Wireless Handheld Operating Panel 10.1"
HGW 1033-32

In combination with a BWH 001 base station and a safety-related PLC, the HGW 1033-32 is a wireless, intelligent manual operating unit with emergency stop function that enables the programming, visualization and diagnosis of processes and systems control.

The HGW 1033-32 can be coupled with machines via base stations, which allows the flexible application of the operating station.

The interfaces can be used to configure the terminal. The integrated battery pack enables 2 hours of operation at full capacity.
The output is shown on a 10.1" WXGA TFT color display. Additionally, three rotary encoders are integrated into the front of the HGW 1033-32.

Performance Data

Processor	EDGE2 Technology
Processor cores	2
Internal cache	32 kByte L1 Instruction Cache 32 kByte L1 Data Cache 512 kByte L2 Cache
Internal program and data memory (DDR3 RAM)	2048-Mbyte
Internal remnant data memory	512-kbyte MRAM
Internal storage device	512-Mbyte microSD card, expandable
Internal I/O	no
Battery	4170 mAh Lithium-Ion Runtime: > 2 h continuous operation with new battery Charge/status display via the on/off button
Charging time	3 h via USB-C as well as base station at 25 °C with a rising temperature and active use of the device, the charge time may increase
Interfaces	1x USB 2.0 Type-A (Host) 1x USB 2.0 Type-C (Dual Role Port charge: USB-PD Profile 4: 20 V, 3 A, 60 W) 1x WLAN dual-band (2.4 GHz, 5 GHz simultaneously)

Internal interface connections and devices	1x TFT color display 1x USB (touch connection)
Control Elements	Touch screen (multi-touch, projective capacitive) 1x confirmation switch (2 normally open, 3-stage) 1x key switch (2 normally open) 1x illuminated emergency stop switch (2 normally closed) 1x illuminated on/off button (with application interface) 3x rotary encoder (analyzable via the application)
Display Resolution	10.1" TFT color display, 16:10, portrait mode WXGA 800 x 1280 pixels
Status LEDs	3x front (controllable via application) 1x rear (boot status/controllable via the application) 1x normally open gate (shows power and charge status)
Signal generator	yes (at least 83 dB at 30 cm)
Real-time clock	yes (buffered circa 3 days via internal battery)
Temperature sensors	4 (2x LP, 1x CPU, 1x battery)
Cooling	passive (fanless)
Coupling display	7-segment LED, two-digit
Input voltage measurement	yes

Electrical Requirements

Charging voltage magnetic connector	typically +19 V DC	
	minimum +15 V DC	maximum +24 V
Charging current	via base station: up to 2.5 A at 15.5 V	
USB host current load	maximum 0.5 A	

Display

Type	10.1" TFT LCD color display
Active range	135.6 (V) x 216.96 (H) mm
Resolution	WXGA 800 x 1280 pixels
Color depth	18-bit RGB (16.7 million colors)
LCD mode	normal black
LCD polarizer	transmissive
Pixel size	0.1695 x 0.1695 mm
Backlighting	LED, adjustable
Contrast	typically 800 : 1
Brightness	typically 300 cd/m²
Angle CR ≥ 10	85° from all sides

Input

	Input	Multi-touch screen (PCAP)
	Emergency stop switch	1
	Confirmation switch	1 (3 switch positions with panic function)
	Key switch	1 (2 switch positions)
	Power button	1
	Rotary encoder	3

Environmental Conditions

	Storage temperature	-5 ... +50 °C (in transport mode)	
	Environmental temperature discharging	0 ... +50 °C	
	Environmental temperature charging	0 ... +40 °C	
	Humidity	10-95 %, non-condensing	
	Installation altitude above sea level	0-2000 m without derating > 2000 m up to a maximum of 5000 m with derating of the maximum environmental temperature by 0.5 °C per 100m	
	Operating conditions	pollution degree 2	
	EMC resistance	EN 61000-6-2:2007 (industrial area); EN 61000-6-7:2015 (immunity industrial functional safety) (increased requirements according to IEC/EN62061)	
	EMC noise generation	EN 61000-6-4	
	Shock resistance	EN 60068-2-27	150 m/s²
	Vibration resistance	10 m/s²	
	Protection type	EN 60529	IP54 (with USB cover only)
	Free fall (rough handling)	DIN EN 60068-2-31	1000 mm
	Free fall (with packaging)	IEC 60068-2-32	1000 mm

WLAN 2.4 GHz

	Frequency range	2399.5-2484.5 MHz
	Transmission power max.	20 dBm (100 mW) EIRP
	Channels	1-13 (2412-2472 MHz)

WLAN 5 GHz

	Frequency range	5150-5350 MHz 5470-5725 MHz
	Transmission power max.	23 dBm (200 mW) EIRP
	Channels	36-48 (5180-5240 MHz) 149-165 (5745-5825 MHz)

Antennae

	Number	2
	Frequency range	2.4/5 GHz
	Transmission power max.	25 W
	Antenna gain	2.4 GHz-4 dBi Peak Gain 5 GHz-4 dBi Peak Gain
	Impedance	50 Ω
	Transmission angle/characteristic	Transmission characteristic: omnidirectional Polarization: linear

Article Number and Miscellaneous

	Article number	12-246-1033-32
	Operating system	Salamander
	Approvals	CE, TÜV-Austria EG-type-examined
	Safety	SIL 3, PL e, Kat 4
	Dimensions	226 x 276 x 96 mm (W x H x D)
	Material	housing: PC/ASA color: RAL7024 front: glass 1.1 mm
	Weight	1.39 kg