EPS9211-ET-HN1-2

**Honeywell
MODBUS/TCP Firewall**

Tofino™ 9211-ET-HN1

- ◆ **industrial network protection**
- ◆ **simple installation**
- ◆ **10/100Mbs Ethernet**
- ◆ **preloaded MODBUS/TCP configuration**

- ◆ **field upgradable**
- ◆ **power supply redundancy**
- ◆ **Class 1/Div 2 and Zone 2 rated**
- ◆ **DIN-rail mounting**

The Tofino™ Honeywell MODBUS/TCP Firewall is a new and unique solution from Honeywell, MTL and Byres Security that addresses the important issue of protecting Industrial Networks from malicious or accidental disruptions.

Instead of the standard, highly complex, "IT-style" firewall that requires highly-trained staff to install it, the Tofino™ device only requires a field technician to attach power and two network cables and then walk away. The Tofino™ is preconfigured to allow only MODBUS/TCP traffic through the firewall blocking all other traffic. It also ensures that MODBUS traffic is only allowed from the side of the network the MODBUS master is on, blocking any unsolicited traffic from the MODBUS slaves.

The system has the flexibility to protect a small plant with a single PLC, or a multi-national organization with thousands of critical devices scattered around the globe. By deploying Tofino™ devices between the Honeywell C300 network and other MODBUS devices, SCADA and process control companies are provided with a layered security solution for their systems.

The Tofino™ is a fully stateful firewall that ensures proper protection of your C300 system from viruses or hackers that may penetrate a system via laptops, USB storage devices and other means.

Configuration is not required - the Tofino™ starts up ready to protect your C300 system. All Tofino™ devices are field-upgradeable via the secure USB upgrade process where files are both encrypted for confidentiality and signed for integrity.

The Tofino™ will provide details on all network traffic conditions and anomalies to the Honeywell system, via standard Honeywell reporting features.

Redundant power supply inputs enable the user to reduce the risk of power failure to the module.

Industrially Hardened. Tofino™ is designed for industrial environments having a 27 year MTBF, -40°C to +70°C operating temperature ratings and Class 1/Div 2 (Zone 2) hazardous area approvals.

Aug 2008

Product specifications are subject to change without notice

SPECIFICATIONS

Tofino™ Security Appliance

Honeywell Part No.
51154724-100
MTL Model No.
9211-ET-HN1
Description
Tofino™ Two Port Security Appliance
Protected Devices
Unlimited

COMMUNICATIONS
Ethernet Ports
Two IEEE 802.3 BASE-T ports (auto sensing or manual)
10 or 100Mbs, full or half-duplex

Auto Tx/Rx sensing

USB-2 Ports (Load updates/Save diagnostics)
Two

POWER (+ redundant power + power fail)
Power Inputs
Two (dual redundant)
Operating Voltage
24V nominal (9V – 32V)
Current Consumption at 24 VDC
< 170mA typ.
< 350mA max.
Power Fail Inputs
Two
Connections
Screw cage-clamp 24...12AWG, 0.2...2.5mm^2

SERVICE
Indicators
Power, Fault, Event, Mode
Link Activity and Speed
Config Switch
Load configuration from USB storage or
Save log files to USB storage

ENVIRONMENTAL
Temperature Specifications
Operating   –40°C to +70°C
Storage/Transport –40°C to +85°C
Relative Humidity
10% to 90% (non-condensing)

MECHANICAL
Protection Class
IP 20
Mounting
35mm DIN rail or panel mounting
Dimensions (W x H x D) mm
146 x 138 x 42
Weight
0.36 kg
Vibration and Shock
IEC 60068-2-6   1g @ 20-500Hz
IEC 60068-2-27   30g for 11ms shock
EN 61326   EMC Annex A Industrial Locations
EN 61010-1

Hazardous Area Approvals

Location of equipment
Safe area or see table in APPROVALS section

Tofino™ Preconfigured Firewall LSM for MODBUS/TCP

Description
Tofino™ Stateful Firewall Module
Type
Layer 2 Stateful Firewall
Layers Filtered
Layers 2-3 with Predefined MODBUS/TCP rules
Throughput
95.5 MBPS at 1500 Byte Frames
Network Statistics
Automatic reporting of traffic statistics to Honeywell Experion stations

Tofino™ is a trademark of Byres Security Inc.

