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A BELDEN BRAND

TLX Matrix Switch SNMP Traps
USER'S MANUAL

Revision J, January 2019

Complete descriptions and usage of
SFP Generated Traps
Switch Generated Traps
Standard Traps

Thinklogical, A BELDEN BRAND • **100 Washington Street • Milford, Connecticut 06460 U.S.A.**

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thinklogical®

CERTIFIED ISO 9001:2015 COMPANY

MADE IN USA

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PREFACE

About Thinklogical A BELDEN BRAND

Thinklogical, A BELDEN BRAND
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Thinklogical, A BELDEN BRAND, is the leading manufacturer and provider of fiber-optic and CATx video, KVM, audio, and peripheral extension and switching solutions used in video-rich, big-data computing environments.

Thinklogical offers the only fiber-optic KVM matrix switches in the world that are accredited to the Common Criteria EAL4, TEMPEST SDIP 24 Level B, and NATO NIAPC Evaluation Scheme: GREEN and the U.S. DoD DISA JITC UCR 2013 APL information assurance standards. And Thinklogical Velocity products are the first system with both KVM and video matrix switching capabilities to be placed on the Unified Capabilities Approved Product List (UC APL) under the Video Distribution System (VDS) category. Thinklogical products are designed and manufactured in the USA and are certified to the ISO 9001:2015 standard.

Thinklogical is headquartered in Milford, Connecticut and is owned by Belden, Inc., St. Louis, MO (http://www.belden.com). For more information about Thinklogical products and services, please visit www.thinklogical.com.

About This Manual

SNMP (**S**imple **N**etwork **M**anagement **P**rotocol) is an Internet-standard protocol for managing devices connected to IP networks. *SNMP is widely used in network management systems to monitor networked devices for conditions that warrant administrative attention.*

An SNMP-managed network consists of three key components:

- Managed device (allows unidirectional or bidirectional access to node-specific information)
- Agent — the software which runs on managed devices
- **N**etwork **M**anagement **S**tation (**NMS**) — the software which runs on the manager

This product manual documents the trap (notification) messages that keep the user informed of events that occur, in real time, on each agent on the managed device (Matrix Switch). It contains sections for **SFP Generated Traps**, **Switch Generated Traps** and **Standard Traps,** as well as **Regulatory & Safety Requirements** and **Thinklogical Support.**

Note and Warning Symbols

In Sections 4 and 5 of this manual you will notice certain symbols that bring your attention to important information. These are **Notes** and **Warnings**. Examples are shown below.

Note: Important Notes appear in blue text preceded by a yellow exclamation point symbol, as shown here.

A **note** is meant to call the reader's attention to **helpful or important** information at a point in the text that is relevant to the subject being discussed.

Warning! All Warnings appear in red text, followed by blue text, and preceded by a red stop sign, as shown here.

A **warning** is meant to call the reader's attention to **critical** information at a point in the text that is relevant to the subject being discussed.

BEFORE STARTING ANY PROCEDURE, IT IS RECOMMENDED THAT YOU READ THE INSTRUCTIONS THOROUGHLY!

Product Serial Number

Thinklogical products have a unique serial number, which includes a date-code, printed on an adhesive label that is affixed to the unit. The format for the date-code is *2 digits for the month*, dash, *2 digits for the year*, plus *at least four digits for a unique unit number*. For example:
09-180129 indicates the unit was built in the **9**th month of 20**18** and is unit number **129**.

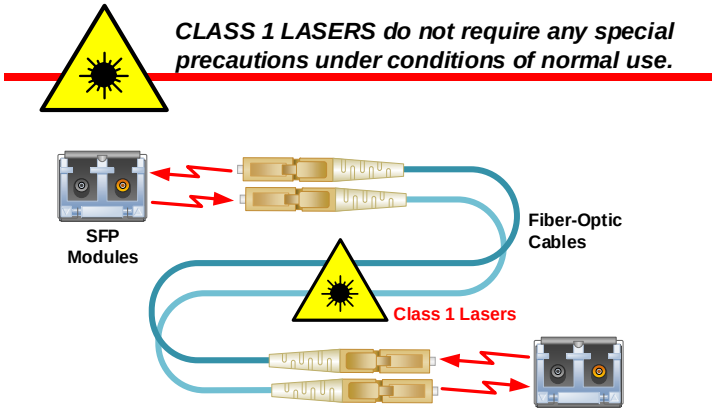
Connection to the Product

Connections and installation hardware for our products use industry-standard devices and methods. All wiring connections to the customer equipment are designed to minimize proprietary or customized connectors and cabling. Power connections are made with regionally appropriate power cords and approved methods.

Section 1: Regulatory & Safety Requirements

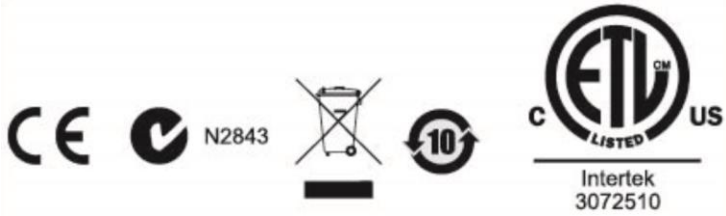
Class 1 Laser Information

TLX Matrix Switches, like all Thinklogical® fiber-optic products, are designed and identified as **Class 1 LASER products.** This means the maximum permissible exposure (MPE) cannot be exceeded when viewing the laser with the naked eye or with the aid of typical magnifying optics (e.g. telescope or microscope).



Symbols Found on Our Products

Markings and labels on our products follow industry-standard conventions. Regulatory markings found on our products comply with all required domestic and many international requirements.



