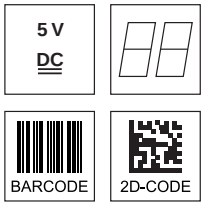
HS 6608 DPM

DPM hand-held scanner

en 01-2018/03 50138348



- Hand-held scanner for directly-marked codes (needle print, laser marking or direct print)
- Very sturdy, ergonomic housing
- Robust trigger button
- Built-in decoder
- Display for successful reading with LED, signal tone and vibration
- RS 232 or USB interface
- Operating temperature from -30 to +50 °C
- Protection class IP 65/IP 67

Accessories

(available separately)

- **RS 232 cable - voltage via pin 9**
  Part no. 50138353
- **RS 232 cable with power supply connection**
  Part no. 50138358
- **Power supply unit (100 … 240VAC)**
  Part no. 50138350
- **USB cable**
  Part no. 50138360
- **Wall mount**
  Part no. 50120444

Electrical connection

for USB cable (part no. 50138360)

USB type A	Signal
1	5VDC
2	Data -
3	Data +
4	GND

for RS 232 cable - voltage via pin 9 (part no. 50138353)

9-pin Sub-D	Signal
2	TXD
3	RXD
5	GND
9	5VDC

for RS 232 cable with power supply connection (part no. 50138358)

9-pin Sub-D	Signal
2	TXD
3	RXD
5	GND
	12VDC

Power supply unit
external
internal

Technical Data

Electrical data

Operating voltage U_B	5VDC ±10%
Current consumption	360mA

Interfaces

Interface types	RS 232 and USB
Trigger	via button

Types of codes

Bar codes	2/5 Interleaved, Code 39, Code 128, Code 93, Codabar, UPC/EAN, GS1 Databar
2D-codes	Data Matrix codes ECC 200, Aztec, PDF417, MicroPDF, QR Code

Optical data

Optical system	Imager 1280x960
Light source	alignment aid: 655nm laser diode, laser class 2 (IEC 60825-1:2014) direct illumination element: 2 LEDs warm white diffuse illumination element: LED ring red (634nm)
Reading distance	25 … 147mm (UPC/EAN 13, 100% or 0.33mm)

Mechanical data

Weight	304g (without cable)
Dimensions	185x77x132mm

Environmental data

Ambient temp. (operation/storage)	-30°C … +50°C / -40°C … +60°C
Relative humidity	5 … 95% (non-condensing)
Protection class	IP 65 / IP 67
Shock resistance	withstands multiple falls onto concrete from a height of 2.4m
Certifications	UL 60950-1, C22.2 No. 60950-1

Read field

Code type	Module size [mil]	Module size [mm]	From [mm]	To [mm]
Code 39	3	0.076	50	71
	5	0.127	50	71
UPC/EAN 13	13 (100%)	0.330	25	147
PDF 417	6.67	0.169	50	81
Data Matrix Code	5	0.127	10	63
	10	0.254	0	86
QR Code	5	0.127	10	63
	10	0.254	0	81

Notice:
Please notice that the real reading distances are also influenced by factors such as labeling material, printing quality, scanning angle, printing contrast etc., and may thus deviate from the reading distances specified here.

Additional information on the product and on configuring (code type release, number of digits, etc.) can be found in the operating instructions (Product Reference Guide). Download at www.leuze.com.

Order guide

		Part no.
HS 6608 DPM	DPM hand-held scanner with RS 232 and USB interface	50138140

Remarks

Operate in accordance with intended use!

- The product may only be put into operation by competent persons.
- Only use the product in accordance with the intended use.

Robust 2D-code hand-held scanner with integrated decoder for directly marked codes (DPM). These codes may be dot-peened or printed. Laser-etched codes on flat or round surfaces can also be detected.

Data transmission during keyboard-wedge operation via USB interface, or serial communication via RS 232 and USB interface.

For a functional unit, a hand-held scanner and corresponding cable and, if using the RS 232 on a PC, a power supply unit must be ordered.

