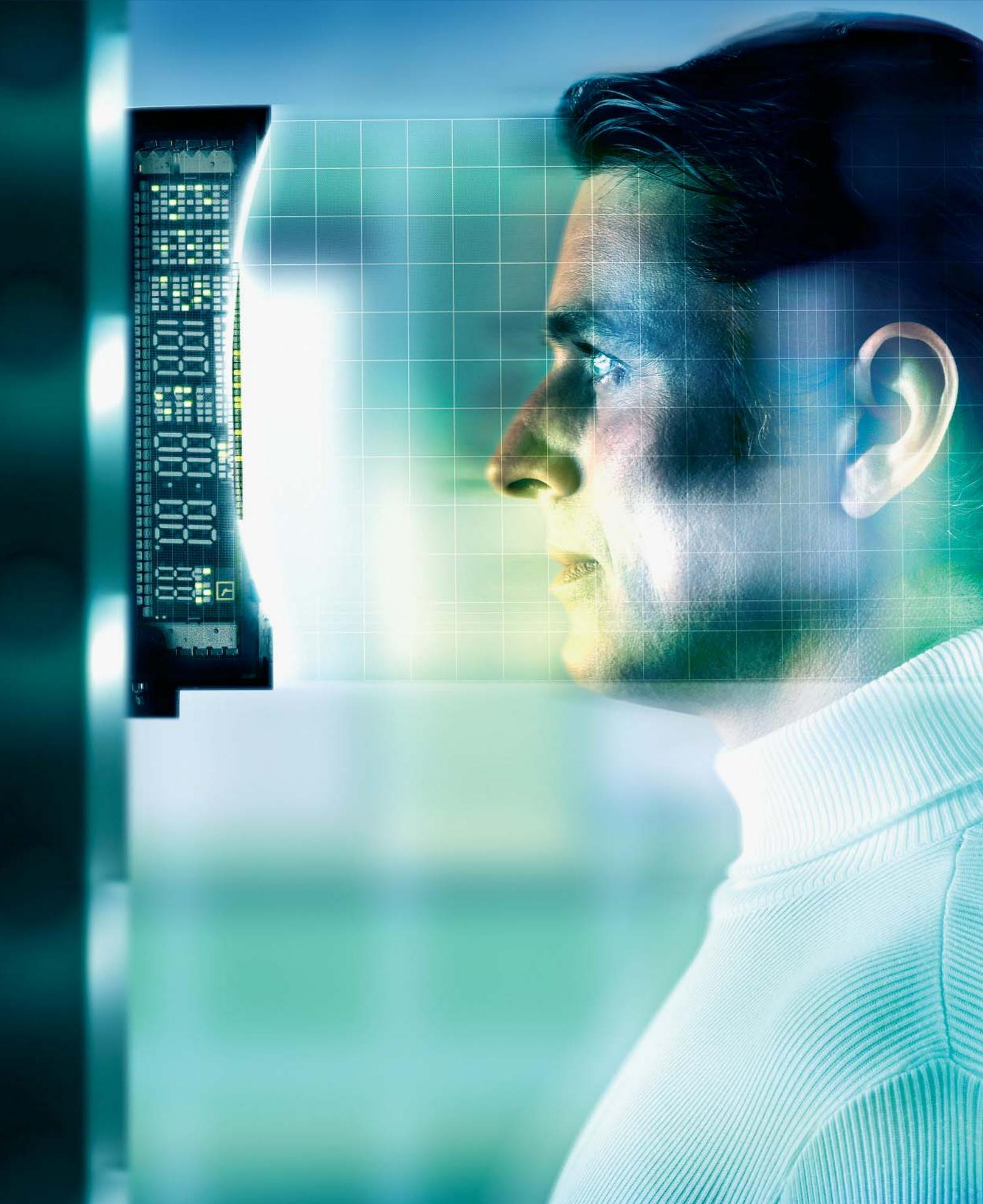


Effective Solutions for Security Applications



Fully integrated solutions, combining copper cable, fiber, wireless technology, connectors, switches and active components to bring voice, video and data to mission critical applications.