Regulatory Compliance

Thinklogical's® products are designed and made in the U.S.A. These products have been tested by a certified testing laboratory and found compliant with the following standards for both domestic USA and many international locations:

North America

Safety
UL 62368-1:2014Ed.2
CSA C22.2#62368-1:2014Ed.2

LASER Safety
CDRH 21 CFR 1040.10
Class 1 LASER Product
Canadian Radiation Emitting Devices Act, REDR C1370
IEC 60825:2001 Parts 1 and 2
Class 1 LASER Product

Electromagnetic Interference
FCC 47CFR Part 15 Subpart B: 2013 Class A
Industry Canada ICES-003: 2016 Ed. 6

Australia & New Zealand

This is a Class A product. In a domestic environment this product may cause radio interference, in which case the user may be required to take corrective action.

European Union

Declaration of Conformity

Manufacturer's Name & Address: **Thinklogical,** A **BELDEN** BRAND
100 Washington Street
Milford, Connecticut 06460 USA

Thinklogical's products comply with the requirements of the Low Voltage Directive 2006/95/EC, the EMC Directive 2004/108/EC, the RoHS Directive 2011/65/EU, the WEEE Directive 2012/19/EU and carry the CE markings accordingly.

Standards with Which Our Products Comply

Safety

IEC 62368-1:2014Ed.2+C1
CB Scheme Certificate

Electromagnetic Emissions

CENELEC EN 55022:2010 +AC:2011

Electromagnetic Immunity

EN 55024:2011+A1
CENELEC EN 55032:2015
EN61000-3-2:2000 Harmonics
EN61000-3-3:2008 Flicker
EN 61000-4-2:2009 Electro-Static Discharge Test
EN 61000-4-3:2006 A1:2008, A2:2010 Radiated Immunity Field Test
EN 61000-4-4:2004 Electrical Fast Transient Test
EN 61000-4-5:2006 Power Supply Surge Test
EN 61000-4-6:2009 Conducted Immunity Test
EN61000-4-11:2004 Voltage Dips & Interrupts Test

Supplementary Information

The following statements may be appropriate for certain geographical regions and might not apply to your location:

- This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. *Cet appareil numérique de la classe A respecte toutes les exigencies du Règlement sur le matérial brouilleur du Canada*.
- This is a Class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take corrective action.
- This equipment has been tested and found compliant with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications in which case the user may be required to make adequate corrective measures at their own expense.
- This Class A digital apparatus complies with Canadian ICES-003 and has been verified as compliant within the Class A limits of the FCC Radio Frequency Device Rules (FCC Title 47, Part 15, Subpart B CLASS A), measured to CISPR 22: 1993 limits and methods of measurement of Radio Disturbance Characteristics of Information Technology Equipment.
- The user may notice degraded audio performance in the presence of electro-magnetic fields.

Section 2: SFP Generated Traps

ALARMS

High Temperature Alarm Begin and Clear

An SFP module can monitor and trigger an alarm on a **high or low temperature** reading. This ability is internal to the SFP and is part of the digital diagnostic interface common to many SFPs. This notification is sent when **bit 7 of byte 112** in the real-time diagnostic registers changes from 0 to 1 (Begin) or from a 1 to a 0 (Clear).

This bit is set when the internal temperature of the SFP exceeds the high temperature alarm level. The SFP temperature is stored at **bytes 96 and 97** of the SFP diagnostic register table.

- Begin OID: 1,3,6,1,4,1,17658,2,2,2,0,1
- Clear OID: 1,3,6,1,4,1,17658,2,2,2,0,2

Objects:

1: sfpLabel
2: sfpTemperature
3: sfpThresholdHighTempAlarm
4: sysContact
5: sysDescr
6: sysLocation
7: sysName

Low Temperature Alarm Begin and Clear

This ability is internal to the SFP and is part of the digital diagnostic interface common to many SFPs. This notification is sent when **bit 6 of byte 112** in the real-time diagnostic registers changes from 0 to 1 (Begin) or from a 1 to a 0 (Clear).

This bit is set when the internal temperature of the SFP exceeds the high temperature alarm level. The SFP temperature is stored at **bytes 96 and 97** of the SFP diagnostic register table.

- Begin OID: 1,3,6,1,4,1,17658,2,2,2,0,3
- Clear OID: 1,3,6,1,4,1,17658,2,2,2,0,4

Objects:

1: sfpLabel
2: sfpTemperature
3: sfpThresholdLowTempAlarm
4: sysContact
5: sysDescr
6: sysLocation
7: sysName

High Vcc Alarm Begin and Clear

An SFP module can monitor and trigger an alarm on a **high or low Vcc voltage** reading. This ability is internal to the SFP and is part of the digital diagnostic interface common to many SFPs. This notification is sent when **bit 5 of byte 112** in the real-time diagnostic registers changes from 0 to 1 (Begin) or from a 1 to a 0 (Clear).

This bit is set when the internal temperature of the SFP exceeds the high temperature alarm level. The SFP temperature is stored at **bytes 98 and 99** of the SFP diagnostic register table.

1. Begin OID: 1,3,6,1,4,1,17658,2,2,2,0,5
2. Clear OID: 1,3,6,1,4,1,17658,2,2,2,0,6

Objects:

1: sfpLabel
2: sfpTemperature
3: sfpThresholdHighVccAlarm
4: sysContact
5: sysDescr
6: sysLocation
7: sysName

Low Vcc Alarm Begin and Clear

An SFP module can monitor and trigger an alarm on a **high or low Vcc voltage** reading. This ability is internal to the SFP and is part of the digital diagnostic interface common to many SFPs. This notification is sent when **bit 4 of byte 112** in the real-time diagnostic registers changes from 0 to 1 (Begin) or from a 1 to a 0 (Clear).

This bit is set when the internal temperature of the SFP exceeds the high temperature alarm level. The SFP temperature is stored at **bytes 98 and 99** of the SFP diagnostic register table.

