





SMART T-Connector with DCD **SEU-1/0-T45 Series** 

We make safety happen.





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#### 1 Product Overview



- Connects conventional emergency stop buttons or safe mechanical switch contacts to an DCD chain of devices
- Rugged design; easy installation with no assembly or individual wiring required
- 4 or 5-pin M12 connection cable to connect an input device
- Daisy Chain diagnostic (DCD) for health and status information when used with a compatible BERNSTEIN Safety Controller or a DCD diagnostic module
- Built-in indication for input device status
- · Built-in indication for DCD Status

#### 1.1 Models

Davit Number	Description	local Reset	Input Device Connector					
Part Number			Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Indication
6075689190	SEU-1/0-T45-C	No	CH1a	CH1b	CH2a	CH2b	NC	Green / Red
6075689191	SEU-1/0-T45-C-X-AB	No	CH1a	CH1b	NC	CH2a	CH2b	Green / Red

Wire contact: NC 1 to CH1a and CH1b and NC 2 to CH2a and CH2b

# 1.2 Important... Read this before proceeding!

The user is responsible for satisfying all local, state, and national laws, rules, codes, and regulations relating to the use of this product and its application. BERNSTEIN has made every effort to provide complete application, installation, operation, and maintenance instructions. Please contact BERNSTEIN Technical Support with any questions regarding this product.

The user is responsible for making sure that all machine operators, maintenance personnel, electricians, and supervisors are thoroughly familiar with and understand all instructions regarding the installation, maintenance, and use of this product, and with the machinery it controls. The user and any personnel involved with the installation and use of this product must be thoroughly familiar with all applicable standards, some of which are listed within the specifications. BERNSTEIN AG makes no claim regarding a specific recommendation of any organization, the accuracy or effectiveness of any information provided, or the appropriateness of the provided information for a specific application.



# WARNING:

- · Not a safeguarding device
- Failure to follow these instructions could result in serious injury or death.
- This device is not considered a safeguarding device because it requires an overt action by an individual to stop machine motion or hazards. A safeguarding device limits or eliminates an individual's exposure to a hazard without action by the individual or others. This device cannot be substituted for required safeguarding. Refer to the applicable standards to determine those requirements.

#### 1.3 Overview

The SEU-1/0-T45-... is an adapter unit to integrate and serially connect Electromechanical Safety Switches (EMSSs) without DCD into machine designs.

This connector can be used to connect a safety point on a machine that is not suitable for an existing DCD device, such as a panel mount e-stop or mechanical interlocks on a door. The SEU-1/0-T45-... interfaces with devices that have two normally closed (NC) safety contacts.

The indicators on the SEU-1/0-T45-... provide local diagnostics. One LED provides the status of the input device. The other LED provides the status of the OSSD inputs (DCD chain).

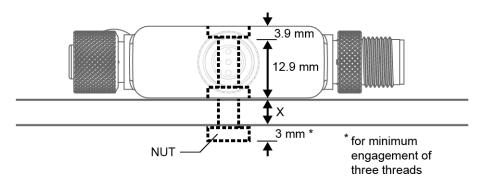


#### 2 Installation Instructions

#### 2.1 Mechanical Installation

Install the SEU-1/0-T45-... to allow access for functional checks, maintenance, and service or replacement. Do not install the SEU-1/0-T45-... in such a way to allow for intentional defeat.

All mounting hardware is supplied by the user. Fasteners must be of sufficient strength to guard against breakage. Use of permanent fasteners or locking hardware is recommended to prevent the loosening or displacement of the device. The mounting hole (4.5 mm) in the SEU-1/0-T45-... accepts M4 hardware. See the figure below to help in determining the minimum screw length.



Screw Length (with screw head fitting in counterbore) = 12.9 mm + "X" mm + 3 mm



#### **CAUTION:**

Tighten the fastening screw of the SEU-1/0-T45... during installation to a maximum torque of 0.56 Nm (5 inlbs). Overtightening can affect the performance of the SEU-1/0-T45....

# Important:

It is the responsibility of the machine builder (user) to ensure the SEU-1/0-T45-... series wiring/cabling is not easily manipulated by an operator to defeat the safety function(s), for example, ensure the operator cannot remove a device from the chain.





