



V20W-0101000

V200 Work Station Extended

SAFETY CAMERA SYSTEMS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
V20W-0101000	1042027

A resolution set has to be ordered separately!

Other models and accessories → www.sick.com/V200_Work_Station_Extended



Detailed technical data

Features

Resolution	20 mm, 24 mm, 30 mm ¹⁾
Protective field range	
20 mm resolution	1.41 m
24 mm resolution	1.7 m
30 mm resolution	2.12 m
Protective field size	
20 mm resolution	1 m x 1 m
24 mm resolution	1.2 m x 1.2 m
30 mm resolution	1.5 m x 1.5 m
Aspect ratio protective field	1:1 to 2:1
Response time	20 ms
Items supplied	Including teaching pen, operating instructions on CD-ROM and Quickstart (instructions for quick commissioning)

¹⁾ Depending on resolution set.

Safety-related parameters

Type	Type 2 (IEC 61496)
Safety integrity level	SIL1 (IEC 61508) SILCL1 (EN 62061)
Category	Category 2 (EN ISO 13849)
Test rate (internal test)	50 /s (EN ISO 13849)
Maximum demand rate	≤ 30 min ⁻¹ (EN ISO 13849) ¹⁾
Performance level	PL c (EN ISO 13849)
PFH_D (mean probability of a dangerous failure per hour)	5.6 x 10 ⁻⁹ (EN ISO 13849)
T_M (mission time)	20 years (EN ISO 13849)

¹⁾ Between two requirements on a safety-related response of the device, at least 100 internal or external tests must be carried out.

Safe state in the event of a fault	At least one OSSD is in the OFF state.
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¹⁾ Between two requirements on a safety-related response of the device, at least 100 internal or external tests must be carried out.

Functions

	Functions	Delivery status
Restart interlock	✓	Deactivated
External device monitoring (EDM)	✓	Deactivated
Cascading	✓	
Teach/sync	✓	

Interfaces

Connection type	Male connector M12, 8-pin
Permitted cable length	≤ 7.5 m
Status display	LEDs
Diagnostic display	LEDs
Fieldbus, industrial network	
Integration via Flexi Soft safety controller	CANopen, DeviceNet™, EtherCAT®, EtherNet/IP™, Modbus TCP, PROFIBUS DP, PROFINET ¹⁾

¹⁾ For additional information on Flexi Soft -> www.sick.com/Flexi_Soft.

Electrical data

Protection class	III (EN 50178)
Supply voltage V_S	24 V DC (19.2 V DC ... 28.8 V DC)
Power consumption	≤ 165 mA ¹⁾ ≤ 690 mA ²⁾
Safety outputs (OSSD)	
Type of output	2 PNP semiconductors, short-circuit protected, cross-circuit monitored
Switching voltage HIGH	$V_S - 2.7 \text{ V DC} \dots V_S$
Switching voltage LOW	≤ 3.5 V DC
Switching current	6 mA ... 250 mA

¹⁾ At 24 V DC without output load.

²⁾ Including maximum output load.

Mechanical data

Dimensions (W x H x D)	93.9 mm x 50 mm x 93.9 mm
Housing material	Aluminum die cast
Weight	355 g

Ambient data

Enclosure rating	IP54 (EN 60529)
Ambient operating temperature	0 °C ... +50 °C
Storage temperature	-25 °C ... +70 °C
Air humidity	15 % ... 95 %, Non-condensing
Vibration resistance	5 g, 10 Hz ... 55 Hz (EN 60068-2-6)
Shock resistance	10 g, 16 ms (EN 60068-2-27)