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TYPICAL APPLICATION METHOD

L2 Switch

CF9 Control Firewall

C300 Controller

MODBUS/TCP Firewall

MODBUS/TCP Firewall

Optional Switch

Optional Switch

Modbus Device

Modbus Device

Modbus Device

Modbus Device

CONNECTION DIAGRAM

POWERFAIL IN
(Fault = Floating)

SCREEN

1   2   0V   S

1   2   3   4

ETHERNET PORTS

UNSECURED PORT (INPUT)

SECURE PORT (OUTPUT)

TOFINO 9211-ET

5   6   7   8

+   −   +   −

POWER IN 9 - 32V dc

POWER & POWER-FAIL CONNECTIONS

5 6 7 8

+   −   +   −
Supply 1   Supply 2

4 3 2 1

Screen
0V
Power-fail 1
Power-fail 2

DIMENSIONS & PANEL DETAILS

42
(1.65")

Mounting clip

Power-fail connector 1 - 4

152
(6.0")

Honeywell

Ethernet ports
Unsecured
Secure

Ethernet LEDs
Speed
Link activity

Pwr
Fault
Event
Mode

LED indicators

BYRES security enabled

USB ports

USB1   USB2

Config button

146
(5.75")

ID number

Modbus TCP Firewall
51154724-100

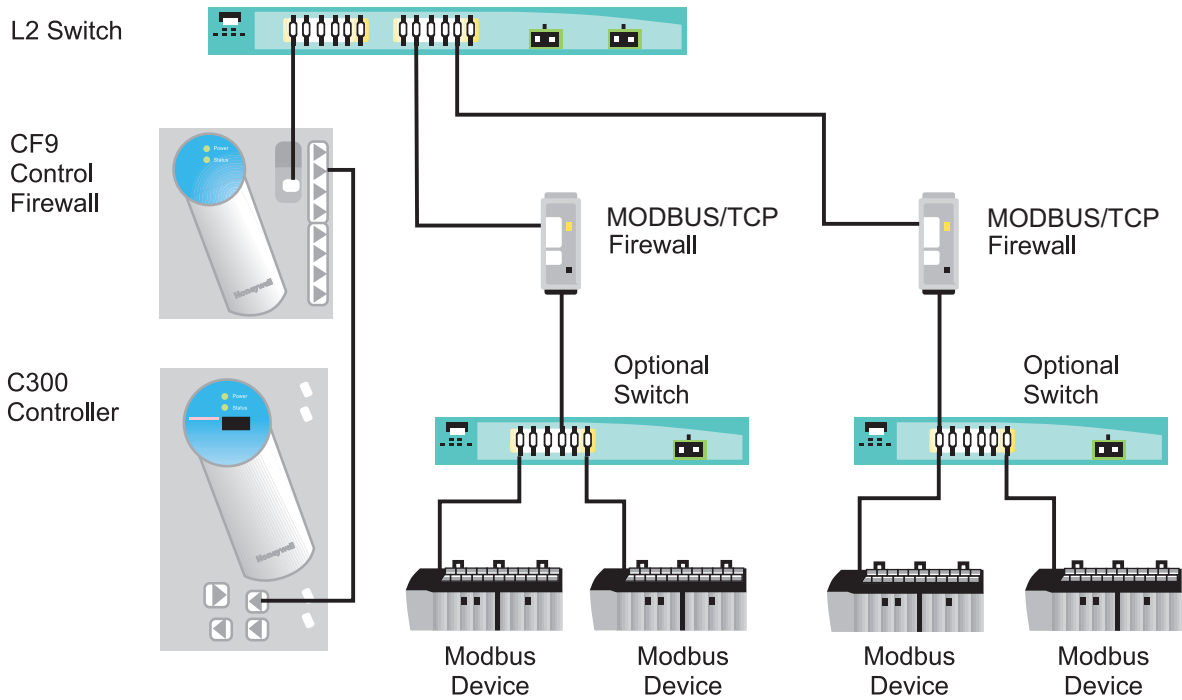Power connector 5 - 8