### 2.2 Installation Requirements

The device is intended for indoor use only and must not be affected by environmental conditions. Install the device so that operation is not impeded, but protected against inadvertent operation (for example, accidental actuation by being bumped or leaned against). Do not operate the switch using a tool. Do not expose the switch to excessive shocks and vibrations, otherwise the switch may be deformed or damaged, causing malfunction or operation failure. Electrical installation must be made by <u>qualified personnel</u> <sup>11</sup> and must comply with IEC/EN 60204-1, ANSI/NFPA 79 or NEC (National Electrical Code), and all applicable local standards. It is not possible to give exact wiring instructions for a device that interfaces to a multitude of machine control configurations. The following is general in nature; it is recommended to perform a risk assessment to ensure appropriate application, interfacing/connection, and risk reduction (see ISO 12100 or ANSI B11.0).



#### **WARNING:**

- Risk of electric shock
- Use extreme caution to avoid electrical shock. Serious injury or death could result.
- Always disconnect power from the safety system (for example, device, module, interfacing, etc.), guarded
  machine, and/or the machine being controlled before making any connections or replacing any component. Lockout/tagout procedures might be required. Refer to OSHA 29CFR1910.147, ANSI Z244-1, or the
  applicable standard for controlling hazardous energy.
- Make no more connections to the device or system than are described in this manual. Electrical installation and wiring must be made by a Qualified Person and must comply with the applicable electrical standards and wiring codes, such as the IEC 60204-1, ANSI NFPA79, or NEC (National Electrical Code), and all applicable local standards and codes.

# 2.3 Protective (Safety) Stop Circuits

A protective (safety) stop allows for an orderly cessation of motion for safeguarding purposes, which results in a stop of motion and removal of power from the Machine Primary Control Elements (MPCE) (assuming this does not create additional hazards).

A protective stop circuit typically comprises a minimum of two normally open contacts from forced-guided, mechanically linked relays, which are monitored through External Device Monitoring (EDM) to detect certain failures, to prevent the loss of the safety function. Such a circuit can be described as a "safe switching point".

Protective stop circuits are either single channel, which is a series connection of at least two normally open contacts, or dual- channel, which is a separate connection of two normally open contacts. In either method, the safety function relies on the use of redundant contacts to control a single hazard. If one contact fails On, the second contact arrests the hazards and prevents the next cycle from occurring.

Interface the protective stop circuits so that the safety function cannot be suspended, overridden, or defeated, unless accomplished in a manner of the same or greater degree of safety as the machine's safety related control system that includes the SEU-1/0-T45-....

A DCD compatible BERNSTEIN Safety Controller, such as the SCR P or SCR DI, provides a series connection of redundant contacts that form protective stop circuits for use in either single-channel or dual-channel control.

<sup>&</sup>lt;sup>1</sup> A person who, by possession of a recognized degree or certificate of professional training, or who, by extensive know-ledge, training and experience, has successfully demonstrated the ability to solve problems relating to the subject matter and work.





### 2.4 Output Signal Switching Devices (OSSDs) and External Device Monitoring (EDM)

The SEU-1/0-T45-... is able to detect faults on OSSD1 and OSSD2. These faults include short circuits to +24 V DC and 0 V, and between OSSD1 and OSSD2.

Both OSSD outputs must be connected to the machine control so that the machine's safety-related control system interrupts the circuit or power to the machine primary control element(s) (MPCE), resulting in a non-hazardous condition. Final switching devices (FSDs) typically accomplish this when the OSSDs go to an OFF state.

Refer to the output specifications and these warnings before making OSSD output connections and interfacing the SEU-1/0-T45-... to the machine.



#### **WARNING:**

- Interfacing both output signal switching devices (OSSD)
- Failure to follow these instructions could result in serious injury or death.
- Unless the same degree of safety is maintained, never wire an intermediate device(s) (PLC, PES, PC) between the safety module outputs
  and the master stop control element it switches such that a failure causes a loss of the safety stop command or the failure allows the safety
  function to be suspended, overridden, or defeated.
- Connect both OSSD outputs to the machine control so that the machine's safety-related control system interrupts the circuit to the machine primary control element(s), resulting in a nonhazardous condition.



#### **WARNING:**

- Interfacing OSSD Outputs to Machine Inputs
- Failure to properly interface the OSSD Outputs to the guarded machine could result in serious injury or death.
- To ensure proper operation, the BERNSTEIN AG device output parameters and machine input parameters must be considered when interfacing the BERNSTEIN AG device OSSD outputs to machine inputs. Design the machine control circuitry so that the maximum load resistance value is not exceeded and the maximum specified OSSD Off-state voltage does not result in an On condition.