Begin OID:1,3,6,1,4,1,17658,2,2,2,0,7
Clear OID: 1,3,6,1,4,1,17658,2,2,2,0,8

Objects:
1: sfpLabel
2: sfpTemperature
3: sfpThresholdLowVccAlarm
4: sysContact
5: sysDescr
6: sysLocation
7: sysName

High TX Bias Alarm Begin and Clear

An SFP module can monitor and trigger an alarm on a **high or low TX bias current** reading. This ability is internal to the SFP and is part of the digital diagnostic interface common to many SFPs. This notification is sent when **bit 3 of byte 112** in the real-time diagnostic registers changes from 0 to 1 (Begin) or from a 1 to a 0 (Clear).

This bit is set when the internal current to the SFP transmitter exceeds the high current alarm level. The SFP TX BIAS current value is stored at **bytes 100 & 101** of the SFP diagnostic register table.

Begin OID: 1,3,6,1,4,1,17658,2,2,2,0,9
Clear OID: 1,3,6,1,4,1,17658,2,2,2,0,10

Objects:
1: sfpLabel
2: sfpTemperature
3: sfpThresholdHighTxBiasAlarm
4: sysContact
5: sysDescr
6: sysLocation
7: sysName

Low TX Bias Alarm Begin and Clear

An SFP module can monitor and trigger an alarm on a **high or low TX bias current** reading. This ability is internal to the SFP and is part of the digital diagnostic interface common to many SFPs. This notification is sent when **bit 2 of byte 112** in the real-time diagnostic registers changes from 0 to 1 (Begin) or from a 1 to a 0 (Clear).

This bit is set when the internal current to the SFP transmitter falls below the low current alarm level. The SFP TX BIAS current value is stored at **bytes 100 & 101** of the SFP diagnostic register table.

Begin OID: 1,3,6,1,4,1,17658,2,2,2,0,11
Clear OID: 1,3,6,1,4,1,17658,2,2,2,0,12

Objects:
1: sfpLabel
2: sfpTemperature
3: sfpThresholdLowTxBasAlarm
4: sysContact
5: sysDescr
6: sysLocation
7: sysName

High TX Power Alarm Begin and Clear

An SFP module can monitor and trigger an alarm on a **high or low TX laser power** reading. This ability is internal to the SFP and is part of the digital diagnostic interface common to many SFPs. This notification is sent when **bit 1 of byte 112** in the real-time diagnostic registers changes from 0 to 1 (Begin) or from a 1 to a 0 (Clear).

This bit is set when the SFP transmitter laser power exceeds the high-power alarm level. The SFP TX power value is stored at **bytes 102 & 103** of the SFP diagnostic register table.

Begin OID: 1,3,6,1,4,1,17658,2,2,2,0,13
Clear OID: 1,3,6,1,4,1,17658,2,2,2,0,14

Objects:

1: sfpLabel
2: sfpTemperature
3: sfpThresholdHighTxPowerAlarm
4: sysContact
5: sysDescr
6: sysLocation
7: sysName

Low TX Power Alarm Begin and Clear

An SFP module can monitor and trigger an alarm on a **high or low TX laser power** reading. This ability is internal to the SFP and is part of the digital diagnostic interface common to many SFPs. This notification is sent when **bit 0 of byte 112** in the real-time diagnostic registers changes from 0 to 1 (Begin) or from a 1 to a 0 (Clear).

This bit is set when the SFP transmitter laser power falls below the low power alarm level. The SFP TX power value is stored at **bytes 102 & 103** of the SFP diagnostic register table.

Begin OID: 1,3,6,1,4,1,17658,2,2,2,0,15
Clear OID: 1,3,6,1,4,1,17658,2,2,2,0,16

Objects:

1: sfpLabel
2: sfpTemperature
3: sfpThresholdLowTxPowerAlarm
4: sysContact
5: sysDescr
6: sysLocation
7: sysName

High RX Power Alarm Begin and Clear

An SFP module can monitor and trigger an alarm on a **high or low RX laser power** reading. This ability is internal to the SFP and is part of the digital diagnostic interface common to many SFPs. This notification is sent when **bit 7 of byte 113** in the real-time diagnostic registers changes from 0 to 1 (Begin) or from a 1 to a 0 (Clear).

This bit is set when the SFP received laser power exceeds the high-power alarm level. The SFP RX power value is stored at **bytes 104 & 105** of the SFP diagnostic register table.

Begin OID: 1,3,6,1,4,1,17658,2,2,2,0,17
Clear OID: 1,3,6,1,4,1,17658,2,2,2,0,18

Objects:

1: sfpLabel
2: sfpTemperature
3: sfpThresholdHighRxPowerAlarm
4: sysContact
5: sysDescr
6: sysLocation
7: sysName

Low RX Power Alarm Begin and Clear

An SFP module can monitor and trigger an alarm on a **high or low RX laser power** reading. This ability is internal to the SFP and is part of the digital diagnostic interface common to many SFPs. This notification is sent when **bit 6 of byte 113** in the real-time diagnostic registers changes from 0 to 1 (Begin) or from a 1 to a 0 (Clear).

This bit is set when the SFP received laser power falls below the low power alarm level. The SFP RX power value is stored at **bytes 104 & 105** of the SFP diagnostic register table.

Begin OID: 1,3,6,1,4,1,17658,2,2,2,0,19
Clear OID: 1,3,6,1,4,1,17658,2,2,2,0,20

Objects:

1: sfpLabel
2: sfpTemperature
3: sfpThresholdLowRxPowerAlarm
4: sysContact
5: sysDescr
6: sysLocation
7: sysName

(SFP) WARNINGS

High Temperature Warning Begin and Clear

An SFP module can monitor and trigger an alarm on a **high or low temperature** reading. This ability is internal to the SFP and is part of the digital diagnostic interface common to many SFPs. This notification is sent when **bit 7 of byte 116** in the real-time diagnostic registers changes from 0 to 1 (Begin) or from a 1 to a 0 (Clear).

