

INDUSTRIAL MACHINERY MONITORING PRODUCT

146031-02

100Base-FX Fiber-Optic TDI I/O Module

Bently Nevada 146031-02 is the 100Base-FX fiber-optic I/O module for the 3500/22M Transient Data Interface. It uses full-duplex multimode Ethernet and an MT-RJ male module connection.

IDENTITY	VERIFIED VALUE	TRADE	VERIFIED VALUE
Manufacturer	Bently Nevada	Country of origin	USA
Model	146031-02	HS code	8537101190
Product	100Base-FX Fiber-Optic 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 146031-02 in the full-height rear slot matched to the TDI and use a multimode cable with an MT-RJ female mating connector. Verify polarity, cleanliness, grounding and the documented maximum fiber distance before enabling host data transfer.

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146031-02

Verified Product Record

PARAMETER	VERIFIED VALUE
Country of origin	USA
HS code	8537101190
Ship from	Xiamen, Fujian, China
Ethernet	100Base-FX full-duplex multimode
Standard	IEEE 802.3u
Module connector	MT-RJ male
Required cable connector	MT-RJ female
Maximum cable length	2000 m
Protocols	BN Host and BN TDI over TCP/IP
Operating temperature	-30 to +65 degC
Humidity	95% non-condensing
Rack space	1 full-height rear slot

Installation Boundary

ENGINEERING BOUNDARY

Install 146031-02 in the full-height rear slot matched to the TDI and use a multimode cable with an MT-RJ female mating connector. Verify polarity, cleanliness, grounding and the documented maximum fiber distance before enabling host data transfer.

CHECK	REQUIRED RECORD
Identity	146031-02
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 146031-02 is the 100Base-FX fiber-optic I/O module for the 3500/22M Transient Data Interface. It uses full-duplex multimode Ethernet and an MT-RJ male module connection.

IDENTITY

Record 146031-02 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	Confirm the complete 146031-02 marking before installation.
2	Remove a 3500/20 RIM I/O before installing the TDI I/O arrangement.
3	Use only one primary TDI network I/O module at the TDI position.
4	Use multimode 100Base-FX cable with an MT-RJ female connector at the module.
5	Keep the fiber route within the published 2000 m maximum.
6	Inspect and clean both optical faces and verify transmit/receive polarity.
7	Preserve the approved Signal Common and rack-ground arrangement.
8	Prove optical link, TCP/IP communication, rack access and dynamic-data transfer before release.

Applications and Model-Specific FAQ

LONG-DISTANCE SYSTEM 1 LINK

Extends TDI host communication over multimode fiber within the published distance.

ELECTRICALLY ISOLATED PLANT NETWORK

Uses optical media between the rack and compatible host network equipment.

HIGH-INTERFERENCE ENVIRONMENTS

Provides fiber transport where copper network exposure is undesirable.

FIBER TDI REAR-I/O REPLACEMENT

Restores the specified 100Base-FX interface behind the installed 3500/22M.

QUESTION	ANSWER
What distinguishes 146031-02 from the copper TDI I/O execution?	146031-02 provides full-duplex multimode 100Base-FX fiber Ethernet rather than an RJ-45 copper interface.
Which mating connector is required at 146031-02?	The module has an MT-RJ male connection, so the fiber cable must use an MT-RJ female connector.
What is the maximum multimode distance for 146031-02?	The current manufacturer datasheet permits up to 2000 metres or 6560 feet.
Which Ethernet standard applies to 146031-02?	Its 100Base-FX interface conforms to IEEE 802.3u.
What optical checks should precede power-up of 146031-02?	Inspect and clean the MT-RJ faces, verify transmit/receive polarity, cable type, bend control and end-to-end loss.
Can 146031-02 and 146031-01 be installed simultaneously as primary TDI network interfaces?	No. The TDI supports only one primary Transient Data Interface network I/O module at a time.
Does 146031-02 change the TDI host protocols?	No. It still transports BN Host Protocol and BN TDI Protocol using Ethernet TCP/IP.
Which final records belong to a 146031-02 fiber acceptance test?	Retain connector inspection, polarity, route length, link state, IP communication, configuration access, data transfer and final diagnostics.

Precautions and Related Products

NO.	PRECAUTION
1	Confirm the complete 146031-02 marking before installation.
2	Remove a 3500/20 RIM I/O before installing the TDI I/O arrangement.
3	Use only one primary TDI network I/O module at the TDI position.
4	Use multimode 100Base-FX cable with an MT-RJ female connector at the module.
5	Keep the fiber route within the published 2000 m maximum.
6	Inspect and clean both optical faces and verify transmit/receive polarity.
7	Preserve the approved Signal Common and rack-ground arrangement.
8	Prove optical link, TCP/IP communication, rack access and dynamic-data transfer before release.

Related Bently Nevada Products on Apter Power

MODEL	RELATION	APTER POWER PAGE
125720-02	Bently Nevada machinery-monitoring component	View 125720-02
125840-01	Bently Nevada machinery-monitoring component	View 125840-01
126599-01	Bently Nevada machinery-monitoring component	View 126599-01
126623-01	Bently Nevada machinery-monitoring component	View 126623-01
128276-01E	Bently Nevada machinery-monitoring component	View 128276-01E
130118-0050-02	Bently Nevada machinery-monitoring component	View 130118-0050-02
130768-01	Bently Nevada machinery-monitoring component	View 130768-01
133300-01	Bently Nevada machinery-monitoring component	View 133300-01

MANUFACTURER SOURCE RECORD

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

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