



CONSPEC[®]

Innovation that digs deeper.

NEMA 4x & XP



Conspec's Trunk Extenders and Fiber Gateways increase the distance over which communications to Conspec's field devices by reshaping the data signal and boosting the power while providing critical battery back-up to ensure your Conspec device network continues operating in the most mission critical applications.

Conspec's Trunk Extenders and Fiber Gateways ensure a reliable communications backbone for even the most demanding mining environment.

- Ensures reliable communication
- Digital Communications using either MODBUS RTU/TCP or Conspec Accessor Protocols
- Provides Power and Communications for up to 4000' (1220m) over a rugged copper backbone without the need for additional repeaters (Depending on the number of connected devices and your local electrical regulations)
- Converts Local AC Power (110VAC~400VAC) to 12VDC~24VDC Power with over 4 hours battery backup for all your Conspec Devices
- Intrinsically Safe Version converts Local AC Power (110VAC~400VAC) to Intrinsically Safe DC Power (15.8VDC or 18VDC) with over to 4 hours battery backup to continue system operations during a high gas event
- One Year Warranty

Fiber Gateways Reduces Cabling Costs

The Use of Conspec's Fiber Gateways reduce the cabling costs of all copper networks by allowing Conspec Devices to interconnect to existing fiber backbones within a mining operation.

Reliable Secure Power

Conspec's Trunk Extenders and Fiber Gateways provide secure, regulated, reliable and steady power to all your Conspec Field Devices minimizing the risk of damage due to power surges. Additionally, every Trunk Extender and Fiber Gateway provides Conspec Field Devices with 4 Hour Battery back-up to ensure your network continues operating in the event of a power outage in compliance with MSHA regulations.

Intrinsically Safe Power for Coal Mining

Conspec's Intrinsically Safe Trunk Extenders and Fiber Gateways are designed to provide an intrinsically safe power and communications backbone for your Conspec Devices to allow your atmospheric monitoring network to continue operating safely through even the most dangerous high gas events, providing you with critical gas monitoring when you need it the most.

Increased Sensor Data Through Digital Communications

Conspec's copper and fiber network backbones uses digital communications either MODBUS RTU/ TCP-IP or Conspec Accessor Protocols) to relay sensor and device data with Mine Wide SCADA Systems such as the Conspec Senturion SCADA using digital communications This ensures that signal

noise on your mining operation's network backbone is significantly reduced and allows for the retrieval of other important operating parameters such as operating temperature and voltage for improved performance analysis.

Certified for use in Coal Mines

Conspec's Multi-Function I/O Controllers are internationally certified for use in high methane environments when connected to a certified intrinsically safe power source.

NEMA 4x & XP Specifications

Mechanical

Enclosure	P1534, P1582 P1584-N4 – Rittal Single Door Wall Mounted Steel Enclosure P2799 – Rittal Single Door Wall Mounted Steel Enclosure w/ Rital Single Door Mounted Steel Enclosure for Battery Backup P1584-XPUS – Killark Copper Free Cast Aluminum Explosion Proof Enclosure P1584-XPCA, P5000A – Custom ½” Welded Steel Explosion Proof Enclosure
Dimensions	P1534, P1582, P1584-N4 – 600cm x 600cm x 210 P2799 – 600cm x 600cm x 210 Battery Box 600 x 380cm x 210 P1584-XPUS – 16” x 16” x 8” P1584-XPCA, P5000A – Main Box 14” x 15” x 7” + Battery Box 13.5” x10.5” x 6”
Weight	P1534, P1582, P1584-N4, P2799 – 127lbs P1584-XPUS – 398lbs P1584-XPCA, P5000A – 391lbs
Conduit Entry	P1534, P1584-N4 – 3 x ¾” Cable Grips P1582 – 4 x ¾” Cable Grips P2799 – 5 x ¾” Cable Grips (two for External Battery Connectors) P1584-XPUS – 3 x String Relief XP Junction Boxes P1584-XPCA, P5000A – 6 x Steel String Relief XP Connectors (Two for External Battery Connectors)

Electrical

Operating Voltage	8-30VDC (15VDC or 18VDC for Intrinsically Safe Operation)
Cable Requirements	4-Conductor 18 AWG Suggested, Conspec P1209 Trunk Cable Recommended
Cable Connection - Output	P1534, P1584-N4 – 1 x Conspec Trunk Out P1582 – 2 x Conspec Trunk Out P2799 – 2 x Conspec Trunk Out, 1 x DC Power Out (for external Battery) P1584-XPUS – 1 x Conspec Trunk Out P1584-XPCA, P5000A – 1 x Conspec Trunk Out, 1 x DC Power Out (for external Battery)
Inputs	P1534, P1582 P1584-N4 – 1 x Trunk In, 1 x AC Power In P2799 – 1 x CAT5 Cable In, 1 x AC Power In, 1 x Battery Power In P1584-XPUS – 1 x Trunk In, AC Power In P1584-XPCA – 1 x Trunk In, AC Power In, 1 x Battery Power In P5000A – 1 x CAT5 Cable In, AC Power In, 1 x Battery Power In
Current Consumption	2A
Communication protocol	Conspec Accessor (Legacy or CN2), MODBUS RTU/TCP-IP

Environmental

Operating Temperature	14°F to 120°F (-10°C to 50°C)
Operating Humidity	10% to 95% RH Non-Condensing

System

Status LEDs	P1534, P1584-N4: 1 x AC Power, 1 x Trunk Power P1582, P2799: 1 x AC Power, 2 x Trunk Power
Operating Modes	2 – Normal, Battery