This bit is set when the internal temperature of the SFP exceeds the high temperature warning level. The SFP temperature is stored at **bytes 96 & 97** of the SFP diagnostic register table.

Begin OID: 1,3,6,1,4,1,17658,2,2,2,0,21

Clear OID: 1,3,6,1,4,1,17658,2,2,2,0,22

Objects:

1: sfpLabel
2: sfpTemperature
3: sfpThresholdHighTempWarning
4: sysContact
5: sysDescr
6: sysLocation
7: sysName

Low Temperature Warning Begin and Clear

An SFP module can monitor and trigger an alarm on a **high or low temperature** reading. This ability is internal to the SFP and is part of the digital diagnostic interface common to many SFPs. This notification is sent when **bit 6 of byte 116** in the real-time diagnostic registers changes from 0 to 1 (Begin) or from a 1 to a 0 (Clear).

This bit is set when the internal temperature of the SFP falls below the low temperature warning level. The SFP temperature is stored at **bytes 96 & 97** of the SFP diagnostic register table.

Begin OID: 1,3,6,1,4,1,17658,2,2,2,0,23

Clear OID: 1,3,6,1,4,1,17658,2,2,2,0,24

Objects:

1: sfpLabel
2: sfpTemperature
3: sfpThresholdLowTempWarning
4: sysContact
5: sysDescr
6: sysLocation
7: sysName

High Vcc Warning Begin and Clear

An SFP module can monitor and trigger an alarm on a **high or low Vcc voltage** reading. This ability is internal to the SFP and is part of the digital diagnostic interface common to many SFPs. This notification is sent when **bit 5 of byte 116** in the real-time diagnostic registers changes from 0 to 1 (Begin) or from a 1 to a 0 (Clear).

This bit is set when the internal supply voltage to the SFP exceeds the high voltage warning level. The SFP voltage is stored at **bytes 98 & 99** of the SFP diagnostic register table.

Begin OID: 1,3,6,1,4,1,17658,2,2,2,0,25

Clear OID: 1,3,6,1,4,1,17658,2,2,2,0,26

Objects:

1: sfpLabel
2: sfpTemperature
3: sfpThresholdHighVccWarning
4: sysContact
5: sysDescr
6: sysLocation
7: sysName

Low Vcc Warning Begin and Clear

An SFP module can monitor and trigger an alarm on a **high or low Vcc voltage** reading. This ability is internal to the SFP and is part of the digital diagnostic interface common to many SFPs. This notification is sent when **bit 4 of byte 116** in the real-time diagnostic registers changes from 0 to 1 (Begin) or from a 1 to a 0 (Clear).

This bit is set when the internal supply voltage to the SFP falls below the low voltage warning level. The SFP voltage is stored at **bytes 98 & 99** of the SFP diagnostic register table.

Begin OID: 1,3,6,1,4,1,17658,2,2,2,0,27
Clear OID: 1,3,6,1,4,1,17658,2,2,2,0,28

Objects:	1: sfpLabel 2: sfpTemperature 3: sfpThresholdLowVccWarning	4: sysContact 5: sysDescr 6: sysLocation 7: sysName

High TX Bias Warning Begin and Clear

An SFP module can monitor and trigger an alarm on a **high or low TX bias current** reading. This ability is internal to the SFP and is part of the digital diagnostic interface common to many SFPs. This notification is sent when **bit 3 of byte 116** in the real-time diagnostic registers changes from 0 to 1 (Begin) or from a 1 to a 0 (Clear).

This bit is set when the internal current to the SFP transmitter exceeds the high current warning level. The SFP TX current value is stored at **bytes 100 & 101** of the SFP diagnostic register table.

Begin OID: 1,3,6,1,4,1,17658,2,2,2,0,29
Clear OID: 1,3,6,1,4,1,17658,2,2,2,0,30

Objects:	1: sfpLabel 2: sfpTemperature 3: sfpThresholdHighTxBiasWarning	4: sysContact 5: sysDescr 6: sysLocation 7: sysName

Low TX Bias Warning Begin and Clear

An SFP module can monitor and trigger an alarm on a **high or low TX bias current** reading. This ability is internal to the SFP and is part of the digital diagnostic interface common to many SFPs. This notification is sent when **bit 2 of byte 116** in the real-time diagnostic registers changes from 0 to 1 (Begin) or from a 1 to a 0 (Clear).

This bit is set when the internal current to the SFP transmitter falls below the low current warning level. The SFP TX current value is stored at **bytes 100 & 101** of the SFP diagnostic register table.

Begin OID: 1,3,6,1,4,1,17658,2,2,2,0,31
Clear OID: 1,3,6,1,4,1,17658,2,2,2,0,32

Objects:	1: sfpLabel 2: sfpTemperature 3: sfpThresholdLowTxBiasWarning	4: sysContact 5: sysDescr 6: sysLocation 7: sysName

High TX Power Warning Begin and Clear

An SFP module can monitor and trigger an alarm on a **high or low TX laser power** reading. This ability is internal to the SFP and is part of the digital diagnostic interface common to many SFPs. This notification is sent when **bit 1 of byte 116** in the real-time diagnostic registers changes from 0 to 1 (Begin) or from a 1 to a 0 (Clear).

This bit is set when the SFP transmitter laser power exceeds the high-power warning level. The SFP TX power value is stored at **bytes 102 & 103** of the SFP diagnostic register table.