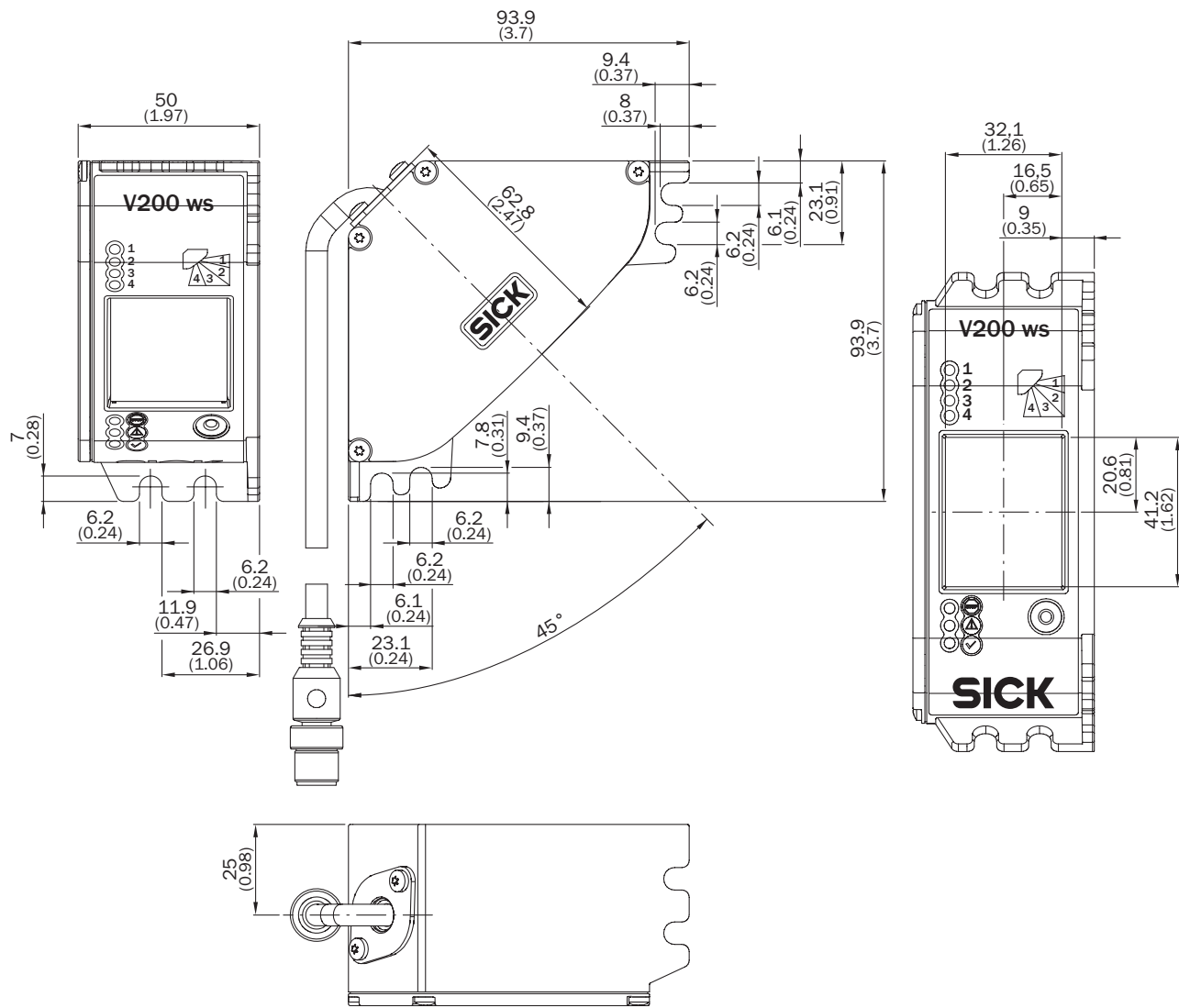
Other information

Wave length	850 nm
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Classifications

