Nano-magna Ex

The Nano-magna Ex radio transmitter has been developed and certified in accordance with the European standards EN 60079-0 and EN 60079-11 in compliance with the European Directive 2014/34/EU for use in areas with potentially explosive atmospheres.
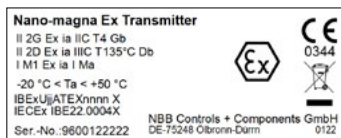
Nano-magna Ex Transmitter
II 2G Ex ia IIC T4 Gb
II 2D Ex iia IIIC T135°C Db
I M1 Ex ia I Ma
-20 °C < Ta < +50 °C
IBExUjiATEXnnnn X
IECEx IBE22.0004X
Ser.-No.:9600122222

CE
0344

NBB Controls + Components GmbH
DE-75248 Olbronn-Durrn
0122

The radio transmitter may be used in potentially explosive atmospheres as specified on the type plate. (Example type plate)

Classification

	2G	Combustible gas, mist or liquid may occasionally occur.
	3G	Combustible gas, mist or liquid can normally not occur or only for a short time.
	2D	Combustible dust may occasionally occur.
	3D	Combustible dust cannot normally occur or can only occur for a short time.
	M1	Methane and coal dust can occur constantly.
Gas groups	**I**	Methane
	IIA	Propane
	IIB	Ethylene
	IIC	Hydrogen
Dust groups	**IIIA**	Combustible flyings
	IIIB	non-conductive combustible dust
	IIIC	Conductive combustible dust
Temperature class (Surface temperature)	**T1**	400 °C
	T2	300 °C
	T3	200 °C
	T4	135 °C

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

4.3 inch TFT colour display
(customer-specific programming)

Compact, ergonomic housing

Up to 3 push buttons on the side

2x NiMH Ex-batteries (7.2 VDC / 1,800 mAh)

Up to 3 push buttons on the side

Illustration contains optional equipment.

> Technology

SMJ	Teach-in function	Multi-user system	NBB battery system	LBT frequency search	Data feedback	Inclination sensor	IECEx / ATEX

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	≤10 mW
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 (SubGHz) / O-QPSK (2.4 GHz)
Datarate	9.600 Baud (Bit/sec.) at SubGHz / 250 k at 2.4 GHz
Ø Current consumption (depending on the expansion level)	Approx. 160 mA (with LCD)
Prewarning time „Battery empty"	Approx. 15 minutes
Acoustic response	–
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 +50 °C
Weight	2.900 g
Dimensions (L x W x H)	354 mm x 229 mm x 170 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	2x NiMH Ex-batteries (7.2 VDC / 1,800 mAh), pluggable
Operating time	Up to 15 hours
Loading form	Externally, via a separate charger
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