External device monitoring (EDM) is a function used to monitor the state of the external, positively guided (mechanically linked) machine control contacts (Final Switching Devives (FSD)). The SEU-1/0-T45-... series does not include the EDM function. As a result, the SEU-1/0-T45-... should be used with an external safety monitoring device that monitors the status of the two OSSDs and is capable of providing the EDM function.

Examples of appropriate external safety monitoring devices include the SCR Safety Controller.



- The SEU-1/0-T45-... does not have external device monitoring (EDM).
- If EDM is required for the application, it must be implemented in the external control.

#### 2.4.1 Fault Tolerant Output Feature

Faults that do not immediately compromise the safe operation of the SEU-1/0-T45-... (for example safety output to external potential, crosswire short safety output) result in a delayed switch-off of the safety outputs.

The safety outputs switch off when the error warning exceeds 20 minutes. In case of error warning, the SEU-1/0-T45-... will doubleflash red.

Use this fault-tolerant output feature to run down the machinery in a controlled manner. After fixing the fault, the error message is confirmed by a voltage reset. The safe outputs enable and allow a restart.

Faults that directly affect the safe operation of the SEU-1/0-T45-... immediately cause a lockout condition and the OSSDs turn off.

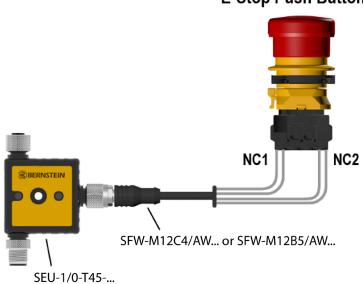




# 2.5 Wiring

Figure 1. Wiring the SEU-1/0-T45-... to a panel mount Emergency Stop button

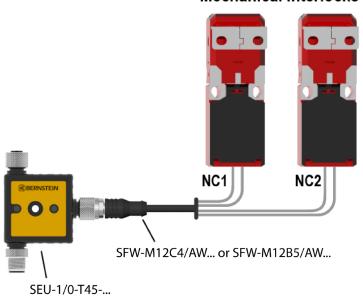
# **E-Stop Push Button**



	SEU-1/0-T4 SFW-M12C		SEU-1/0-T45-AB with SFW-M12B5/AW		
Pin 1	CH1a Brown		CH1a	Brown	
Pin 2	CH1b	White	CH1b	White	
Pin 3	CH2a	Blue	NC	Blue	
Pin 4	CH2b	Black	CH2a	Black	
Pin 5	NC	-	CH2b	Grey	

Figure 2. Wiring the SEU-1/0-T45-... to mechanical interlocks

# **Mechanical Interlocks**



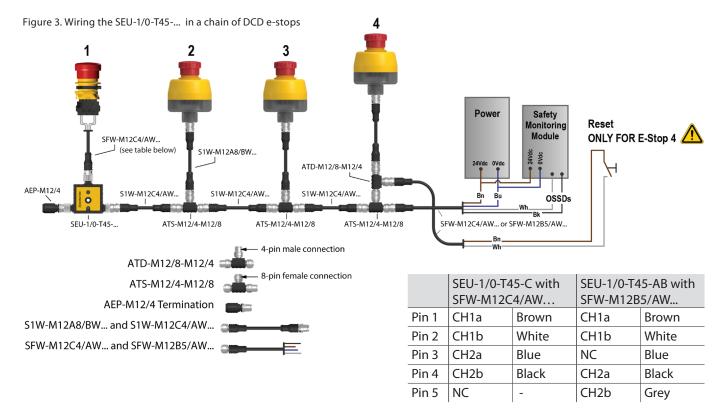
	SEU-1/0-T4 SFW-M12C		SEU-1/0-T45-AB with SFW-M12B5/AW		
Pin 1	CH1a Brown		CH1a	Brown	
Pin 2	CH1b	White	CH1b	White	
Pin 3	CH2a	Blue	NC	Blue	
Pin 4	CH2b	Black	CH2a	Black	
Pin 5	NC	-	CH2b	Grey	



# 2.5.1 Wire the SEU-1/0-T45-... in a Chain of DCD E-Stops

When connecting emergency stop units in series, simplify the wiring by using special T-Adapters, low cost unshielded four-wire double-ended cables, and the SEU-1/0-T45-... with indication.

A configuration of three lighted DCD E-Stops and a panel mount E-Stop is shown. The SEU-3... and SEU-4... E-stops and the SEU-1/0-T45-... can be combined in a single chain.