BELDEN
SENDING ALL THE RIGHT SIGNALS





Belden® for the Best Security Solutions in the World

Belden designs, manufactures and markets high-speed electronic cables, connectivity products and related items for the specialty electronics and data networking markets. The company focuses on segments of the worldwide cable and connectivity market that require highly differentiated, high-performance products, adding value through design, engineering, excellence in manufacturing, product quality and customer service.

Total Connectivity Solutions Supplier

Belden is a total connectivity solutions provider, with a portfolio that includes the full range of Belden® cables, Hirschmann™ connectors and switches and Lumberg Automation™ connectors, all supported by a strong and experienced team of experts.

Well Established and with More Choice Than Ever

Belden has long been committed to the development of high quality solutions and is the top choice for the world's most prominent security system designers and integrators. They know that they can trust Belden to deliver solutions that perform reliably to industry standards, day in and day out.

The Belden team integrates copper cable, fiber, wireless technology, connectors, switches and active components to bring voice, video and data to any mission-critical security application. Belden offers a complete line of value-added CCTV, access control, intruder detection and fire alarm cables. In short, Belden offers the security industry more choices than ever before.

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Table of Reference (additional documentation to the products mentioned in this brochure)

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| Banana Peel® | NP 256 Composite Surveillance Monitoring Cables | 4 |
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CCTV Coaxial

Belden reduces installation time by requiring less set-up, pulling and termination time.

Analogue

Belden offers a range of CCTV cables that provides security installers and/or system integrators in particular with readily available, cost effective alternatives that perform to the highest industry standards. These cables are designed for CCTV applications, where they deliver competitive price/performance when compared to cables of a similar construction.

Key features and benefits include:

- Coaxial cable with solid copper conductor for low attenuation and easier termination
- True 75 ohm impedance – ensures no impedance mismatches for optimum whole-system performance, quality signal transmission over long distances
- Sequential marking – for usage tracking during installation
- A whole step in the termination process is eliminated – thanks to Banana Peel® sleeveless cable design

| Part Number | Distance | Description |
|-------------|----------|-------------|
|-------------|----------|-------------|

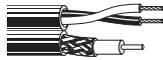
Coaxial Cables



| | | |
|---------|-------|----------------------------|
| 573945* | 200 m | Mini RG-59 |
| 543945* | 300 m | RG-59 |
| 533945* | 500 m | RG-6 |
| 513945* | 700 m | RG-11 |
| 551945* | 200 m | RG-59 (stranded conductor) |
| 5439W5* | 300 m | RG-59 (water blocked) |
| 5339W5* | 500 m | RG-6 (water blocked) |

Coaxial Cables plus auxiliary pairs

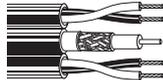
To carry a DC power supply, transmit audio and/or control



| | | |
|---------|-------|---------------------|
| 579945* | 150 m | Mini RG-59 + 0.8 mm |
| 549945* | 300 m | RG-59 + 1.0 mm pair |
| 539945* | 500 m | RG-6 + 1.0 mm pair |

Coaxial Cables plus four wires

Two wires for control and two wires for power



| | | |
|---------|-------|---------------------------------------|
| SEC0002 | 300 m | RG-59 + 2 x 0.5 mm + 2 x 1.5 mm wire |
| SEC0004 | 300 m | RG-59 + 2 x 0.5 mm + 2 x 0.22 mm wire |

Coaxial Cables plus four wires

BananaPeel® – The Cable without a jacket

Two wires for control and two wires for power



| | | |
|--------|-------|--------------------------------------|
| 500PTZ | 300 m | RG-59 + 2 x 1.2 mm + 2 x 0.6 mm wire |
| 501PTZ | 300 m | RG-59 + 2 x 1.2 mm + 2 x 0.8 mm wire |
| 502PTZ | 300 m | RG-59 + 2 x 1.2 mm + 2 x 1.2 mm wire |
| 503PTZ | 300 m | RG-59 + 2 x 1.6 mm + 2 x 1.2 mm wire |
| 504PTZ | 300 m | RG-59 + 2 x 1.6 mm + 2 x 0.8 mm wire |

* Also available with a halogen-free jacket. If you would like to order the halogen-free version, please replace the first digit, number 5, with a 4.