Begin OID: 1,3,6,1,4,1,17658,2,2,2,0,33
Clear OID: 1,3,6,1,4,1,17658,2,2,2,0,34

Objects:
1: sfpLabel
2: sfpTemperature
3: sfpThresholdHighTxPowerWarning
4: sysContact
5: sysDescr
6: sysLocation
7: sysName

Low TX Power Warning Begin and Clear

An SFP module can monitor and trigger an alarm on a **high or low TX laser power** reading. This ability is internal to the SFP and is part of the digital diagnostic interface common to many SFPs. This notification is sent when **bit 0 of byte 116** in the real-time diagnostic registers changes from 0 to 1 (Begin) or from a 1 to a 0 (Clear).

This bit is set when the SFP transmitter laser power falls below the TX low power warning level. The SFP TX power value is stored at **bytes 102 & 103** of the SFP diagnostic register table.

Begin OID: 1,3,6,1,4,1,17658,2,2,2,0,35
Clear OID: 1,3,6,1,4,1,17658,2,2,2,0,36

Objects:
1: sfpLabel
2: sfpTemperature
3: sfpThresholdLowTxPowerWarning
4: sysContact
5: sysDescr
6: sysLocation
7: sysName

High RX Power Warning Begin and Clear

An SFP module can monitor and trigger an alarm on a **high or low RX laser power** reading. This ability is internal to the SFP and is part of the digital diagnostic interface common to many SFPs. This notification is sent when **bit 7 of byte 117** in the real-time diagnostic registers changes from 0 to 1 (Begin) or from a 1 to a 0 (Clear).

This bit is set when the SFP received laser power exceeds the high-power warning level. The SFP RX power value is stored at **bytes 104 & 105** of the SFP diagnostic register table.

Begin OID: 1,3,6,1,4,1,17658,2,2,2,0,37
Clear OID: 1,3,6,1,4,1,17658,2,2,2,0,38

Objects:
1: sfpLabel
2: sfpTemperature
3: sfpThresholdHighRxPowerWarning
4: sysContact
5: sysDescr
6: sysLocation
7: sysName

Low RX Power Warning Begin and Clear

An SFP module can monitor and trigger an alarm on a **high or low RX laser power** reading. This ability is internal to the SFP and is part of the digital diagnostic interface common to many SFPs. This notification is sent when **bit 6 of byte 117** in the real-time diagnostic registers changes from 0 to 1 (Begin) or from a 1 to a 0 (Clear).

This bit is set when the SFP received laser power falls below the low power warning level. The SFP RX power value is stored at **bytes 104 & 105** of the SFP diagnostic register table.

Begin OID: 1,3,6,1,4,1,17658,2,2,2,0,39
Clear OID: 1,3,6,1,4,1,17658,2,2,2,0,40

Objects:

1: sfpLabel
2: sfpTemperature
3: sfpThresholdLowRxPowerWarning
4: sysContact
5: sysDescr
6: sysLocation
7: sysName

(SFP) EVENTS

SFP Removed and Inserted

An SFP module has been removed or inserted.

Removed OID: 1,3,6,1,4,1,17658,2,2,2,0,41
Inserted OID: 1,3,6,1,4,1,17658,2,2,2,0,42

Objects:
1: sfpLabel
2: sysContact
3: sysDescr
4: sysLocation
5: sysName

TX Fault Begin and Clear

An SFP module has entered the TX Fault state (Begin) or has exited the TX Fault state (Clear). This state is determined by the TxFault status bit located in the SFP diagnostic registers.

Begin OID: 1,3,6,1,4,1,17658,2,2,2,0,43
Clear OID: 1,3,6,1,4,1,17658,2,2,2,0,44

Objects:
1: sfpLabel
2: sysContact
3: sysDescr
4: sysLocation
5: sysName

LOS Begin and Clear

An SFP module has entered the LOS state (Begin) or has exited the LOS state (Clear). This state is determined by the LOS status bit located in the SFP diagnostic registers.

This trap is not conditioned by the switch matrix but is the LOS status of the SFP. For example, **this trap will be generated when a fiber is removed from the SFP or when an existing connection is broken by the switch matrix.**

Begin OID: 1,3,6,1,4,1,17658,2,2,2,0,45
Clear OID: 1,3,6,1,4,1,17658,2,2,2,0,46

Objects:
1: sfpLabel
2: sysContact
3: sysDescr
4: sysLocation
5: sysName

Section 3: Switch Generated Alarms

TLX12 & TLX24 HARDWARE ALARMS (Front Panel LCD)

Power Supply Failure Begin and Clear

Power Supply 1 has failed (Begin) or is restored (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,1
Clear OID: 1,3,6,1,4,1,17658,3,14,0,2

Objects:
1: tlxSwitchPSlabel
2: tlxSwitchPSstatus
3: sysContact
4: sysDescr
5: sysLocation
6: sysName

Low Fan Speed Begin and Clear

A fan in the chassis has failed (Begin) or is restored (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,5
Clear OID: 1,3,6,1,4,1,17658,3,14,0,6

Objects:
1: sysContact
2: sysDescr
3: sysLocation
4: sysName

High Temperature Begin and Clear

The system has detected a temperature that is above the preset alarm threshold (Begin) or is now below the preset alarm threshold (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,9
Clear OID: 1,3,6,1,4,1,17658,3,14,0,10

Objects:
1: sysContact
2: sysDescr
3: sysLocation
4: sysName

I/O Card Error Begin and Clear

The system has detected an error in the I/O section of the chassis (Begin) or the I/O section of the chassis is now error free (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,13
Clear OID: 1,3,6,1,4,1,17658,3,14,0,14

Objects:
1: sysContact
2: sysDescr
3: sysLocation
4: sysName

TLX48 HARDWARE ALARMS (Alarm Contacts)

TLX48 Power Supply Failure Begin and Clear Contact 1

A Power Supply has failed (Begin) or is restored (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,27
Clear OID: 1,3,6,1,4,1,17658,3,14,0,28