- 1. Connect the female 4-pin M12/Euro-Style cable to the male 4-pin M12/Euro-Style of the series connection T-Adapter (ATS-M12/4-M12/8).
- 2. Connect your reset device.
  - If you are using a manual reset model of emergency stop device—Connect the female 8-pin M12/Euro-Style of the reset T-Adapter (ATD-M12/8-M12/4) to the male 8-pin M12/Euro-Style connector of the series connection T-Adapter.
  - If you are using a reset switch—Connect a female 4-pin M12/Euro-Style cable to the male 4-pin M12/Euro-Style QD of the reset T-Adapter.
- 3. Connect the SEU-2 / -3 / -4 to the male 8-pin M12 connector of the T-Adapter. Use the S1W-M12A8/BW... extension cables as needed.
- 4. Connect the male 4-pin M12 end of a double-ended cable to the female 4-pin M12 of the T-Adapter. Connect the female end of the double ended cable to the next series connection T-Adapter (ATS-M12/4-M12/8) or the SEU-1/0-T45-....
- 5. At the end of the line, install a terminating plug (AEP-M12/4) to properly truncate the system.
- 6. Wire the wired end of the 4-pin M12 cable (from step 1) directly to a Safety Monitoring Device, such as a DCD-enabled BERNSTEIN Safety Controller model SCR P or SCR DI. You may also wire the 4-pin M12 cable to an Daisy Chain diagnostic (DCD) module then to the Safety Monitoring device.
- 7. Verify that the DCD chain of devices and the safety monitoring device are powered from the same power supply or the commons of the separate supplies are the same. Ensure that the voltage level at the DCD enabled device in position #1 (furthest from the power supply) is above 19.5 V for the system to operate properly.

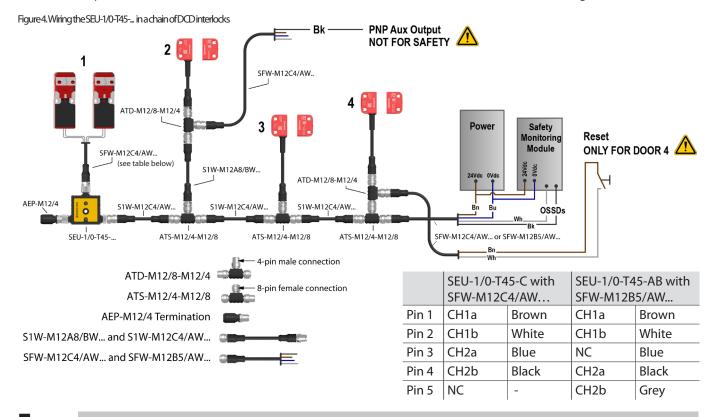




## 2.5.2 Wire the SEU-1/0-T45-... in a Chain of DCD Interlocks

When connecting DCD interlocks in series, simplify the wiring using special T-Adapters, low cost unshielded four-wire double- ended cables, and the SEU-1/0-T45-... with Indication.

A configuration of three SRF switches and an SEU-1/0-T45-... with two mechanical interlocks connected in shown below. The SEU E-Stops and connection boxes, SRF switches, and the SEU-1/0-T45-... can be combined in a single chain.



#### **Important:**

The inputs to the SEU-1/0-T45-... must meet the three second maximum simultaneity requirement to prevent faults.

- 1. Connect the female 4-pin M12/Euro-style cable to the male 4-pin M12/Euro-style of the series connection T-Adapter (ATS-M12/4-M12/8).
- 2. Connect your reset device.
  - If you are using a manual reset model of SRF switch—Connect the female 8-pin M12/Euro-style of the reset T-Adapter (ATD-M12/8-M12/4) to the male 8-pin M12/Euro-style connector of the series connection T-Adapter.
  - If you are using a reset switch—Connect a female 4-pin M12/Euro-style cable to the male 4-pin M12/Euro-style QD of the reset T-Adapter.
- 3. Connect the interlock to the male 8-pin M12 connector of the T-Adapter. Use the S1W-M12A8/BW... extension cables as needed.
- 4. Connect the male 4-pin M12 end of a double-ended cable to the female 4-pin M12 of the T-Adapter. Connect the female end of the double ended cable to the next series connection T-Adapter (ATS-M12/4-M12/8) or the SEU-1/0-T45-....
- 5. At the end of the line, install a terminating plug (AEP-M12/4) to properly truncate the system.
- 6. Wire the wired end of the 4-pin M12 cable (from step 1) directly to a Safety Monitoring Device, such as an DCD-enabled BERNSTEIN Safety Controller model SCR P or SCR DI. You may also wire the 4-pin M12 cable to an Daisy Chain diagnostic (DCD) module then to the Safety Monitoring device.
- 7. Verify that the DCD chain of devices and the safety monitoring device are powered from the same power supply or the commons of the separate supplies are the same. Ensure that the voltage level at the DCD enabled device in position #1 (furthest from the power supply) is above 19.5 V for the system to operate properly.