For example:
573945 – PVC jacket
473945 – halogen-free jacket



HDcctv

Belden continues to be at the forefront of video technology. HDcctv* is derived from HD-SDI, the broadcast standard. The HDcctv specification includes:

- Bi-directional audio;
- Up-the-cable transmission of control and power;
- Long Reach mode (in the near future draft version 2) for 300 m transmission over conventional RG-59 cable;
- Video formats up to 20 megapixels per frame;
- HD transmission of 720P and 1080P video over coaxial cable uncompressed and non-packetized (version1, according SMPTE 292M);
- No latency, compression or video delay – much faster than IP-based CCTV solutions;

Belden joined the HDcctv Alliance as we recognize both the value of HDcctv in the video surveillance market and the importance of having interoperability standards. Delivering high-resolution video images, this new camera connection technology allows for higher performing systems, with a lower installation learning curve and a significantly lower cost of entry.



| Part Number | Description |
|-------------|--|
| 543945 | RG-59, "gold standard", transmit 1.5 GB/s over 150 m |
| 533945 | RG-6, 200 m single run at 1.5 GB/s |

* HDcctv Alliance® is the global security industry consortium established to manage and promote technical standards for HDcctv equipment interoperability.

Compression Connectors

Built to Belden's exacting standards, Belden Connectors and Tools, combined with Belden coaxial cables, provide maximum signal reliability and performance, which means enhanced customer satisfaction and profitability for you.

Key features and benefits include:

- Belden 360-degree compression
- Viewed entry point with pop-up pin
- Custom compression tools
- Easy dispensing tubes
- Connector warranty

| Part Number | Cable Type |
|-------------|------------|
|-------------|------------|

Connectors

| F Series | |
|------------|-----------|
| BBRG59F | RG-59 |
| BBRG66F | RG-6 |
| BNC Series | |
| BBRG59B | RG-59 |
| BBRG66B | RG-6 |
| BBMINIB | 22–24 AWG |
| BB2426B | 22–26 AWG |
| RCA Series | |
| BBRG59R | RG-59 |
| BBRG66R | RG-6 |
| BBMINIR | 22–24 AWG |
| BB2426R | 22–26 AWG |



| Part Number | Description | Quantity |
|-------------|-------------|----------|
|-------------|-------------|----------|

Accessories

| Strip Tools | | |
|------------------|---|---|
| BBRGST | 59/6 for RG-59 or RG-6 Cable | 1 |
| BBRGBST | RGB for Mini RGB Cable 22–26 AWG | 1 |
| Compression Tool | | |
| BBCOMT | For BB Series F, RCA and BNC Connectors | 1 |

CCTV
IP-based Solutions

Cables

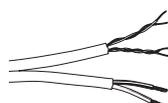
Belden's data products – designed and manufactured exclusively for video, sound and security system integrators – offer a cost-effective digital solution for demanding applications.

Belden provides superior performance both before and after the cable's installation.

Copper

Key features and benefits include:

- 4-pair unshielded twisted pair (UTP) cables provide both signal transmission and Power over Ethernet (PoE) capabilities in a single cable, eliminating the need for an external power source.
- Belden UTP data cables feature patented Bonded-Pair construction – a unique advantage ensuring consistently high Installable Performance® both before and after installation.
- Improved attenuation ensures stronger signal power.
- Available in Spool-in-Box packaging for ease of installation, handling and inventory management.



| Part Number | Description |
|-----------------------------|-------------------------|
| Networking Cables | |
| Category 5e | |
| 5663U5* | U/UTP |
| 1633E | F/UTP |
| 1633ES | SF/UTP |
| Category 6 | |
| 5663U6* | U/UTP |
| 7860ENH | F/UTP |
| 7860ENS | SF/UTP |
| Category 6a | |
| 24818095 | U/UTP |
| Category 7 | |
| 1885ENH | S/FTP |
| 2-Pair UTP + 2 wire | |
| 5284US* | 2 x 1.5 mm + 2 x 0.5 mm |
| 5284UE* | 2 x 1.5 mm + 2 x 0.6 mm |
| Category 5e + 2 wire | |
| 5288US* | 2 x 1.5 mm + 4 x 0.5 mm |

* Also available with a halogen-free jacket. If you would like to order the halogen-free version, please replace the first digit, number 5, with a 4.

