



HW19

Mobile 1D and 2D code identification for read ranges up to 16 m

SICK
Sensor Intelligence.

Advantages



SICK mobile handheld scanners – a good way to make your connection

Using modular connection technology, the mobile handheld scanners from SICK can be integrated into numerous fieldbus technologies such as PROFIBUS DP, PROFINET IO/RT, Ethernet TCP/IP, or EtherCAT®. When used in systems with fixed 1D and 2D cameras or RFID read/write devices, the AUX loop-in is an economical solution.



Especially when it comes to stationary track and trace systems, manual mobile code reading is often required as a back-up. This can be done economically with AUX loop-in.



This video tutorial gives an example of the materials and steps required for integration in a fieldbus network.



Simple PROFIBUS integration into large track and trace systems is possible using the Connection Device Fieldbus fieldbus module.



Simple integration into numerous fieldbus technologies and AUX loop-in for track and trace systems using modular connection technology



Reliable 2D code identification for challenging industrial applications

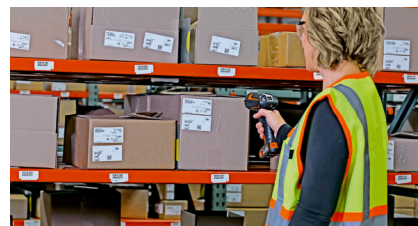
The quality of barcodes in industrial environments often leaves a lot to be desired because they are frequently poorly printed, contaminated, or damaged. The HW19 mobile handheld scanners achieve an efficient scanning performance even under these conditions because they come with a high resolution sensor and sophisticated algorithms for decoding barcodes. Their fast and precise data acquisition enables complex work processes to be executed smoothly. The HW199x standard variants are suitable for universal applications and short distances. The HW198x scanners are used for demanding tasks or read ranges up to 24 m.



Data collection in production: Traceability of products and processes with reliable code identification



Detection of tires in factory automation: high precision thanks to enclosure rating IP65/67 and rugged housing



Scanning processes in intralogistics: high productivity thanks to reliable read results even for several thousand scanning operations per day



Increase in productivity for manned forklift truck applications: no more time wasted while the driver repeatedly gets in and out of the vehicle



Universal code reading in logistics automation: reliable detection of codes from a variety of distances thanks to large read range



Use in high-bay warehouses and marshaling yards: effective reading of bar codes on pallets or stacked containers



Compact, rugged and shock resistant for harsh and demanding day-to-day work in industrial environments with read ranges up to 16 m



Technical data overview

Application	Industrial application
Readable code structures	1D codes, 2D codes, Stacked, Digimarc® (depends on variant)
Code resolution	$\geq 0.05 \text{ mm}^{1)}$ $\geq 2 \text{ mm}^{2)}$ $\geq 0.076 \text{ mm}^{3)}$ $\geq 0.152 \text{ mm}^{4)}$
Reading distance	0 mm ... 16,000 mm (depends on variant)
Sensor	1,280 px x 800 px
Ambient operating temperature	-30 °C ... +50 °C (depends on variant)
Enclosure rating	IP65 IP51 IP67 (depends on variant)
Shock resistance	50 drop tests onto concrete from a height of 2 m at -30 °C 50 drop samples at -30 °C ... +50 °C from 2 m height on concrete 20 drop samples at 25 °C, 55% rel. air humidity onto concrete from a height of 2.4 m Onto concrete from a height of 3 m
Ethernet	✓, TCP/IP, optional over external fieldbus module / ✓, TCP/IP, Optional, over external connection module / ✓, Optional, over external connection module (depends on variant)
PROFINET	✓, optional over external fieldbus module
EtherCAT	✓, optional over external fieldbus module
Serial	✓, RS-232 TTL
PROFIBUS DP	✓, optional over external fieldbus module
USB	✓
PS/2	✓
Bluetooth	✓

1) Close range.

2) Distance range.

3) Valid for Code 39.

4) Valid for Data Matrix code.

