



KONGSBERG

cNODE® MiniS 3X-XXX P



cNODE® MiniS Transponder with high accuracy pressure sensor

The Kongsberg cNODE MiniS P series are SSBL and LBL transponders, with built-in high accuracy strain gauge pressure sensors.

These units are designed for positioning of ROV's, drones/AUV's, towed bodies and structures where additional depth data or depth aiding is required.

The cNODE MiniS P pressure sensor data can be reported on the back of the SSBL navigation reply pulse, without the need for additional telemetry.

A range of models with different pressure sensors are available to maximise the accuracy of the reading. The 100 m full scale rated unit is ideal for windfarm installation support work, whereas the 1000 m and 4000 m models are suited for deeper water research, construction, towfish and AUV operations.

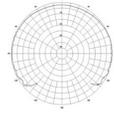
The Transponder includes all the features of the standard MiniS models, can be configured by RS232 line or by acoustic telemetry and is fully compatible with HiPAP®, μ PAP® and cPAP® medium-frequency underwater positioning systems for precise ranging and positioning utilizing Cymbal acoustic wideband protocol and FSK signaling.

cNODE MiniS has a compact housing for the transponder electronics which can be powered both by the internal rechargeable battery or external power 24 VDC supply. The power level for the transducers can be stepped in 4 levels depending on range and conditions.

- 500+ Cymbal Wideband Channels
- SSBL and LBL Ranging
- Internal Pressure sensor
- Responder Mode
- Rechargeable battery Li-Ion
- External power supply
- Choice of transducers
- Works with HiPAP, μ PAP and cPAP
- RS232 Comms to setup and change channel



ACOUSTIC SPECIFICATION

Transducer type	180	40V
Transducer beam pattern		
Beam coverage	180° vertical	40° vertical
Max source level	188 dB	203 dB
Trigger level	<85 dB	<80 dB
Range capability*)	3000+ m	5000+ m

*) Range capability is depending on transponder's transmit power setting, vessel's acoustic system and influence of ambient noise and ray bending.

TECHNICAL DATA cNODE MiniS 3x-xxx-P

Operating frequency	20-30 kHz (MF)	
Signal type	Cymbal wideband and FSK	
Responder and beacon mode	Yes	
Range accuracy	0.02 m	
Pressure sensor accuracy	0.05 % of sensor full scale	
Transponder depth rating	100 m / 1000 m / 4000 m (depending on pressure sensor model)	
External power supply	24 VDC / 1 A	
Housing	Aluminium	
Physical characteristics	Weight in kg (air / water)	Size in mm (length x diameter)
-models with 40V transducer	4.6 / 2.1	321 x Ø105
-models with 180 transducer	4.3 / 2.1	306 x Ø105

ORDER INFORMATION

cNODE model	MiniS 30-180 P	MiniS 31-180 P	MiniS 31-40V P	MiniS 34-180 P	MiniS 34-40V P
Part no.	470212	443380	443391	443399	443303
Depth rating	100 m	1000 m	1000 m	4000 m	4000 m
Transducer	180°	180°	40°	180°	40°

ACCESSORIES

Item	Battery charger	Floating collar	Transducer guard	Transit case for 2x MiniS
Part no.	404199	442750	439442	436669