For example: 5663U5 – PVC jacket, 4663U5 – halogen-free jacket

Fiber

Belden offers a complete product range of optical fiber cables with:

- Single-mode fibers
- Multimode fibers 62.5/125 and 50/125 (OM2, OM2+, OM3, OM4)



| Part Number | Description |
|---------------------|---|
| Fiber Cables | |
| GIPS_1 | Simplex, I-K(ZN)H |
| GIPS_2 | Duplex, I-K(ZN) |
| GIBT | Breakout, I-V(ZN)HH, 2–24 fibers |
| GUMT | Mini-Breakout, A/I-V(ZN)H, 2–24 fibers |
| GOSB | Central-Loose-Tube, A-DQ(ZN)2Y, 2–24 fibers |
| GBAM | Multi-Loose-Tube, A-DQ(ZN)2Y, 4–216 fibers |



FiberExpress® Brilliance® Field-Installable Connectors

Belden's FiberExpress Brilliance Field-installable Connectors ensure reliable network performance by virtue of their superior design and manufacture. Quality of this kind enables Belden to provide a 100% installation yield guarantee – even when the connectors are used in environments with temperatures ranging from -40°C to +75°C.

The FiberExpress Brilliance Connector is the only fiber optic connector in the marketplace to overcome the key challenges of connector

installation in the field and it provides a quick and greatly simplified tool-less fiber termination process and the ability to quickly and reliably verify the termination once it's made.

These features positions the connector as the industry's best solution for the challenges of field connectorization of optical fiber networks. It is also the connector of choice for high-speed optical networks such as 10G Ethernet and the more challenging 40G/100G networks of the future.

Belden's FiberExpress Brilliance Field-installable Connectors are available in 900 µm tight buffered single-mode and multimode (OM1, OM2, OM3/OM4) LC, SC and ST Connectors. They exhibit a typical insertion loss of 0.2 dB. The 2 and 3 mm jacketed options and APC versions will become available in 2011.

Fool-Proof Termination in Three Simple Steps... Now That's Brilliance



Switches

Belden offers a range of Hirschmann™ industrial switches for use in CCTV Systems, especially suited for outdoor use.

Key features and benefits include:

- Robust Design:
 - Standard operating temperature 0°C to 60°C
 - Extended operating temperature -40°C to 85°C + conformal coating
- Fan-less:
 - Hirschmann™ high performance circuitry generates less heat. This means that there is no dependence on a fan for cooling and that the circuits have an extremely high MTBF (Mean Time Before Failure) while being able to operate at temperatures as high as 85°C.
 - Higher MTBF because of no fans (first device who fails is a fan) – no noise
 - No vacuuming of dust.
- Easy to Configure:
 - Managed switches feature built-in (password protected) web interface. Configuration via SNMP and command line interface (CLI) is also available. Remote configuration and monitoring is possible through the network.
 - Easy to configure via the web interface, all Hirschmann™ switches have the same management interface. If you know one you know all.
- Fast Replacement:
 - Fast switch replacement/MTR (Mean Time To Repair) using copy-cat and/or configuration archiving using USB drive.
 - The ACA (Auto Configuration Adapter) makes it possible to store the configuration of the switch and load it back to an identical device, in the event of a replacement. Therefore, no trained employee is necessary which reduces the cost of a replacement.



Belden's industrial switches are constructed for maximum performance and reliability. They are the perfect choice for rugged and harsh environments.

Switches (continued)

- **IT-Compatible:**
Fully IT-compatible managed switch functionality with SNMP and RMON. Compatible with industry standard network management tools and other brands of switches for configuration and monitoring.
- **Media Redundancy Options:**
Hiper-Ring allows simplified redundant network topologies which will recover from media failure within 50 ms (Gigabit ring) or 300 ms (100 Mbps ring) – no software configuration is required.
- **RSTP (Rapid Spanning Tree) and trunking/link aggregation redundancy is also available.**
- **Fault Contact(s):**
97% of the switches in the market include at least one configurable fault contact that can provide indication of lost power supply, lost redundancy, temperature out of limits, etc. Hirschmann™ industrial switches guarantee 100% fault-free tested contacts ensuring maximum uptime. This feature is not available for office switches.
- **Broad Product Line:**
Managed and unmanaged switches (4-48 ports in an almost limitless copper/fiber mix), Layer 3 routers, media converters, wireless, firewalls with VPN tunneling and network management software.
- **Service:**
Belden offers global service and consulting, as well as training and certification programs for it's Hirschmann™ product range.