Laser safety notices

ATTENTION, LASER RADIATION – LASER CLASS 2

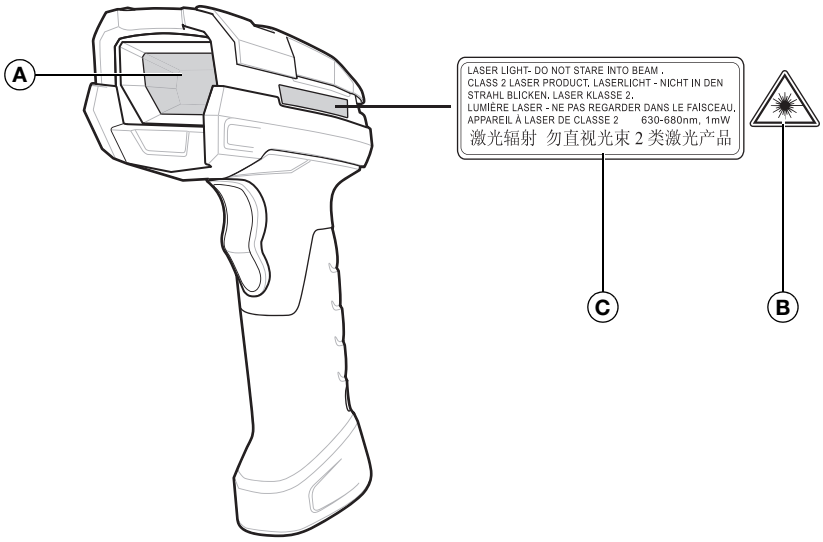
Never look directly into the beam!

The device satisfies the requirements of IEC 60825-1:2007 and IEC 60825-1:2014 (EN 60825-1:2007 and EN 60825-1:2014) safety regulations for a product in **laser class 2** as well as the U.S. 21 CFR 1040.10 and 1040.11 regulations with deviations corresponding to "Laser Notice No. 50" from June 24th, 2007.

- Never look directly into the laser beam or in the direction of reflecting laser beams!
  If you look into the beam path over a longer time period, there is a risk of injury to the retina.
- Do not point the laser beam of the device at persons!
- Intercept the laser beam with an opaque, non-reflective object if the laser beam is accidentally directed towards a person.
- When mounting and aligning the device, avoid reflections of the laser beam off reflective surfaces!
- CAUTION! Use of controls or adjustments or performance of procedures other than specified herein may result in hazardous light exposure.
- Adhere to the applicable legal and local regulations regarding protection from laser beams.
- The device must not be tampered with and must not be changed in any way.
  There are no user-serviceable parts inside the device.
  Repairs must only be performed by Leuze electronic GmbH + Co. KG.

NOTICE

Laser information and warning signs are firmly attached to the device.



A Laser exit opening
B Laser warning sign
C Laser information sign with laser parameters

HS 6608 DPM on serial PC interface

Required parts:

1x 50138140 HS 6608 DPM
1x 50138358 KY-HS-DDS-D9AJ2ARAA-020-T1
1x 50138350 NT HS6608-Schuko

Scanning the adjacent bar code sets the following interface parameters:

RS 232 at 9600 baud, 8 data bits, 1 stop bit, no parity, no prefix, no postfix

STANDARD RS-232

Configuration for the RS 232 Leuze standard protocol

Scanning the adjacent 2D-code sets the following interface parameters for the Leuze standard protocol:

RS 232 at 9600 baud, 8 data bits, 1 stop bit, no parity, prefix STX and postfixes <CR><LF>; Code 2/5 Interleaved with 10 places

HS 6608 DPM on MA 2xx*i*

Required parts:

1x 50138140 HS 6608 DPM
1x 50138353 KDS HS-SUB-9A-RJ41-AA-T1-028
1x 50113397 KB JST-HS-300
1x MA 2xxi fieldbus/industrial ethernet gateway

Scanning the adjacent 2D-code sets the following interface parameters for communication with the MA 2xx*i* gateway:

RS 232 transmission at 9600 baud, 8 data bits, 1 stop bit, no parity, postfixes <CR><LF>; Code 2/5 Interleaved with 10 places

HS 6608 DPM on MA 21

Required parts:

1x 50138140 HS 6608 DPM
1x 50138353 KDS HS-SUB-9A-RJ41-AA-T1-028
1x 50035421 KB 021 Z
1x 50030481 MA 21 100

Scanning the adjacent 2D-code sets the following interface parameters for communication with the MA 21 connector unit:

RS 232 transmission at 9600 baud, 7 data bits, 1 stop bit, even parity, postfixes <CR><LF>; Code 2/5 Interleaved with 10 places

Pin assignments KB 021 Z

Core color:	Signal	Terminal in the MA 21:
brown	RXD	26
white	TXD	27
blue	GND	28
red	VCC	30
black	GND	31
bare (shield)	PE	21

HS 6608 DPM on USB interface (keyboard emulation)

With this operating mode, a PC keyboard is emulated (Keyboard Wedge mode via USB). The read data are written directly into the currently activated program. The data can thereby be further processed in all standard programs.