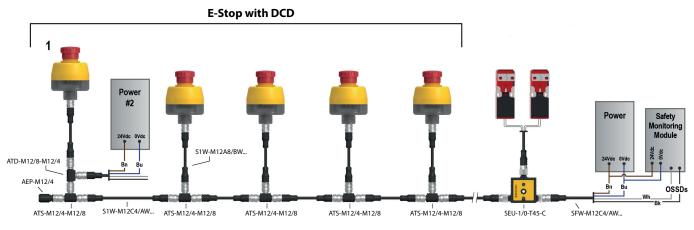


# 2.5.3 Wiring Additional Power Supplies

For guidance on maximum total cable length and maximum number of devices before an additional power supply may be needed, see Figure 7 on p. 10. For using DCD information to monitor the individual device voltages, see Daisy Chain diagnostic (DCD) Information on p. 11.

In a long series or series with many DCD devices, the voltage at all devices must stay above 19.5 V for proper operation. An additional power supply may be required to maintain a minimum of 19.5 V at all devices. There are two options to connect an additional power supply.

Figure 5. Option 1: Use a ATD-M12/8-M12/4 Connector in series with DCD Device. If available, set the power supplies for parallel output.



#### Note:

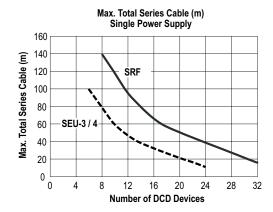
Option 1 can only be used in combination with ATS-M12/4-M12/8 connector (the ATD-M12/8-M12/4 cannot be connected to an SEU-1/0-T45-...).

Figure 6. Option 2: Replace the terminator with a power supply. The OSSD1 and OSSD2 wires at power supply #2 must be connected to +24 V DC. If available, set the power supplies for parallel output.





Figure 7. Maximum total cable length for a single power supply



The SEU-1/0-T45-... has a similar current demand to the SRF sensors.



#### **WARNING:**

- Safety devices with OSSDs and without DCD, such as safety light curtains, are not compatible.
- Failure to follow these instructions could result in serious injury or death.
- Do not use safety devices with OSSDs and without DCD in a series connection of multiple DCD
- · devices.



#### **WARNING:**

- Safety devices with solid-state OSSDs are not acceptable Input Devices
- Failure to follow these instructions could result in serious injury or death.
- Only use safety devices with two normally closed (NC) contacts as input devices to the SEU-1/0-T45-....

#### 2.6 Checkout

At machine set up, a Designated Person <sup>2)</sup> should test each safety point for proper machine shutdown response. A Designated Person should check the safety point for proper operation, physical damage, button looseness, and excessive environmental contamination. This should take place on a periodic schedule determined by the user, based on the severity of the operating environment and the frequency of switch actuations.

Adjust, repair, or replace components as needed. If inspection reveals contamination on the switch, thoroughly clean the switch and eliminate the cause of the contamination. Replace the switch and/or appropriate components when any parts or assemblies are damaged, broken, deformed, or badly worn; or if the electrical/mechanical specifications (for the environment and operating conditions) have been exceeded.

Always test the control system for proper functioning under machine control conditions after performing maintenance, replacing the safety point, or replacing any component of the device.

<sup>&</sup>lt;sup>2</sup> A Designated Person is identified in writing by the employer as being appropriately trained to perform a specified checkout procedure. A Qualified Person possesses a recognized degree or certificate or has extensive knowledge, training, and experience to solve problems relating to the emergency stop installation.





# 2.7 Daisy Chain diagnostic (DCD) Information

DAISY CHAIN DIAGNOSTICS

The information transmitted via the Daisy Chain diagnostic (DCD) interface is not safety related. The diagnostic technology allows a wide range of device information to be loaded into the machine control system.