Switches

BAT54

Wireless LAN Access Points/Clients with IEEE 802.11a/b/g/h/i

BAT300

Wireless LAN Access Points/Clients with IEEE 802.11n

MACH100

Switches with 10/24 ports

MACH1000

Switches with 16/20 ports

MACH4000

Backbone switches/router up to 48 GBit/s ports and 3x10 GBit/s ports

RS20/30

Robust DIN Rail switches with 8/10 ports

SPIDER

Unmanaged Standard Rail switches with 2/10 ports



Access Control

Banana Peel® Saves Time and Money

Belden Access Control Banana Peel Composites feature a patented design that affixes the individual cables to a center spline, eliminating the need for an overall jacket.

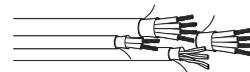
Key features and benefits include:

- A whole step in the termination process is eliminated - no overall jacket.
- The Banana Peel composite has a smaller OD than traditional composites. This improves the cable's overall bend radius for faster, easier installation. A smaller OD also means a smaller size conduit.
- Eliminates the need for pulling several individual components by using an all-in-one Banana Peel cable (reducing installation costs and time).
- The individual cable components are all instantly identifiable, they are color-coded by application, they have the application printed on the individual jackets, and they are ready for termination.
- Experience and studies have shown installing one cable instead of four saves time and money. In one Belden-sponsored study involving Belden unjacketed Banana Peel Composites, the savings equalled or exceeded 31% for labor and 14% in end-user costs.
- Breakout versatility is assured since the individual cables can be connected to the junction box or can be rerouted to the point of termination.

| Part Number | Description |
|-------------|-------------|
|-------------|-------------|

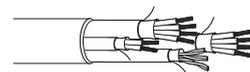
Banana Peel™ – The Cable without a jacket.

| Lock + Reader + Door + Spare | |
|------------------------------|---|
| 558AFS | 4 x 1.2 mm + 3P x 0.8 mm + 2 x 0.8 mm + 4 x 0.8 mm |
| 558GMS | 4 x 1.2 mm + 6 x 0.8 mm + 4 x 0.8 mm + 4 x 0.8 mm |
| 558GFS | 4 x 1.2 mm + 3P x 0.8 mm + 2 x 0.8 mm + 3P x 0.8 mm |
| 538AFS | 4 x 1.5 mm + 3P x 1.2 mm + 2 x 1.2 mm + 4 x 1.2 mm |



Combination Cables

| Lock + Reader + Door + Spare | |
|------------------------------|--|
| 558AFJ | 4 x 1.2 mm + 3P x 0.8 mm + 2 x 0.8 mm + 4 x 0.8 mm |



Intruder Detection

Safeguarding and Protecting Your Business

The quality of the systems depends on the performance of all individual components and the way they interact. Belden offers the most comprehensive, economical and up-to-date range of reliable cable products on the market today, to ensure that your security systems stay on the go.

Key features and benefits include:

- Top of the line shielded and unshielded cables that allow the use of the total network length.
- Belden shielded cables feature patented innovative, high performance Beldfoil® shield, for unique performance and utmost reliability.
- Multi pair configurations allow maximum flexibility in designing your network.
- Different versions, PVC, LSNH, FEP are available as standard items fit for purpose.