Product description

The HW19 mobile handheld scanners detect a large number of codes, including 1D, 2D and Digimarc codes. Variants with a read range up to 16 m allow a convenient scanning of codes from far away, even from a manned forklift truck. No more time-consuming getting on and off required for the driver. The rugged housing with an enclosure rating of IP65 or IP67 enables the mobile handheld scanners to withstand adverse ambient conditions. The cable and wireless variants deliver flexibility and mobility. Connection modules for integration into industrial fieldbuses such as PROFIBUS or Ethernet TCP/IP are available from SICK. The HW19 scanners with their powerful reading performance even under demanding working conditions ensure high throughputs and productivity.

At a glance

- Reliable 1D, 2D and Digimarc code reading over distances from a few centimeters up to 16 m
- Very rugged: Survives 50 falls from a height of 2.4 m and 7,500 impacts from a drop height of 1 m
- Industrial grade: Available with an enclosure rating of IP65 or IP67 and suitable for use down to -30 °C
- Good read feedback via LED, beeper, and vibration

Your benefits

- Scanning technology optimized specifically for industrial applications with significant scanning requirements and reading distances of up to 16 m
- Quick and reliable identification even on low-contrast or highly reflective codes and in harsh industrial environments
- Simple and flexible integration into industrial fieldbus networks using SICK connection technology
- Highly reliable, e.g., in cold-storage warehouses with temperatures as low as -30°C , thanks to IP65 or IP67 enclosure rating and rugged housing
- Wide range of accessories and easy configuration options for practical handling
- Simple and intuitive operation through multiple read confirmation

Fields of application

- Production control and traceability of products or components in the automotive, electronics, solar and consumer goods industries
- Warehouses and distribution centers, e.g., for incoming goods, order picking, and dispatch

Ordering information

Other models and accessories → www.sick.com/HW19

- **Readable code structures:** 1D codes, 2D codes, Stacked
- **Reading distance:** 150 mm ... 16,000 mm
- **Code resolution:** ≥ 0.05 mm (Close range.), ≥ 2 mm (Distance range.)
- **Application:** Industrial application
- **Note:** Additional accessories may be necessary for some communication interfaces (details available online)

Scanner design	Communication interface	Ambient operating temperature	Type	Part no.
Cable connection variant	Ethernet, PROFINET, EtherCAT®, Serial, PROFIBUS DP	–30 °C ... +50 °C	HW1980IFR-3SER KIT	6059466
	Ethernet, PROFINET, EtherCAT®, Serial, PROFIBUS DP, USB, PS/2	–30 °C ... +50 °C	HW1980IFR-3	6067057
	USB	–30 °C ... +50 °C	HW1980IFR-3USB KIT	6059465
Wireless variant	Ethernet, PROFINET, EtherCAT®, Serial, PROFIBUS DP, Bluetooth	–20 °C ... +50 °C	HW1981IFR-3SER-5 KIT	6059463
	Ethernet, PROFINET, EtherCAT®, Serial, PROFIBUS DP, USB, PS/2, Bluetooth	–20 °C ... +50 °C	HW1981IFR-3	6067058
	USB	–20 °C ... +50 °C	HW1981IFR-3USB-5 KIT	6059464

- **Readable code structures:** 1D codes, 2D codes, Stacked, Digimarc®
- **Reading distance:** 0 mm ... 837 mm
- **Code resolution:** ≥ 0.076 mm (Valid for Code 39.), ≥ 0.152 mm (Valid for Data Matrix code.)
- **Application:** Industrial application
- **Note:** Additional accessories may be necessary for some communication interfaces (details available online)

Scanner design	Communication interface	Ambient operating temperature	Type	Part no.
Cable connection variant	Ethernet, Serial, PROFIBUS DP, PROFINET, EtherCAT®, USB, PS/2	–30 °C ... +50 °C	HW1990ISR-3	2123084
	USB	–30 °C ... +50 °C	HW1990ISR-3USB	2123085
Wireless variant	Ethernet, USB, PS/2, Serial, PROFIBUS DP, PROFINET, Bluetooth, EtherCAT®	–20 °C ... +50 °C	HW1991ISR-3	2123086
	USB	–20 °C ... +50 °C	HW1991ISR-3USB-5	2123087

SICK AT A GLANCE

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.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com