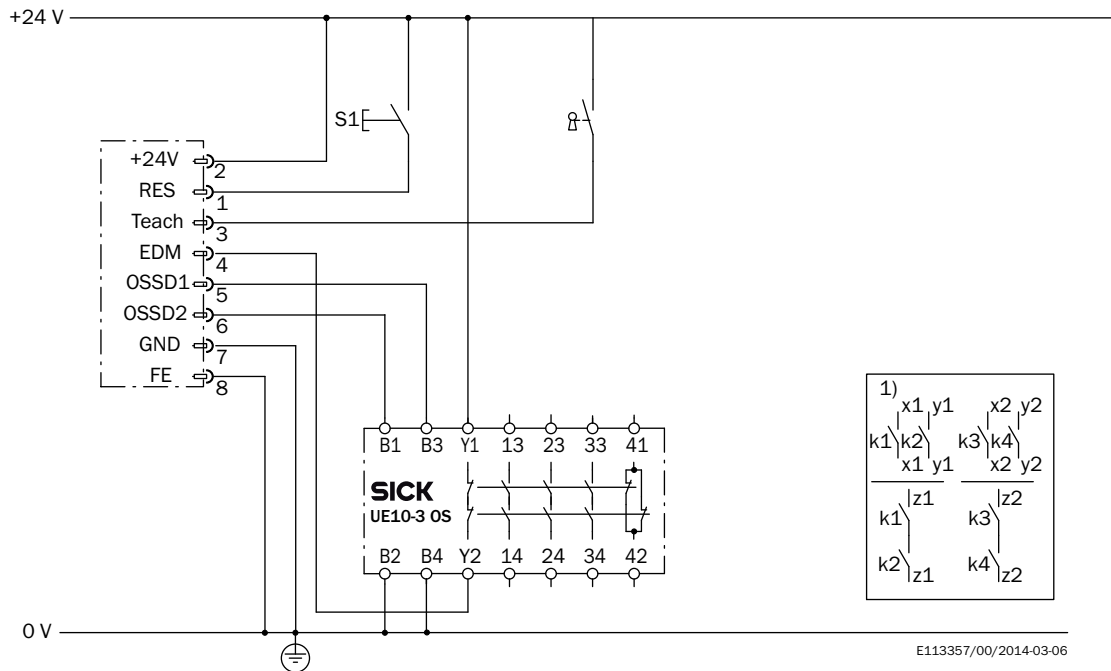
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ECI@ss 5.1.4	27272790
ECI@ss 6.0	27272790
ECI@ss 6.2	27272790
ECI@ss 7.0	27272790
ECI@ss 8.0	27272790
ECI@ss 8.1	27272790
ECI@ss 9.0	27272790
ETIM 5.0	EC001511
ETIM 6.0	EC001511
UNSPSC 16.0901	39121528

Dimensional drawing (Dimensions in mm (inch))

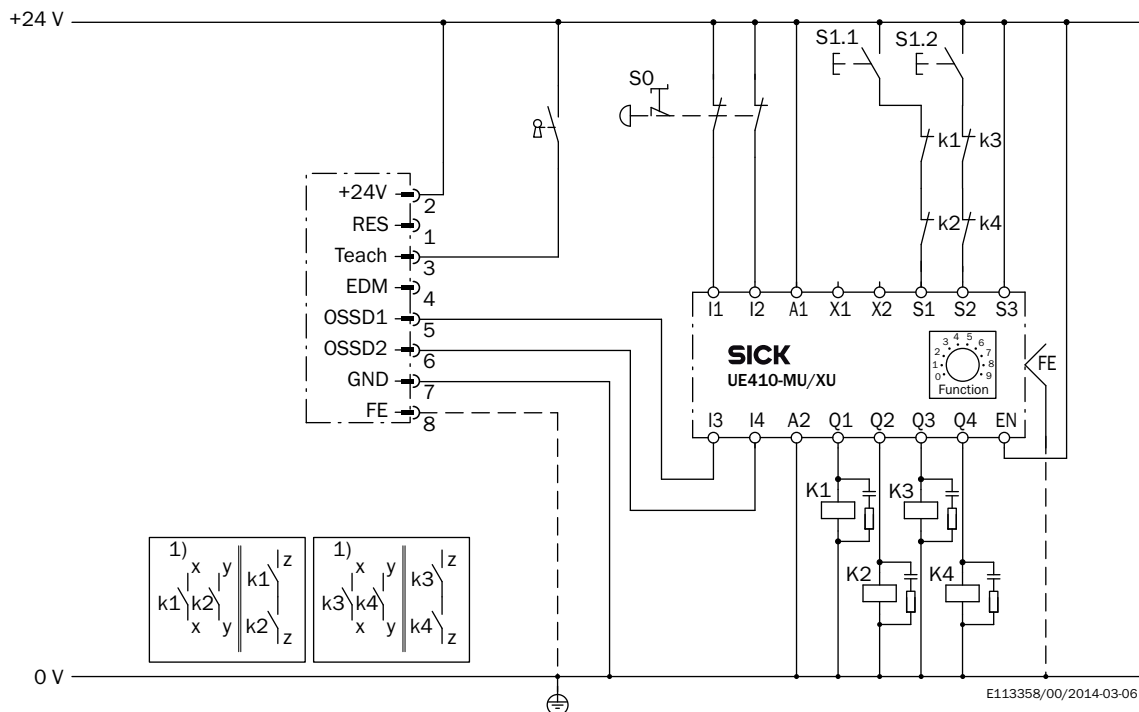


Connection diagram

Safety camera system on UE10-30S safety relay



Safety camera system on Flexi Classic safety controller



Task

The V200 Work Station Extended safety camera system can be integrated into a relay controller/contactors controller with the aid of the UE10-30S safety relay. Operation is with external device monitoring (EDM) and internal restart interlock.

