

## HyPro+



The latest further development of the HyPro series extends the HyPro-8 with a 3.2 inch TFT colour display. This allows the display of any data feedback in high resolution. Configurable and programmable via NBB programming tools.

### > Operating elements

Joysticks	Up to 8 single-axis (MSA1)
Joystick options	<ul style="list-style-type: none"> <li>– Black or red protective boots</li> <li>– Stepped travel activation</li> </ul>
Digital on/off switch	<ul style="list-style-type: none"> <li>– Up to 16 on/off functions available via toggle switches, push buttons, rotary switches, key switch, etc.*</li> <li>– Deck of push buttons included</li> </ul>
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 NNB for available combinations.

Additional dust and shock protection  
 – protectors (optional)  
 – bellows joysticks (optional)

3.2 inch TFT colour display  
 (customer-specific programming)

Compact, ergonomic housing



### > Technology



SMJ



Proximity Detection



Teach-In function



Multi-user system



NBB battery system



LBT frequency search



Data feedback



Inclination sensor



Radiokey

## 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. 20 ms (SubGHz) / 5 ms (2.4 GHz)
LF modulation method	FSK/GFSK
Baud rate (depending on customer requirements)	9600 Baud (Bit/sec.) at SubGHz 250 k at 2.4 GHz
Ø Current consumption (depending on the expansion level)	Approx. 100 mA
Prewarning time „Battery empty“	Approx. 15 minutes
Acoustic response	Integrated buzzer, customized setting
LCD/TFT display	3.2 inch TFT-display (800 x 480 px) with customized design
Energy saving function (stand by)	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	1500 g
Dimensions (L x W x H)	280 mm x 160 mm x 141 mm (without protectors)
Case material	Impact resistant glass fiber reinforced polyamide

### > Equipment safety

CE certification	Yes
IP-Protection class	IP67
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 / 2400 mAh), pluggable
Operating time	Up to 24 hours
Loading form	– Externally, via a separate charger – Optional: via additionally built-in CAN bus connector with integrated battery charging functionality
Available for (UE)	230 VAC, 110 VAC, 12/24 VDC
Optional plug shape	EU, USA, JP, GB, AU