Required parts:

1x 50138140 HS 6608 DPM

1x 50138360 KSS HS-USB-4A-RJ41-AA-T1-020

Scanning the adjacent 2D-code sets the following interface parameters for keyboard emulation via USB interface:

German USB keyboard emulation with <CR><LF>; Code 2/5 Interleaved with 10 places

HS 6608 on USB interface (COM port emulation)

With this operating mode, a COM interface is emulated (COM port emulation via USB). The read data are sent to a new COM interface and can be further processed by programs that expect data via COM interfaces. The drivers with which this COM interface is emulated can be downloaded at *www.leuze.com*.

Required parts:

1x 50138140 HS 6608 DPM

1x 50138360 KSS HS-USB-4A-RJ41-AA-T1-020

Procedure:

1. Plug the HS 6608 DPM hand-held scanner into a free USB port. The scanner acknowledges this with a tone sequence.
2. Scan the code shown below.
3. Install the USB serial driver when you are prompted to do so by Windows.
4. Open a terminal program or your program for the serial interface and select the new COM port.

COM port emulation on the next free
COM address with CR/LF as postfix.

Settings for reading directly marked Codes (DPM)

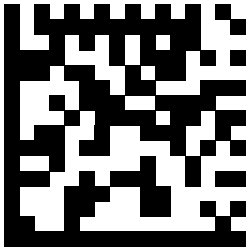
Unlike bar codes typically printed on labels, a direct part mark (DPM) is a symbol that is marked directly on an item's surface for permanent identification, using methods such as laser etching, dot peening, or direct-printing.

DPM Modes

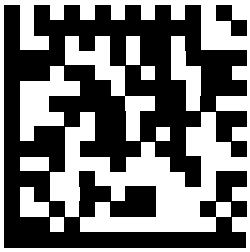
Select one of the following DPM modes based on the type of bar code being scanned. There are two DPM modes which are recommended for different sets of bar code characteristics. The combinations of these characteristics vary and it is recommended that all modes are tested on the target bar code to determine the best mode for the application.

Disable DPM Mode

No special processing occurs.



DPM Mode 1

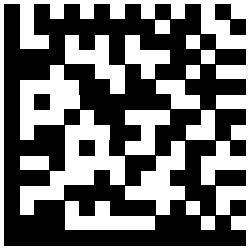


This setting optimizes decoding performance on smaller DPM codes, typically found on electronics and medical instruments, especially on smooth surfaces. These codes tend to be laser etched or direct-printed.

DPM Mode 2

This setting optimizes decoding performance on larger DPM codes, typically found on industrial parts, especially on rough, grainy, or visibly machined surfaces. These bar codes tend to be dot-peened or laser etched.

This is the factory default setting for the HS 6608 DPM device.

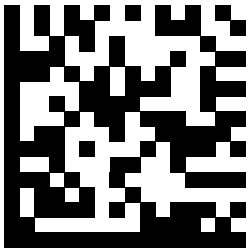


DPM Illumination Control

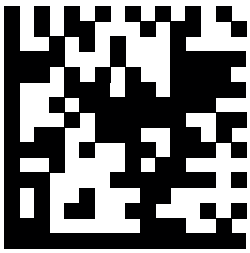
The following settings control the Illumination for DPM code reading.

Direct illumination

With this setting the scanner uses only the direct (warm white) illumination. It is recommended for use with dot-peened codes.
We recommend to tilt the part 30 degrees.



Indirect illumination



With this setting the scanner uses only the red diffuse illumination. It is recommended for use with laser etched codes on curved, rough, grainy, highly reflective, visibly machined surfaces or cylinders.

Automatic cycle illumination

With this setting the scanner cycles alternately between direct and indirect illumination. The scanner starts with the illumination used during the last successful decode.

This is the factory default setting for the HS 6608 DPM device.