nbb

Nano-magna Ex

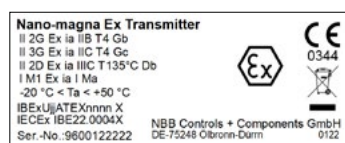### II 2G Ex ia IIB T4 Gb / II 3G Ex ia IIC T4 Gc / II 2D Ex ia IIIC T135 °C Db / I M1 Ex ia I Ma

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 IIB T4 Gb
II 3G Ex ia IIC T4 Gc
II 2D Ex ia IIIC T135°C Db
I M1 Ex ia I Ma
-20 °C < Ta < +50 °C
IBExUljiATEXnnnn X
IECEx IBE22.0004X
Ser.-No.:9600122222
NBB Controls + Components GmbH
DE-75248 Ölbronn-Dürrn
CE 0344
0122

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

Classification

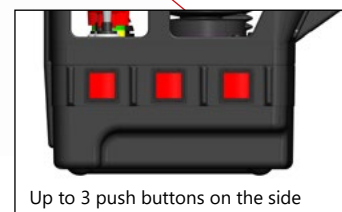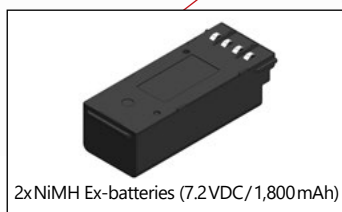|		
	2G	Combustible gas, mist or liquid may occasionally occur.
	3G	Combustible gas, mist or liquid can normally not occur or only for a short time.
	2D	Combustible dust may occasionally occur.
	3D	Combustible dust cannot normally occur or can only occur for a short time.
	M1	Methane and coal dust can 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

4.3 inch TFT colour display (customer-specific programming)

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

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	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	Glass fiber reinforced polyamide (electrically conductive)
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

Status 11/22 · Subject to technical changes.