To interpret this information, BERNSTEIN diagnostic modules are available, including the SRF-DI Diagnostic Module and the SCR DI and SCR P Safety Controller. Refer to the instruction manuals for detailed information on the diagnostic devices. By means of diagnostics, the following information can be transmitted, among others:

- Safety Device Status (on, off, or faulted)
- Under-voltages in the series connection (chain)
- Attempts to remove a device from the chain

At this time this information can be refined using the following interfaces:

- USB—Displays device information on the PC (requires using an SRF DI, SCR DI or SCR P)
- NFC Displays device information on a mobile phone (requires SRF DI or SCR DI, a mobile phone and the BERNSTEIN DCD APP).
- IO-Link—Bus independent data reading into the control system (requires using the SRF DI or SCR DI and an IO-Link master)
- Industrial Ethernet Protocols—Bus data reading into the control system (requires using the SCR P Safety Controller)

# 2.8 Information Available Using Daisy Chain Diagnostic (DCD)



A variety of information can be retrieved from the Emergency Stop devices via the DCD series connection and a diagnostic unit or a safety controller with DCD interface.

A description of the information can be found under the following link:

https://www.bernstein.eu/fileadmin/downloads/schaltertechnik/Konstruktionsdaten/SRF/0800000857\_en.pdf



# 3 Specifications

# Important:

Interface the SEU-1/0-T45-... with Indication only to a SELV (Safety Extra-Low Voltage) for circuits without earth ground or a PELV (Protected Extra-Low Voltage) for circuits with earth ground power supply according to EN/IEC 60950.

### Rated operational voltage (Ue)

 $24\,V_{DC}$  +15%, -20% (SELV/PELV power supply) The external voltage supply must be capable of buffering brief mains interruptions of 20 ms, as specified in IEC/EN 60204-1.

# **Rated Conditional Short-Circuit Current**

100 A

#### Rated Isolation Voltage (Ui)

 $75 V_{DC}$ 

#### **No-Load Current**

60 mA typical at  $24\,V_{DC}$  75 mA maximum at  $19.2\,V_{DC}$ 

#### Rated Impulse Withstand Voltage (Uimp)

500 V

#### Indication

Red (618 nm), Green (525 nm)

#### **Housing/connectors**

Housing: Polyvinyl Chloride (PVC), Black Connector Nuts: Nickel plating on Cu/Zn allow

#### **Vibration Resistance**

Operating extremes: 10 Hz to 500 Hz, amplitude 0,35 mm, acceleration 50 m/s2

#### **Operating Conditions**

-25 °C to +55 °C (-13 °F to +131 °F)

45% to 85% relative humidity (no condensation)

#### **Environmental Ratings**

For Indoor Use Only

IEC IP65, IEC IP67 (EN 60529)

#### Certifications

TÜV, CE, cULus, UKCA

# **OSSD Outputs**

Two solid state, p-switching, short circuit-proof Voltage level: according to Type 3 EN 61131-2 Maximum operating current: 30 mA

Leakage current:  $\leq 1 \text{ mA}_{DC}$  On-state voltage:  $\geq Ue - 3 \text{ V}$  Protection: Sustained short circuit and overload protection; thermal / digital (clocking)

Test pulse duration: 70 us Test pulse rate: 1 s

#### **Input Device Requirements**

Accepts two normally closed (NC) contacts

#### **Simultaneity Requirement**

Three seconds

#### **Power Up Delay**

 $\leq 2 s$ 

#### **Response Time**

 $\leq$  40 ms maximum + (7 ms  $\times$  number of following Smart Safety devices)

#### **Risk Time**

≤ 40 ms according to EN IEC 60947-5-3

# **Maximum Cable Length Between DCD Devices**

30 m

#### **EMC**

According to EN 61326-1 and EN 61326-3-1

# **Safety Data**

SIL 3 (IEC 61508) SILCL 3 (EN 62061)

Category 4, PL e (EN ISO 13849-1)

PFHD:  $6.56 \times 10-9$  1/h according to EN 62061 Service Life:

20 years

#### **ZVEI Interface Informations**

The OSSD interface corresponds to Interface Type C Class 3 according to the ZVEI position paper CB24I Ed. 2.0.