NEMA 4x & XP Specifications

Options

P1534	Accessor Trunk Extender w/ 4-Hour Battery Backup complete with Charging Circuitry and Low Battery Cut-Off. Provides 2A of DC Power.
P1582	Dual Accessor Trunk Extender w/ 4 Hour Battery Backup complete with Charging Circuitry and Low Battery Cut-Off. Provides 2A of DC Power per Trunk. (1 x Conspec Trunk In, 2 x Conspec Trunk Out)
P1584-N4	Intrinsically Safe Accessor Trunk Extender in NEMA 4x Enclosure for Mounting outside Portal w/ 4-Hour Battery Backup. Provides 500mA of Intrinsically Safe Power.
P1584-XPUS	Intrinsically Safe Accessor Trunk Extender in Killark Copper Free Aluminum Explosion Proof Enclosure w/ 4-Hour Battery Backup. Provides 500mA of Intrinsically Safe Power.
P1584-XPCA	Intrinsically Safe Accessor Trunk Extender in Custom ½" Welded Steel Explosion Proof Enclosure w/ External 4-Hour Battery Backup in Custom ½" Welded Steel Explosion Proof Enclosure. Provides 500mA of Intrinsically Safe Power.
P2799-1	Multi-Mode Fiber Optic Accessor Trunk Extender w/ External 4-Hour Battery Backup complete with Charging Circuitry and Low Battery Cut-Off. Provides 2A of DC Power per Trunk. (1 Fiber In, 2 Conspec Trunk Out)
P2799-2	Single Mode Fiber Optic Accessor Trunk Extender w/ External 4 Hour Battery Backup complete with Charging Circuitry and Low Battery Cut-Off. Provides 2A of DC Power per Trunk. (1 x Fiber In, 2 x Conspec Trunk Out)
P5000-1	Intrinsically Safe Multi-Mode Fiber Optic Accessor Trunk Extender in Custom ½" Welded Steel Explosion Proof Enclosure w/ External 4 Hour Battery Backup in Custom ½" Welded Steel Explosion Proof Enclosure. Provides 500mA of Intrinsically Safe Power.
P5000-2	Intrinsically Safe Multi-Mode Fiber Optic Accessor Trunk Extender in Custom ½" Welded Steel Explosion Proof Enclosure w/ External 4 Hour Battery Backup in Custom ½" Welded Steel Explosion Proof Enclosure. Provides 500mA of Intrinsically Safe Power.

NEMA 4x & XP Specifications

Accessories & Spare Parts

P1163	Intrinsically Safe Trunk Driver.
P1166	Intrinsically Safe Power Supply. (Legacy Systems Only)
P1168	DC Power Supply.
P1247	Accessor Data Pulse Shaper (Accessor Protocol)
P1249	Non-Intrinsically Safe Trunk Driver.
P1343	Replacement Accessor Trunk Driver Board with Power Supply for P1534
P1547	Portal Protector
P2810	Pulse Regenerator/Trunk Splitter Board (MODBUS)
P2810-A	Pulse Regenerator/Dual Trunk Splitter Board for P2799 (MODBUS)
P2830	RS-485 Adaptor for P2810 Pulse Regenerator/Trunk Splitter Board
P2338	RS-232 Adaptor for P2810 Pulse Regenerator/Trunk Splitter Board
MB3180/US	Moxa Mgate MB3180/US Ver1.1 Modbus Gateway
MP62-2MSC	Garrettcom MP62-2MSC Multi-Mode Ethernet Fiber Switch
RS2-3TX/2FX EEC	Hirschmann RS2-3TX/2FX EEC Multi-Mode Ethernet Fiber Switch
EDS-508A-MM-SC-T	Moxa EDS-508A-MM-SC-T Multi-Mode Ethernet Fiber Switch
MP62-2SSC	Garrettcom MP62-2SSC Single Mode Ethernet Fiber Switch
RS2-3TX/2FX-SM EEC	Hirschmann RS2-3TX/2FX-SM EEC Single Mode Ethernet Fiber Switch
T1266	Intrinsically Safe Power Supply. (500mA @18VDC)

Conspec Controls Ltd.
 25 Klondike Drive
 Toronto, Ontario, Canada
 M9L 1S1

Phone: +1 (416) 661-0500 • Fax: +1 (416) 736-1684
 Toll Free (Can./US only): +1 (877) 526-6773
 sales@conspec.ca • www.conspec.ca

Conspec Controls Ltd.
 666 Burrard Street
 Vancouver, BC, Canada
 V6C 3P6

Phone: +1 (604) 642-6123 • Fax: +1 (604) 688-2419
 Toll Free (Can./US only): +1 (877) 526-6773
 sales@conspec.ca • www.conspec.ca

Conspec Controls Pty., Ltd.
 Suite 2, 1 Shaw Road
 Ingleburn, NSW 2565
 Australia

Phone: +61 (2) 9829-3633 • Fax: +61 (2) 9829-3488
 Toll Free (Can./US only): +1 (877) 526-6773
 sales@conspec.au • www.conspec.ca

© 2014 Conspec Controls Limited

The Conspec Logo is a trademark and service mark of Conspec Controls Limited. Conspec, Conspec Controls and Smart Head are registered trademarks of Conspec Controls Ltd. All other marks and logos are the property of their respective owners.

The contents of this publication are presented for information purposes only, and while effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. All sales are governed by our terms and conditions, which are available on request. We reserve the right to modify or improve the designs or specifications of our products at any time without notice.