Mounting clip

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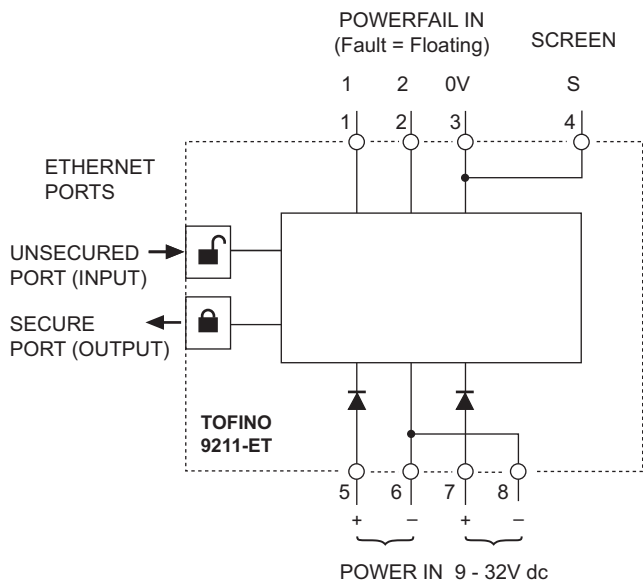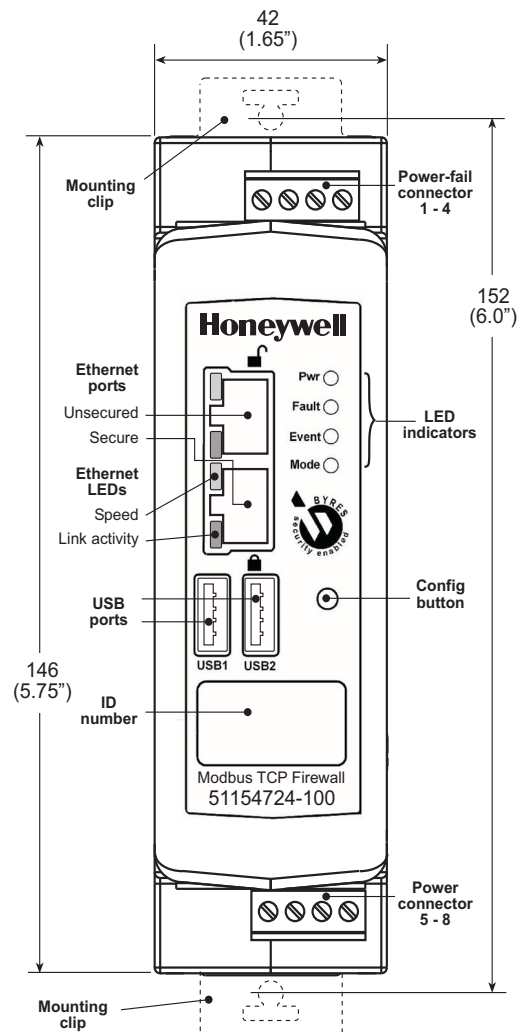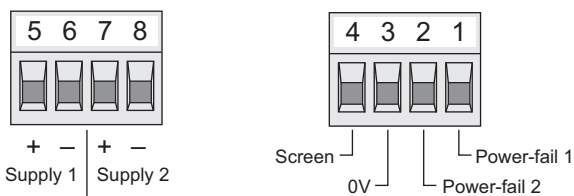E-mail: tofinosupport@mtl-inst.com   Web site: www.tofinosecurity.com

MUSIC CERTIFIED FOUNDATION

BYRES security enabled

Aug 2008

APPROVALS

For the latest certification information visit: http://www.mtl-inst.com/certs_1.nsf

9211-ET-HN1 - Tofino™ Industrial Security Appliance

Region	Europe	USA	Canada
Authority	**ATEX**	**FM**	**FM**
Standard	EN 60079-15:2005	Class 3600 1998 Class 3611 2004 Class 3610 2005	CAN/CSA E60079-0 2002 CAN/CSA E60079-15 2002 C22.2 No. 1010-1 2004
Approved for	⟨Ex⟩ II 3 G Ex nA nC IIC T4	Non-incendive for Class I, Div. 2 Grps A-D; Zone 2 AEx nC IIC T4 Ta=70°C	Non-sparking for Class I, Div. 2 Grps A-D; Zone 2 Ex nL IIC T4 Ta=70°C
Certificate Numbers	MTL07ATEX9211X	3029914	3029914C

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