# Source

Safety switch /safety outputs: C3

#### Drain

Safety monitoring unit (e.g. safety controller): C1, C2, C3

### Interface Type C Source (Table 4.32)

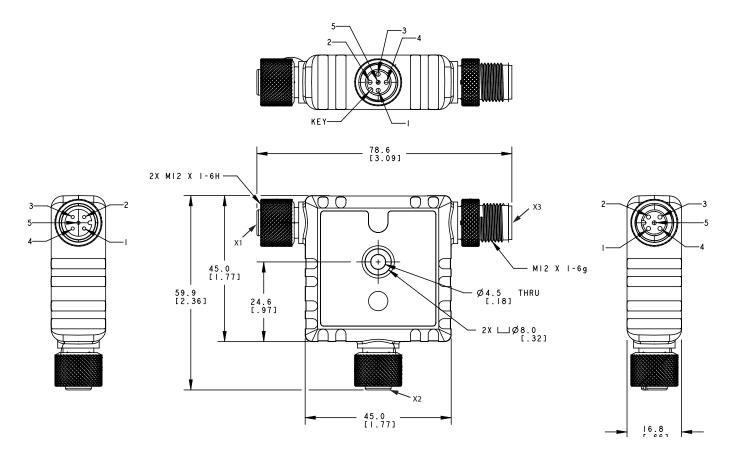
Parameter	min.	typ.	max.
Test pulse duration t <sub>i</sub>		70 μs	
Test pulse rate T		2 s	
Current rating I <sub>N</sub>	-	30 mA	Output current I <sub>N</sub>
Capacitive loads	-	50 nF	Maximum capacitive load C <sub>L_max.</sub>
Inductive load(*)	-	-	Maximum inductive load L <sub>L max.</sub>

<sup>(\*)</sup> Optional indication of the manufacturer.





# **3.1 Dimensions** (All measurements are listed in millimeters, unless noted otherwise. Dimensions in []: inch)



	SEU-1/0-T45-C mit SFW-M12C4/AW			SEU-1/0-T45-C-X-AB mit SFW-M12B5/AW		
	X1 / X3	X1 / X3 X2			X2	
Pin 1	24 V DC	CH1a	BN	24 V DC	CH1a	BN
Pin 2	OSSD1	CH1b	WH	OSSD1	CH1b	WH
Pin 3	0 V DC	CH2a	BU	0 V DC	NC	BU
Pin 4	OSSD2	CH2b	ВК	OSSD2	CH2a	ВК
Pin 5	NC	NC	-	NC	CH2b	GY



# 5 Product Support and Maintenance

#### 5.1 Maintenance and Service

Do not use alcoholic cleaning agents.

The SEU-1/0-T45-... is maintenance-free.

For long-term and trouble-free operation, please periodically check the following points:

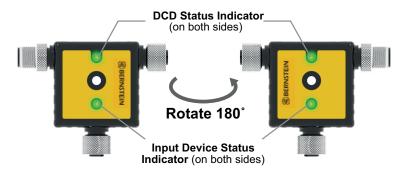
- solid fit of all components
- reliable switching function
- if damage occurs, please exchange the relevant components

**Liability disclaimer**— By breach of the given instructions (concerning the intended use, the safety instructions, the installation and connection through qualified personnel and the testing of the safety function) manufacturer's liability expires.

#### 5.2 Status Indicators

The SEU-1/0-T45-... has matching indicators on both sides to allow for installation needs and still provide adequate indication visibility. Each indicator displays both red and green. When power is applied, both LEDs flash red/green/ off, then turn on in the appropriate state (red or green).

Figure 8. SEU-1/0-T45-... status indicators



Input Device Status (Two NC Contact Status)	OSSD Inputs	SEU-1/0-T45 Status	OSSD Outputs	Input Device LED	DCD Status LED
Run State (closed)	On	Normal	On	Green	Green
Run State (closed)	Off	Normal	Off	Green	Red
Off State (open)	On	Normal	Off	Red	Green
Off State (open)	Off	Normal	Off	Red	Red
Χ	x	Fault (Volt. Mon)	Off	Red Flashing	Red Flashing
Run State (closed)	On	Fault (OSSD)	On/Off *	Red Flashing	Red Flashing
X	×	Fault (internal)	Off	Red Flashing	Red Flashing

<sup>\*</sup>OSSD Fault Tolerant Mode: OSSDs remain on for 20 minutes then turn off. For more information, see Fault Tolerant Output Feature on p. 6.



# **5.3 BERNSTEIN AG Limited Warranty**

If the instructions (proper use, safety instructions, installation and connection by trained personnel, testing for safe operation) are violated, the manufacturer's liability expires.