Belden's cable range offers one of the largest, most economical and up-to-date selections of reliable multi-conductor products in the market today.

| Application | Description | Part Number | | |
|--|---------------------------------|-------------|--------|--------|
| | | PVC | LSNH | SWA |
| Data | 22 AWG-2P Individual Shield | 8723 | 8723NH | 8723LS |
| DMP Weigland Module 733 | 18 AWG-6C STR Unshielded | 8489 | - | - |
| RS422 Data 4 Wire Extended Distance | 24 AWG-2P (4C) STR OS Low CAP | 8102 | - | - |
| Reader | 22 AWG-3P STR Individual Shield | 8777 | 8777NH | 8777LS |
| Reader | 20 AWG-3P STR Individual Shield | 9873 | 8777NH | 8777LS |
| Reader | 18 AWG-3P STR Individual Shield | 9773 | - | - |
| Lock Power-EDR | 20 AWG-1P STR Unshielded | 8205 | 8205NH | - |
| Power Extended Load/Distance | 16 AWG-2C STR Unshielded | 8471 | 8471NH | 8471LS |
| RS232 Data/General Purpose | 24 AWG-1P STR Overall Shield | 9501 | 9501NH | - |
| RS232 Data/General Purpose | 24 AWG-2P STR Overall Shield | 9502 | 9502NH | 9502LS |
| RS232 Data/General Purpose | 24 AWG-4P STR Overall Shield | 9504 | 9504NH | - |
| REX-Alarm Points-Glass Break | 18 AWG-1P STR Overall Shield | 8760 | 8760NH | 8706LS |
| Door Switch-Button- Alarm Points | 22 AWG-1P STR Overall Shield | 8761 | 8761NH | - |
| High Performance CCTV Coax | RG-59 Coax | 8241 | - | 8241LS |



Fire Alarm

Designed for Easy Installation to Save Time and Labor Costs

When a fire occurs, there is no time for hesitation and every second counts. It is critical that fire detection, warning and alarm circuits continue to operate even under the most extreme conditions of fire, smoke and heat. There is nothing more important than the safety and evacuation of personnel and the fire alarm system must not fail.

Belden's New Generation® range features cables specifically designed for use during severe fires where a low-smoke, zero-halogen cable is required to maintain circuit integrity.

These cables are ideal for fire detection systems, emergency lighting, video surveillance and public address systems.

Key features and benefits include:

- High-performance alarm circuits
- Uninterrupted operation during severe fires

| Part Number | Description |
|-----------------------------------|---|
| Unshielded Multiconductor | |
| Solid, PVC Jacket | |
| 55xxUL | 22 AWG, 0.6 mm, 4, 6 conductors |
| 53xxUL | 18 AWG, 1.0 mm, 2, 4, 6, 8, 10, 12 conductors |
| 52xxUL | 16 AWG, 1.3 mm, 4, 6 conductors |
| 51xxUL | 14 AWG, 1.6 mm, 2, 4 conductors |
| 50xxUL | 12 AWG, 2.1 mm, 2, 4 conductors |
| Solid, Halogen-free Jacket | |
| 45xxUL | 22 AWG, 0.6 mm, 4, 6 conductors |
| 43xxUL | 18 AWG, 1.0 mm, 2, 4, 6, 8, 10, 12 conductors |
| 42xxUL | 16 AWG, 1.3 mm, 4, 6 conductors |
| 41xxUL | 14 AWG, 1.6 mm, 2, 4 conductors |
| 40xxUL | 12 AWG, 2.1 mm, 2, 4 conductors |
| Shielded Multiconductor | |
| Solid, PVC Jacket | |
| 55xxFL | 22 AWG, 0.6 mm, 4, 6 conductors |
| 53xxFL | 18 AWG, 1.0 mm, 2, 4, 6, 8, 10, 12 conductors |
| 52xxFL | 16 AWG, 1.3 mm, 4, 6 conductors |
| 51xxFL | 14 AWG, 1.6 mm, 2, 4 conductors |
| 50xxFL | 12 AWG, 2.1 mm, 2, 4 conductors |
| Solid, Halogen-free Jacket | |
| 45xxFL | 22 AWG, 0.6 mm, 4, 6 conductors |
| 43xxFL | 18 AWG, 1.0 mm, 2, 4, 6, 8, 10, 12 conductors |
| 42xxFL | 16 AWG, 1.3 mm, 4, 6 conductors |
| 41xxFL | 14 AWG, 1.6 mm, 2, 4 conductors |
| 40xxFL | 12 AWG, 2.1 mm, 2, 4 conductors |



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See www.beldensolutions.com for a complete listing of Belden locations.



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