Objects:
1: sysContact
2: sysDescr
3: sysLocation
4: sysName

TLX48 Fan Failure Begin and Clear Contact 2

A fan in the Fan Tray has failed (Begin) or is restored (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,29
Clear OID: 1,3,6,1,4,1,17658,3,14,0,30

Objects:
1: sysContact
2: sysDescr
3: sysLocation
4: sysName

TLX48 High Temperature Begin and Clear Contact 3

The system has detected a temperature that is above the preset alarm threshold (Begin) or is now below the preset alarm threshold (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,31
Clear OID: 1,3,6,1,4,1,17658,3,14,0,32

Objects:
1: sysContact
2: sysDescr
3: sysLocation
4: sysName

TLX80, TLX160 & TLX320 HARDWARE ALARMS (Alarm Contacts)

Power Supply 1 Failure Begin and Clear Contact 1

Power Supply 1 has failed (Begin) or is restored (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,1
Clear OID: 1,3,6,1,4,1,17658,3,14,0,2

Objects:

```
1: tlxSwitchPSlabel
2: tlxSwitchPSstatus
3: sysContact
4: sysDescr
5: sysLocation
6: sysName
```

Power Supply 2 Failure Begin and Clear Contact 2

Power Supply 2 has failed (Begin) or is restored (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,3
Clear OID: 1,3,6,1,4,1,17658,3,14,0,4

Objects:

```
1: tlxSwitchPSlabel
2: tlxSwitchPSstatus
3: sysContact
4: sysDescr
5: sysLocation
6: sysName
```

Low Fan Speed Begin and Clear Contact 3

A fan in the Fan Tray has failed (Begin) or is restored (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,5
Clear OID: 1,3,6,1,4,1,17658,3,14,0,6

Objects:

```
1: sysContact
2: sysDescr
3: sysLocation
4: sysName
```

Temperature Warning Begin and Clear Contact 4

The system has detected a temperature that is above the preset warning threshold (Begin) or is now below the preset alarm threshold (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,7
Clear OID: 1,3,6,1,4,1,17658,3,14,0,8

Objects:

```
1: sysContact
2: sysDescr
3: sysLocation
4: sysName
```

High Temperature Begin and Clear Contact 5

The system has detected a temperature that is above the preset alarm threshold (Begin) or is now below the preset alarm threshold (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,9
Clear OID: 1,3,6,1,4,1,17658,3,14,0,10

Objects:
1: sysContact
2: sysDescr
3: sysLocation
4: sysName

CPU Error Begin and Clear Contact 6

The system has detected a CPU fault (Begin) or the fault is now gone (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,11
Clear OID: 1,3,6,1,4,1,17658,3,14,0,12

Objects:
1: sysContact
2: sysDescr
3: sysLocation
4: sysName

I/O Card Error Begin and Clear Contact 7

The system has detected an error in one of the I/O cards (Begin) or the card is now error free (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,13
Clear OID: 1,3,6,1,4,1,17658,3,14,0,14

Objects:
1: sysContact
2: sysDescr
3: sysLocation
4: sysName

TLX640 HARDWARE ALARMS (Alarm Contacts)

Power Supply 1 Failure Begin and Clear Contact 1

TLX640 Power Supply 1 has failed (Begin) or is restored (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,1
Clear OID: 1,3,6,1,4,1,17658,3,14,0,2

Objects:		
	1: tlxSwitchPSlabel	3: sysContact
	2: tlxSwitchPSstatus	4: sysDescr
		5: sysLocation
		6: sysName

Power Supply 2 Failure Begin and Clear Contact 2

TLX640 Power Supply 2 has failed (Begin) or is restored (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,3
Clear OID: 1,3,6,1,4,1,17658,3,14,0,4

Objects:		
	1: tlxSwitchPSlabel	3: sysContact
	2: tlxSwitchPSstatus	4: sysDescr
		5: sysLocation
		6: sysName

Power Supply 3 Failure Begin and Clear Contact 3

TLX640 Power Supply 3 has failed (Begin) or is restored (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,15
Clear OID: 1,3,6,1,4,1,17658,3,14,0,16

Objects:		
	1: tlxSwitchPSlabel	3: sysContact
	2: tlxSwitchPSstatus	4: sysDescr
		5: sysLocation
		6: sysName

Power Supply 4 Failure Begin and Clear Contact 4

TLX640 Power Supply 4 has failed (Begin) or is restored (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,17
Clear OID: 1,3,6,1,4,1,17658,3,14,0,18

Objects:		
	1: tlxSwitchPSlabel	3: sysContact
	2: tlxSwitchPSstatus	4: sysDescr
		5: sysLocation
		6: sysName

Low Fan Speed Begin and Clear Contact 5

A fan in the Fan Tray has failed (Begin) or is restored (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,5

Clear OID: 1,3,6,1,4,1,17658,3,14,0,6

Objects:
```
1: sysContact
2: sysDescr
3: sysLocation
4: sysName
```

Temperature Warning Begin and Clear Contact 6

The system has detected a temperature that is above the preset warning threshold (Begin) or is now below the preset alarm threshold (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,7

Clear OID: 1,3,6,1,4,1,17658,3,14,0,8

Objects:
```
1: sysContact
2: sysDescr
3: sysLocation
4: sysName
```

High Temperature Begin and Clear Contact 7

The system has detected a temperature that is above the preset alarm threshold (Begin) or is now below the preset alarm threshold (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,9

Clear OID: 1,3,6,1,4,1,17658,3,14,0,10

Objects:
```
1: sysContact
2: sysDescr
3: sysLocation
4: sysName
```

CPU Error Begin and Clear Contact 8

The system has detected a CPU fault (Begin) or the fault is now gone (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,11