# 5.4 EU/UK- Declaration of Conformity (DoC)



#### EU/UK-Konformitätserklärung / EU/UK-Declaration of Conformity / UE/UK-Déclaration de conformité

entspricht der europäischen Norm DIN EN ISO/IEC 17050-1: Konformitätsbewertung -Konformitätserklärung von Anbietern – Teil 1: Allgemeine Anforderungen. Die Grundlage der Kriterien sind internationale Dokumente, insbesondere ISO/IEC-Leitfaden 22, 1982, Informations on manufacturer's declaration of manufacturer's declaration of conformity with standards or other technical specifications. Die deutsche Sprachfassung ist die Originalkonformitäts-erklärung. Bei anderen Sprachen handelt es sich um die Übersetzung der Original-konformitätserklärung.

is suitable to the European Standard EN ISO/IEC 17050-1: Standard EN ISO/IEC 17050-1: Conformity assessment -Supplier's declaration of conformity - Part 1: General requirements. The basis for the criteria has been found in international documentation, particularly in: ISO/IEC Guide 22, 1982, Informations on 22, 1982, Informations on manufacturer's declaration of conformity with standards or other technical specifications. The original Declaration of Conformity is the German language version. Other languages are a translation of the original Declaration of of the original Declaration of

Cette déclaration de conformité correspond au Norme Européenne EN ISO/ IEC 17050-1: Évaluation de la conformité – Déclaration de conformité du fournisseur – conformité du fournisseur – Partie 1: Exigences générales. La base des directives sont des documents internationaux répondant à ISO/IEC-Guide 22, 1982, Informations on manufacturer's declaration of conformity with standards or other technical specifications. La version allemande est la langue d'origine de la déclaration de conformité. Les autres langues ne sont qu'une tradjuction de la qu'une traduction de la déclaration de conformité en langue allemande.

**BERNSTEIN AG** Wir / We / Nous

(Name des Anbieters) / (Supplier's name) / (Nom du foumisseur)

Hans-Bernstein-Straße 1 D-32457 Porta Westfalica

(Anschrift) / (Address) / (Adresse)

erklären in alleiniger Verantwortung, dass das (die) Produkt(e): declare under our sole responsibility that the product(s):

déclarons sous notre seule responsabilité que le(s) produit(s):

SEU-1/0-T45-C-X-AB SEU-1/0-T45-C-X-AIDA SEU-1/0-T45-C-X SEU-1/0-T45-C

(Bezeichnung, Typ oder Modell, Los-, Chargen- oder Serien-Nr., möglichst Herkunft und Stückzahl) (Name, type or model, batch or serial number, possibly sources and number of items) (Nom, type ou modèle, n° de lot, d'échantillon ou de série, éventuellement les sources et le d'éxemplaires

mit folgenden Richtlinien übereinstimmt (übereinstimmen):

is (are) in conformity with the following directives: est (sont) conforme(s) aux directives européennes:

EU Richtlinien / EU Directives / UE Diréctives

Maschinenrichtlinie / Safety-of-Machinery-Directive 2006/42/EC EMV Richtlinie / EMC Directive 2014/30/EU

RoHSIII 2011/65/EU; 2015/863

UK Richtlinien / UK Directives / UK Diréctives

Supply of Machinery (Safety) Regulations 2008: 2008 No. 1597 Electromagnetic Compatibility Regulations 2016: 2016 No. 1091 The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012: 2012 No. 3032

Dies wird nachgewiesen durch die Einhaltung folgender Norm(en): This is documented by the accordance with the following standard(s):

Notre justification est l'observation de la (des) norme(s) suivante(s):

EN ISO 13849-1: 2015; IEC 61508 Parts 1-7:2015 EN 62061:2005+AC:2010+A1:2013; EN IEC 63000:2018

Benannte Stelle / Notified Body / Organisme Notifié

TÜV Rheinland Industrie Services GmbH, Am Grauen Stein, 51105 Köln

Name und Anschrift Bevollmächtigter Dokumentation:

Name and address of authorized agent documentation: Nom et adresse de la documentation autorisée:

Herr Wolfgang Vogt

D-32457 Porta Westfalica, Hans-Bernstein-Straße 1

Porta Westfalica, 2022-09-26

(Ort und Datum der Ausstellung) (Place and date of issue) (Date et lieu)

i. V. Wolfgang vogt Compliance Officer Product

(Name, Position, Unterschrift) (Name, status, signature) (Nom, fonction, signature)









# **Contact**

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