

Nexus NB

The Next Generation
in Industrial Communications



Send Bi-Directional Control Signals Over Power Conductors

Nexus NB™ - by Conductix-Wampfler - is a new and ultra-reliable way to send industrial communications through power conductors. Using the inherent advantages of narrowband communications, Nexus NB takes the transmission of core control signals over power conductors to a new level. Nexus NB offers:

- Low latency
- High-reliability due to a high signal-to-noise ratio
- No signal loss up to 500 meters
- No communication errors, owing to its unique packet handshake communications



General System Functions

Nexus NB™ uses state-of-the-art narrowband technology that allows bidirectional, packetized data transmission over power conductors. The packetized data communications employ a digital handshake to ensure that both devices acknowledge that the packets have been successfully sent and received. This technique sends control signals reliably between devices over phase power conductors, and even through sliding brush/shoe contacts such as conductor bars or slip rings.

The **Nexus NB** system can be employed in any new conductor installation or an existing installation. The system eliminates the need for additional signal conductors and it can replace or augment radio controls. Nexus NB employs a simple one-to-one mapping scheme to make installation fast and easy.

Features and Benefits

- Reliable and robust communication using IEEE standard 1901.2 protocol for data transmission
- Bi-directional communication
- Packetized data transmission up to 500 meters over conductor bar. (Need a longer length? Contact the factory.)
- Operates on equipment moving at speeds up to 5 meters/second
- Maximum response time is less than 92ms
- The units are designed to comply with IEC 61508 at SIL2
- Includes four force-guided safety relays



Dimensions and Specification

- Input signals: 120 VAC only
- Output signals: Dependant on what devices are connected to the Common on the relay outputs.
- Conforms to EN 55011 Class A for radiated emissions
- Conforms to EN 55022 Class B for conducted emissions
- FCC compliant
- Vibration tested to IEC 60068-2-6 Table B.1



Specifications	
Operating Temp	-20°C to +50°C
Storage Temp	-40°C to +70°C
Input Voltage	90 to 280 VAC, or 18 to 30 VDC
Control Inputs Voltage	120 VAC
Control Outputs Rated Load	Resistive load: 5A at 250VAC Inductive load: 2A at 250VAC Resistive load: 5A at 30VDC Inductive load: 2A at 30VDC
Power Line Signal Voltage (Max)	480 VAC
Enclosure	Plastic IP66 NEMA 4X
Enclosure Dimensions (inches)	8.59 wide x 8.59 high x 5.11 deep
Cable Length	6 ft.



Enclosure Dimensions: 8.6" High x 8.6" Wide x 5.1" Deep

Application Examples

Nexus NB™ is the ideal device to handle control signals to and from a variety of devices.

- Radio Signals
- Limit Switches
- Push Buttons
- Alarms
- Lights
- Actuators
- Motor Controls
- Sigals to Enable/Disable VFDs
- Digital Inputs and Outputs
- Valve Controls

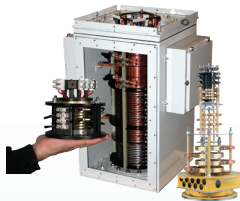
Input and Output Options

Kit Part No.	Unit Part No.	Description	Inputs/Outputs
XA-583030	XA-583032	Primary transceiver	16 inputs / 16 outputs
	XA-582987	Secondary transceiver	16 inputs / 16 outputs
XA-583045	XA-583040	Primary transceiver	08 inputs / 08 outputs
	XA-583044	Secondary transceiver	08 inputs / 08 outputs
XA-583052	XA-583047	Primary transceiver	16 inputs / 0 outputs
	XA-583048	Secondary transceiver	00 inputs / 16 outputs
XA-583059	XA-583057	Primary transceiver:	08 inputs / 00 outputs
	XA-583044	Secondary transceiver	00 inputs / 08 outputs

Nexus NB can reduce the number of control conductors needed in a variety of power systems:



Festoon Systems



Slip Rings



Cable Reels



Copper Cables

www.conductix.com

Conductix-Wampfler

has just one critical mission:

To provide you with energy and
data transmission systems that
will keep your operations up and
running 24/7/365.

To contact your nearest sales
office, please refer to:

www.conductix.us

