Nano-magna

Easy Movement

The Nano-magna is our largest joystick transmitter, which is particularly suitable for complex applications. Maximum number of control elements possible. Low weight despite the size.

> **Bedienelemente**

Joysticks	– Up to 8 single-axis (MSA1)* – Up to 4 dual-axis (MSA2)* – Up to 2 three-axis (MSA3)*
Joystick options	– Stepped travel activation – Embedded push button (MSA2) – Travel limiting gates (MSA2)
Digital on/off switch	Up to 39 on/off functions available via toggle switches, push buttons, rotary switches, key switch, etc.*
Additional analog functions	Up to 4 analog devices such as potentiometers
Cable control interface	1 x CAN I/O for machine control and feedback

*Consult NBB for available combinations.

Additional protectors (optional)

4.3 inch TFT colour display (customer-specific programming)
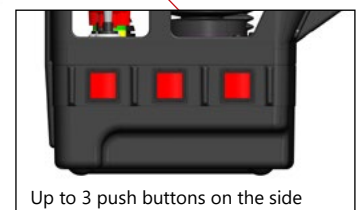
Compact, ergonomic housing

Push buttons, rotary switches, potentiometers, toggle switches, key switch, etc.
(different combinations possible)

Up to 3 push buttons on the side

Two NiMH batteries (7.2 VDC / 2,400 mAh)

Up to 3 push buttons on the side

Illustration contains optional equipment.

> **Technology**

SMJ	Proximity detection	Teach-in function	Multi-user system	NBB battery system	LBT frequency search	Data feedback	Inclination sensor

Technical data

Technical information	
Frequency range	419 MHz, 429 MHz, 434 MHz, 868 MHz, 915 MHz, (2.4 GHz) (depending on customer requirements and country-specific regulations)
RF power	≤ 1 mW, ≤ 10 mW, ≤ 25 mW (depending on frequency range and country-specific regulations)
Typical working range	≤ 100 m (depending on environmental conditions)
Frequency channel search, automatic	LBT-Modus (Listen Before Talk) (depending on country and function configuration)
Antenna	Integrated
Typical response time of the control commands	Approx. 50 ms
LF modulation method	FSK / GFSK
Datarate	9,600 Baud (Bit/sec.) at SubGHz / 250 k at 2.4 GHz
Ø Current consumption (depending on the expansion level)	– approx. 140 mA (with LED 7-segment display) – approx. 250 mA (with LCD display)
Prewarning time „Battery empty"	Approx. 15 minutes
Acoustic response	Integrated buzzer, customized setting
LCD/TFT display	Optional: 4.3 inch graphic TFT color display (480 x 272 px), customized illustration possible
Energy saving function (Standby)	Standard: after 60 min. Optional: Setting according to customer requirements (continuous operation possible)

Machine data	
Ambient operating temperature	-20 °C up to +70 °C
Weight	2,800 g
Dimensions (L x W x H)	354 mm x 229 mm x 141 mm
Case material	Impact resistant, glass fiber reinforced polyamide
Status display (7-segment, depending on the configuration)	1x (2-digit)

Equipment safety	
CE certification	Yes
Protection class	IP65
Data security	Addressing of each transmitter by unique bit combination
EMERGENCY STOP or STOP function	Yes (sending stop telegrams for 2 sec.)

Power supply	
Power supply	NiMH battery (7.2 VDC / 2,400 mAh), pluggable
Operating time	Up to 10 hours
Loading form	Standard: Externally, via a separate charger Optional: Via additionally built-in CAN bus connector with integrated battery charging functionality
Automatic battery compartment switching	Yes
Charger available for (UE)	110 VAC – 230 VAC, 12/24 VDC
Plug form AC (adapter set)	EU, USA, JP, GB, AU
Plug form DC	Car charger plug

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