Clear OID: 1,3,6,1,4,1,17658,3,14,0,12

Objects:
```
1: sysContact
2: sysDescr
3: sysLocation
4: sysName
```

I/O Card Error Begin and Clear Contact 9

The system has detected an error is one of the I/O cards (Begin) or the card is now error free (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,13

Clear OID: 1,3,6,1,4,1,17658,3,14,0,14

Objects:
```
1: sysContact
2: sysDescr
3: sysLocation
4: sysName
```

TLX1280 HARDWARE ALARMS (Alarm Contacts)

Power Supply 1 Failure Begin and Clear Contact 1

TLX1280 Power Supply 1 has failed (Begin) or is restored (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,1
Clear OID: 1,3,6,1,4,1,17658,3,14,0,2

Objects:		
	1: tlxSwitchPSlabel	3: sysContact
	2: tlxSwitchPSstatus	4: sysDescr
		5: sysLocation
		6: sysName

Power Supply 2 Failure Begin and Clear Contact 2

TLX1280 Power Supply 2 has failed (Begin) or is restored (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,3
Clear OID: 1,3,6,1,4,1,17658,3,14,0,4

Objects:		
	1: tlxSwitchPSlabel	3: sysContact
	2: tlxSwitchPSstatus	4: sysDescr
		5: sysLocation
		6: sysName

Power Supply 3 Failure Begin and Clear Contact 3

TLX1280 Power Supply 3 has failed (Begin) or is restored (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,15
Clear OID: 1,3,6,1,4,1,17658,3,14,0,16

Objects:		
	1: tlxSwitchPSlabel	3: sysContact
	2: tlxSwitchPSstatus	4: sysDescr
		5: sysLocation
		6: sysName

Power Supply 4 Failure Begin and Clear Contact 4

TLX1280 Power Supply 4 has failed (Begin) or is restored (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,17
Clear OID: 1,3,6,1,4,1,17658,3,14,0,18

Objects:		
	1: tlxSwitchPSlabel	3: sysContact
	2: tlxSwitchPSstatus	4: sysDescr
		5: sysLocation
		6: sysName

Power Supply 5 Failure Begin and Clear Contact 5

TLX1280 Power Supply 5 has failed (Begin) or is restored (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,35
Clear OID: 1,3,6,1,4,1,17658,3,14,0,36

Objects:

```
1: tlxSwitchPSlabel
2: tlxSwitchPSstatus
3: sysContact
4: sysDescr
5: sysLocation
6: sysName
```

Power Supply 6 Failure Begin and Clear Contact 6

TLX1280 Power Supply 6 has failed (Begin) or is restored (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,37
Clear OID: 1,3,6,1,4,1,17658,3,14,0,38

Objects:

```
1: tlxSwitchPSlabel
2: tlxSwitchPSstatus
3: sysContact
4: sysDescr
5: sysLocation
6: sysName
```

Low Fan Speed Begin and Clear Contact 7

A fan in the Fan Tray has failed (Begin) or is restored (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,5
Clear OID: 1,3,6,1,4,1,17658,3,14,0,6

Objects:

```
1: sysContact
2: sysDescr
3: sysLocation
4: sysName
```

Temperature Warning Begin and Clear Contact 8

The system has detected a temperature that is above the preset warning threshold (Begin) or is now below the preset alarm threshold (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,7
Clear OID: 1,3,6,1,4,1,17658,3,14,0,8

Objects:

```
1: sysContact
2: sysDescr
3: sysLocation
4: sysName
```

High Temperature Begin and Clear Contact 9

The system has detected a temperature that is above the preset alarm threshold (Begin) or is now below the preset alarm threshold (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,9

Clear OID: 1,3,6,1,4,1,17658,3,14,0,10

Objects:

```
1: sysContact
2: sysDescr
3: sysLocation
4: sysName
```

CPU Error Begin and Clear Contact 10

The system has detected a CPU fault (Begin) or the fault is now gone (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,11

Clear OID: 1,3,6,1,4,1,17658,3,14,0,12

Objects:

```
1: sysContact
2: sysDescr
3: sysLocation
4: sysName
```

I/O Card Error Begin and Clear Contact 11

The system has detected an error is one of the I/O cards (Begin) or the card is now error free (Clear).

Begin OID: 1,3,6,1,4,1,17658,3,14,0,13

Clear OID: 1,3,6,1,4,1,17658,3,14,0,14

Objects:

```
1: sysContact
2: sysDescr
3: sysLocation
4: sysName
```

EVENTS

I/O Card Removed or Inserted

An I/O card has been removed or inserted.

Removed OID: 1,3,6,1,4,1,17658,3,14,0,19
Inserted OID: 1,3,6,1,4,1,17658,3,14,0,20

Objects:		
	1: tlxSwitchBPlabel	3: sysContact
	2: tlxSwitchCTlabel	4: sysDescr
		5: sysLocation
		6: sysName

Fan Tray Removed or Inserted

The Fan Tray has been removed or inserted.

Removed OID: 1,3,6,1,4,1,17658,3,14,0,21
Inserted OID: 1,3,6,1,4,1,17658,3,14,0,22

Objects:	
	1: sysContact
	2: sysDescr
	3: sysLocation
	4: sysName

Port LOS Begin and Clear

An input port has entered the LOS state (Begin) or has exited the LOS state (Clear). These events are a generic form of the SFP LOS events but are generated on any port that can detect LOS. Currently LOS is detected on fiber or CATx ports

Removed OID: 1,3,6,1,4,1,17658,3,14,0,25
Inserted OID: 1,3,6,1,4,1,17658,3,14,0,26

Objects:	
	1: tlxSwitchPTlabel
	2: tlxSwitchPTportNumber
	3: sysLocation
	4: sysName
	5: tlxSwitchPrimaryCPU
	6:

CPU is Active

The Primary or Backup CPU has become active.