Function

If the light path is clear and there are no errors in the inactive state of the UE10-30S, the status LED on the V200 Work Station Extended flashes (reset required). The system is ready for switch-on and waits for an input signal/switch-on signal. The system is en-

abled by pressing and releasing the S1 button. The OSSD1 and OSSD2 outputs carry power. The UE10-30S is switched on. On interruption of the light path, the UE10-30S is de-energized by the OSSD1 and OSSD2 outputs.

Possible faults

Cross-circuits and short-circuits on the OSSD1 and OSSD2 outputs are detected and will result in "lock-out." Malfunctions on the UE10-30S are detected. The shutdown function is retained. If the S1 button is tampered with (e.g., by jamming), the system will not re-enable the output circuits.

Comments

¹⁾ Output circuits: These contacts are to be connected to the controller such that, with the output circuit open, the dangerous state is disabled. For categories 4 and 3, the integration must be dual-channel (x/y paths). Single-channel integration in the control (z path) is only possible with a single-channel control and by taking the risk analysis into account.

Task

The V200 Work Station Extended safety camera system can be integrated into a relay controller/contact controller with the aid of the modular Flexi Classic (UE410-MU with expansion UE410-XU) safety controller. Operation is with external device monitoring and internal restart interlock on the V200 Work Station Extended as well as restart interlock for the emergency stop.

Function

When the light path on the V200 Work Station Extended is clear and the input conditions on the Flexi Classic are valid, the system is ready for switch-on and waits for an input signal/switch-on signal. The system's corresponding logic path is enabled by pressing and releasing the related S1 button. The related output on the Flexi Classic carries power. If the input conditions are no longer met, the related outputs on the Flexi Classic shut down.

Possible faults



Cross-circuits and short-circuits on the connection cables for the V200 Work Station Extended are detected and result in "lock-out." Malfunctions on the K1 to K4 contactors are detected. The shutdown function is retained. If the S1.x button is tampered with (e.g., by jamming), the system will not re-enable the output circuits.



Comments

¹⁾ Output circuits: These contacts are to be connected to the controller such that, with the output circuit open, the dangerous state is disabled. For categories 4 and 3, the integration must be dual-channel (x/y paths). Single-channel integration in the control (z path) is only possible with a single-channel control and by taking the risk analysis into account.

Recommended accessories

Other models and accessories → www.sick.com/V200_Work_Station_Extended

	Brief description	Type	Part no.
Terminal and alignment brackets			
	Mounting kit for mounting the sensor on the profile frame	Mounting kit	2045375
Plug connectors and cables			
	Head A: female connector, M12, 8-pin, straight Head B: cable Cable: drag chain use, PUR, halogen-free, shielded, 5 m	DOL-127SG05ME25KM0	2076541
	Head A: female connector, M12, 8-pin, straight Head B: cable Cable: drag chain use, PUR, halogen-free, shielded, 2.5 m	DOL-127SG2M5E25KM0	2076540
	Head A: female connector, M12, 8-pin, straight Head B: cable Cable: drag chain use, PUR, halogen-free, shielded, 7.5 m	DOL-127SG7M5E25KM0	2076542
	Head A: female connector, M12, 8-pin, angled Head B: cable Cable: drag chain use, PUR, halogen-free, shielded, 5 m	DOL-127SW05ME25KM0	2076548

Brief description		Type	Part no.
Programming and configuration tools			
	Teach-in pin for safety camera systems	Teaching pen	4052939
Sets and kits			
	Resolution set for 20 mm resolution and protective field size from 0.4 x 0.4 m to 1.0 m x 1.0 m	Resolution set 20 mm	2051336
	Resolution set for 24 mm resolution and protective field size from 0.4 x 0.4 m to 1.2 m x 1.2 m	Resolution set 24 mm	2051338
	Resolution set for 30 mm resolution and protective field size from 0.6 x 0.6 m to 1.5 m x 1.5 m	Resolution set 30 mm	2051339

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SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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