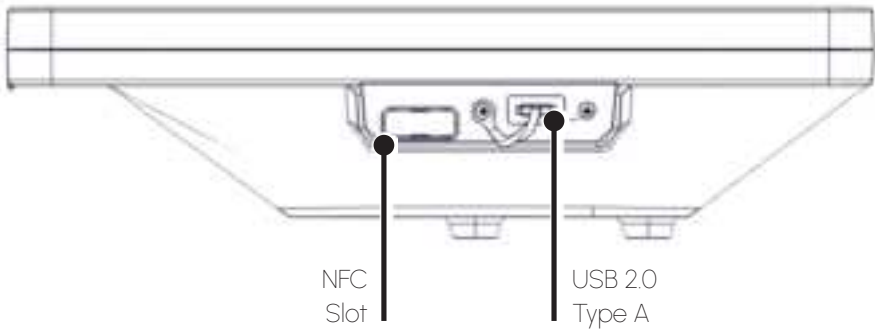
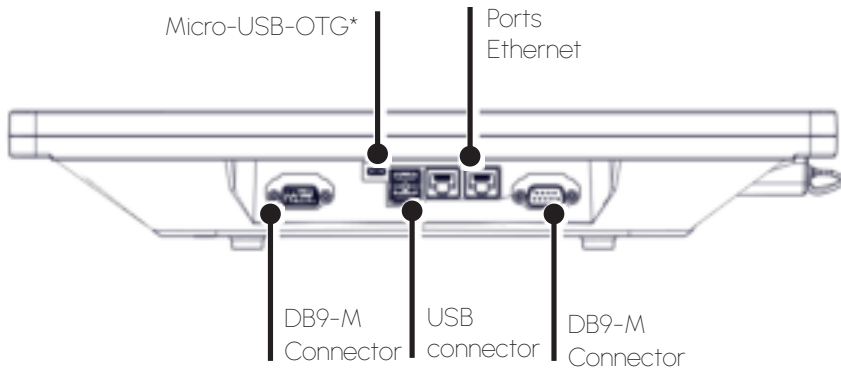
The **SYS-D90-ITE** it is equipped with a cables connectors kit in order connect properly to the destination machine.

### 5.1 Measurement layout

Length (A)	400 mm
Width (B)	250 mm
Height	67 mm



## 5.2 Components



\* must be used for installation/maintenance/update only.



## 6. Installation

### 6.1 Permitted environmental conditions

Use of the device and of associated control systems that differ from those listed below is **not** permitted.

In particular, the installation and operation environment must **not** be:

- Exposed to environmental temperatures exceeding 0°C to +50°C.
- Exposed to limit areas of 2,000 m.a.s.l.
- Exposed to excessive humidity (minimum 5%, maximum 95 %) and rapid changes in relative humidity (above 0.005 p.u./h).
- Exposed to corrosive fumes.
- Exposed to excessive dust.
- Exposed to abrasive dust.
- Exposed to oil vapours.
- Exposed to powder or gas explosive mixtures.
- Exposed to salt air.
- Exposed to vibrations, impacts or abnormal shocks.
- Exposed to weather conditions beyond the limits permitted or dripping.
- Exposure to unusual transport or storage conditions.
- Exposure to high or rapid thermal changes (above 5K/h).
- Presence of nuclear radiation.
- The conductors of the command and control circuits directly connected to the supply voltage must be protected against overcurrents.
- The conductors of the command and control circuits fed by a transformer or by a DC supply must be protected against overcurrent.
- In command and control circuits connected to a protective equipotential circuit, the requirement is satisfied by inserting a protective device against overcurrents in the isolated conductor.

#### CAUTION



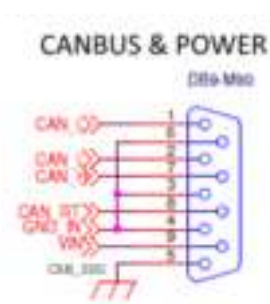
**Environmental conditions that differ from those specified may seriously damage the device. Positioning the device in environments that do not correspond to those indicated shall render the warranty null and void for the parts to be replaced.**



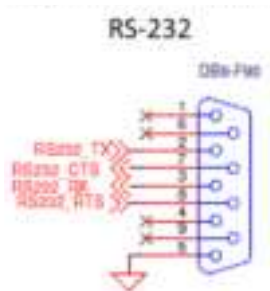
**SECO S.p.A. shall not be held liable if these instructions are not complied with.**

## 6.2 Installing the device

In order to install the device, make sure that the following cables connectors are connected properly to the device:



X1 = Vin (+24V and GND ) & CAN-bus



X2 = RS-232 connector.

### CAUTION



The power supply must have this values:

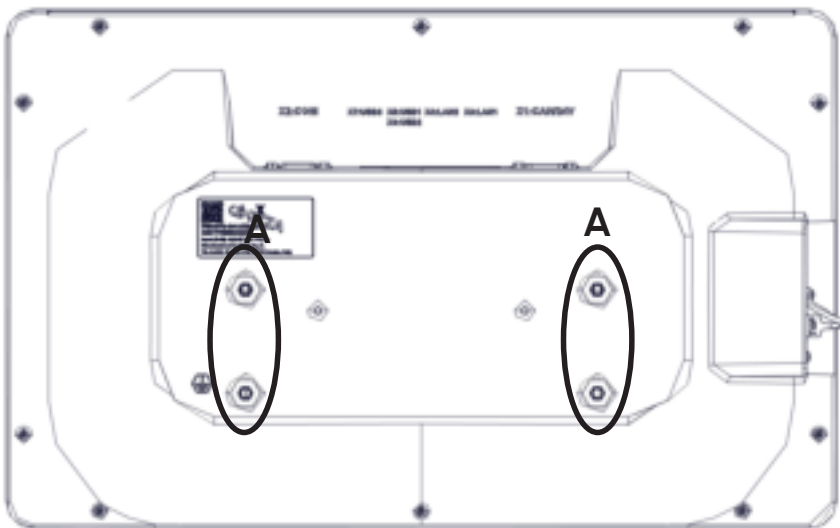
- Voltage: 24Vdc +/- 10%
- Current: 2.5 Amps Max



SECO S.p.A. shall not be held liable if these instructions are not complied with.

To install the device properly on the available support, follow the procedure below:

- 1 Make sure the electric connection on the destination machine is off and the electric power supply is disconnected from the device;
- 2 Fix the device to the existing support using 4 screws that will be screwed in matching the holes in the plate **(A)**;
- 3 Proceed to connect the electric supply to the device. Once inserted, turn the connector clockwise in order to lock it in place;
- 4 Proceed to electrically connect the destination machine.



**SECO S.p.A. shall not be held liable if these instructions are not complied with.**

## 7. Maintenance

User should clean the product with a dry cloth when necessary, based on his visual inspection.

**CAUTION**

**Disconnect the device from any power source before cleaning operation.**

**WARNING**

**The enclosure of the device must be cleaned only with a dry cloth.**

After cleaning, the user should check that the product is still correctly installed.

## 8. Waste disposal



Electrical equipment no longer in use must not be thrown away with normal municipal waste. The substances and materials it contains must be disposed of separately in an appropriate manner.

The device must be disposed correctly as it is a waste of electric and electronic equipment (WEEE).

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