OID: 1,3,6,1,4,1,17658,3,14,0,33

Objects:	
	1: sysContact
	2: sysDescr
	3: sysLocation
	4: sysName
	5: tlxSwitchPrimaryCPU

CPU is Inactive

The Primary or Backup CPU has become inactive.

OID: 1,3,6,1,4,1,17658,3,14,0,34

Objects:	
	1: sysContact
	2: sysDescr
	3: sysLocation
	4: sysName
	5: tlxSwitchPrimaryCPU

Section 4: Standard Traps

Network linkUp (1.3.6.1.6.3.1.1.5.4)

A linkUp trap signifies that the SNMP entity has detected that one of its communication links has left the down state and transitioned into some other state (but not into the notPresent state).

Network linkDown (1.3.6.1.6.3.1.1.5.3)

A linkDown trap signifies that the SNMP entity has detected that one of its communication links is about to enter the down state from some other state (but not from the notPresent state).

ColdStart (1.3.6.1.6.3.1.1.5.1)

A coldStart trap signifies that the SNMP entity is reinitializing itself and that its configuration may have been altered.

WarmStart (1.3.6.1.6.3.1.1.5.2)

A warmStart trap signifies that the SNMP entity is reinitializing itself such that its configuration is unaltered.

nsNotifyStart (1.3.6.1.4.1.8072.4.0.1)

An indication that the SNMP agent has started running.

nsNotifyShutdown (1.3.6.1.4.1.8072.4.0.2)

An indication that the SNMP agent is in the process of shutting down.

mteTriggerFired (1.3.6.1.2.1.88.2.0.1)

An mte trigger event has fired. These are typically defined in the SNMP setup file: **/etc/snmp/snmpd.conf.** Example: proc vxrcntl 6 6

Section 5: Thinklogical Support

Customer Support

Thinklogical® is an engineering company and we offer the best customer support available. You can count on our most knowledgeable engineers to assist you with any questions or problems. *We* won't be satisfied until *you* are satisfied.

Thank you for choosing Thinklogical® products for your application.

We appreciate your business and are dedicated to helping you successfully use our products.

thinklogical® is always here to help you.

To contact us, please use the following telephone numbers and internet-based methods:

Website

Check out our website at www.thinklogical.com for current products, support documents and useful information about all the products and services we offer, including technical specification sheets, quick-start guides and product manuals (for viewing online or for download).

Most online documents are stored as Adobe Acrobat "PDF" files. If you do not have the Adobe Acrobat reader needed to view PDF files, visit www.adobe.com for a download.

Email

Thinklogical is staffed **Monday through Friday from 8:30am to 5:00pm**, Eastern Time Zone. We will do our best to respond to your email inquiries promptly. Please use the following email addresses:

info@thinklogical.com – Information on Thinklogical and our products.

sales@thinklogical.com – Sales Department - orders, questions or issues.

support@thinklogical.com – Product support, technical issues or questions, product repairs and request for Return Merchandise Authorization.

Telephone

Thinklogical Operator	**1-203-647-8700**
Product & Customer Support:	**1-203-647-8798**

Please contact our expert sales staff in Milford, CT. We are here Monday through Friday from 8:30am to 5:00pm, Eastern Time Zone. We'll provide a representative's direct dial phone number when you call.

If leaving a voice message, please provide a preferred time to call back so we may reach you at your convenience.

Our switchboard attendant will direct your call during regular business hours. We have an automated attendant answering our main telephone switchboard after regular business hours and on holidays. Please leave a voice message at any time.

Fax

Our company facsimile number is **1-203-783-9949**. Please indicate the nature of the fax on your cover sheet and provide return contact information.

Product Support

Thinklogical's support personnel are available **Monday through Friday, from 8:30am to 5:00pm,** Eastern Time Zone. If your application requires assistance at some time outside of our normal business hours, please contact us beforehand, if possible, and we will have someone available to assist you.

Warranty

Thinklogical warrants this product against defects in materials and workmanship for a period of one year from the date of delivery, with longer term available at time of purchase on most products. Thinklogical and its suppliers disclaim all other warranties. Please refer to your product invoice for the Warranty Terms & Conditions.

Defect remedy shall be the repair or replacement of the product, provided that the defective product is returned to the authorized dealer within a year from the date of delivery.

If you wish to return your device, contact the Thinklogical authorized dealer where you purchased the device, or if you purchased directly, call Thinklogical at **1-800-291-3211** (USA).

Return Authorization

If you need to return your Thinklogical® product to us for any reason, please get a

Return Merchandise Authorization Number (RMA#)

from Thinklogical's Product Support Department (1-203-647-8700) before sending the unit in.

If you must return a product to Thinklogical directly, please contact us at **1-800-291-3211** or **1-203-647-8700**. Customer Support will ask you to describe the problem and will issue you a **R**eturn **M**erchandise **A**uthorization **number** (RMA#). Pack the device in its original box, if possible, and return it with the RMA# printed on the outside of the box.

Note: DO NOT return a product to Thinklogical without a *Return Merchandise Authorization*.

Our Addresses

If you have any product issues or questions or need technical assistance with your Thinklogical system, please call us at **1-800-291-3211 (USA only)** or **1-203-647-8700** and let us help. If you need to write us or return a product, please use the following address:

Please include the Return Merchandise Authorization number:

Thinklogical, A **BELDEN** BRAND
100 Washington Street
Milford, CT 06460 USA
Attn: *RMA#*

Website: www.thinklogical.com
Facebook: www.facebook.com/ThinklogicalUSA
LinkedIn: www.linkedin.com/company/thinklogical
Google+: http://plus.google.com/u/0/109273605590791763795/about
YouTube: www.youtube.com/user/thinklogicalNA
Twitter: @thinklogical