APTER POWER

INDUSTRIAL MACHINERY MONITORING PRODUCT

146031-01

10Base-T/100Base-TX TDI I/O Module

Bently Nevada 146031-01 is the copper Ethernet I/O module for the 3500/22M Transient Data Interface. It provides autosensing 10Base-T/100Base-TX communication through an RJ-45 connection.

IDENTITY	VERIFIED VALUE	TRADE	VERIFIED VALUE
Manufacturer	Bently Nevada	Country of origin	USA
Model	146031-01	HS code	8537101190
Product	10Base-T/100Base-TX TDI I/O Module	Ship from	Xiamen, Fujian, China
Family	3500/22M Transient Data Interface	Dimensions	

DOCUMENT SCOPE

Exact model identity, supported configuration data, installation checks, applications, precautions and controlled acceptance records.

MODEL-SPECIFIC ENGINEERING NOTE

Install 146031-01 in the full-height rear slot paired with the 3500/22M TDI. Use shielded Category 5 copper Ethernet, keep the segment within 100 m and verify the rack signal-common grounding arrangement before network commissioning.

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Verified Product Record

PARAMETER	VERIFIED VALUE
Country of origin	USA
HS code	8537101190
Ship from	Xiamen, Fujian, China
Ethernet	10Base-T/100Base-TX autosensing
Standard	IEEE 802.3
Connector	RJ-45
Maximum cable length	100 m
Protocols	BN Host and BN TDI over TCP/IP
Operating temperature	-30 to +65 degC
Storage temperature	-40 to +85 degC
Humidity	95% non-condensing
Rack space	1 full-height rear slot

Installation Boundary

ENGINEERING BOUNDARY

Install 146031-01 in the full-height rear slot paired with the 3500/22M TDI. Use shielded Category 5 copper Ethernet, keep the segment within 100 m and verify the rack signal-common grounding arrangement before network commissioning.

CHECK	REQUIRED RECORD
Identity	146031-01
Installed arrangement	Position, mating hardware, cable and termination
Configuration	Associated module or monitor channel
Acceptance	Diagnostics and controlled functional proof

SOURCE BOUNDARY

Baker Hughes / Bently Nevada publication 161581 Rev. AC. Apply only the exact ordering-code values shown in this document and verify the installed marking before work.

System Role and Verification

Bently Nevada 146031-01 is the copper Ethernet I/O module for the 3500/22M Transient Data Interface. It provides autosensing 10Base-T/100Base-TX communication through an RJ-45 connection.

IDENTITY

Record 146031-01 from the physical marking.

INTERFACE

Document every mating part, connector and cable before disturbance.

CONFIGURATION

Confirm the associated system and channel using manufacturer records.

ACCEPTANCE

Restore the documented arrangement and prove operation before release.

Controlled Installation Checklist

NO.	CHECK
1	Verify the 146031-01 part number before removing the rear module.
2	Remove any incompatible RIM I/O before inserting a TDI I/O module.
3	Install only one primary TDI network I/O module behind the TDI.
4	Use shielded Category 5 cable with RJ-45 connectors.
5	Keep the copper Ethernet segment within 100 m.
6	Connect rack Signal Common to the approved single-point instrument ground when required.
7	Set the Power Input Module grounding selector as directed for the chosen Signal Common arrangement.
8	Verify link speed, IP communication, rack configuration access and data transfer before release.

Applications and Model-Specific FAQ

SYSTEM 1 HOST NETWORKING

Carries TDI data to compatible System 1 condition-monitoring software.

3500 RACK CONFIGURATION

Provides the Ethernet path used by compatible 3500 configuration software.

PLANT COPPER LAN INTEGRATION

Connects the rack through a shielded Category 5 RJ-45 segment.

TDI REAR-I/O REPLACEMENT

Restores the exact copper network interface behind the 3500/22M module.

QUESTION	ANSWER
What network medium does 146031-01 use?	It is the 10Base-T/100Base-TX copper Ethernet I/O module for the 3500/22M TDI.
Which connector is fitted to 146031-01?	The official datasheet specifies an RJ-45 connection for 10Base-T/100Base-TX Ethernet cabling.
How long may the Ethernet cable from 146031-01 be?	The copper Ethernet segment is limited to 100 metres or 328 feet.
Which protocols pass through 146031-01?	It carries BN Host Protocol and BN TDI Protocol over Ethernet TCP/IP.
Can 146031-01 be installed while a 3500/20 RIM I/O remains in the rack?	No. The manufacturer warns that the RIM I/O must be removed before TDI I/O and TDI installation to avoid damage.
How many primary TDI network I/O modules may accompany a TDI using 146031-01?	Only one Transient Data Interface I/O module may be installed at a time behind or above the TDI.
What grounding check is required around 146031-01?	Verify the Signal Common single-point instrument-ground connection and the Power Input Module HP selector position for the approved rack arrangement.
What proves 146031-01 is ready for service?	Confirm RJ-45 link, negotiated Ethernet operation, correct rack address, configuration access, System 1 data transfer and no unexplained diagnostics.

Precautions and Related Products

NO.	PRECAUTION
1	Verify the 146031-01 part number before removing the rear module.
2	Remove any incompatible RIM I/O before inserting a TDI I/O module.
3	Install only one primary TDI network I/O module behind the TDI.
4	Use shielded Category 5 cable with RJ-45 connectors.
5	Keep the copper Ethernet segment within 100 m.
6	Connect rack Signal Common to the approved single-point instrument ground when required.
7	Set the Power Input Module grounding selector as directed for the chosen Signal Common arrangement.
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Related Bently Nevada Products on Apter Power

MODEL	RELATION	APTER POWER PAGE
140471-02	Bently Nevada machinery-monitoring component	View 140471-02
140482-01	Bently Nevada machinery-monitoring component	View 140482-01
143729-01	Bently Nevada machinery-monitoring component	View 143729-01
147663-01	Bently Nevada machinery-monitoring component	View 147663-01
149844-01	Bently Nevada machinery-monitoring component	View 149844-01
149992-02	Bently Nevada machinery-monitoring component	View 149992-02
3500-05-01-02-01-00-01	Bently Nevada machinery-monitoring component	View 3500-05-01-02-01-00-01
3500-15-04-04-114M5330-01	Bently Nevada machinery-monitoring component	View 3500-15-04-04-114M5330-01

MANUFACTURER SOURCE RECORD

3500/22M Transient Data Interface Module Datasheet
Baker Hughes / Bently Nevada publication 161581 Rev. AC

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