# PANDUIT Permanent Identification System

PANDUIT offers the widest range of permanent identification solutions in the industry to enable reliable, comprehensive identification throughout the physical infrastructure. Ideal in harsh and industrial environments, the *PANDUIT* permanent identification system delivers long-term durability and legibility for optimum identification of pipes, conduit, cables and equipment. Safe, quick, and easy to install, the system includes stainless steel and aluminum marker plates, tags, marking tools and ties engineered for maximum reliability, improved productivity and workplace safety to mitigate risk in the physical infrastructure.

Featuring on-site custom marking tools, these systems offer portability for permanent identification on demand. *PANDUIT* also offers a rapid response, factory custom marking service for embossed and laser etched marker plates, tags, and ties to speed installation time, reduce labor costs and keep projects on schedule.
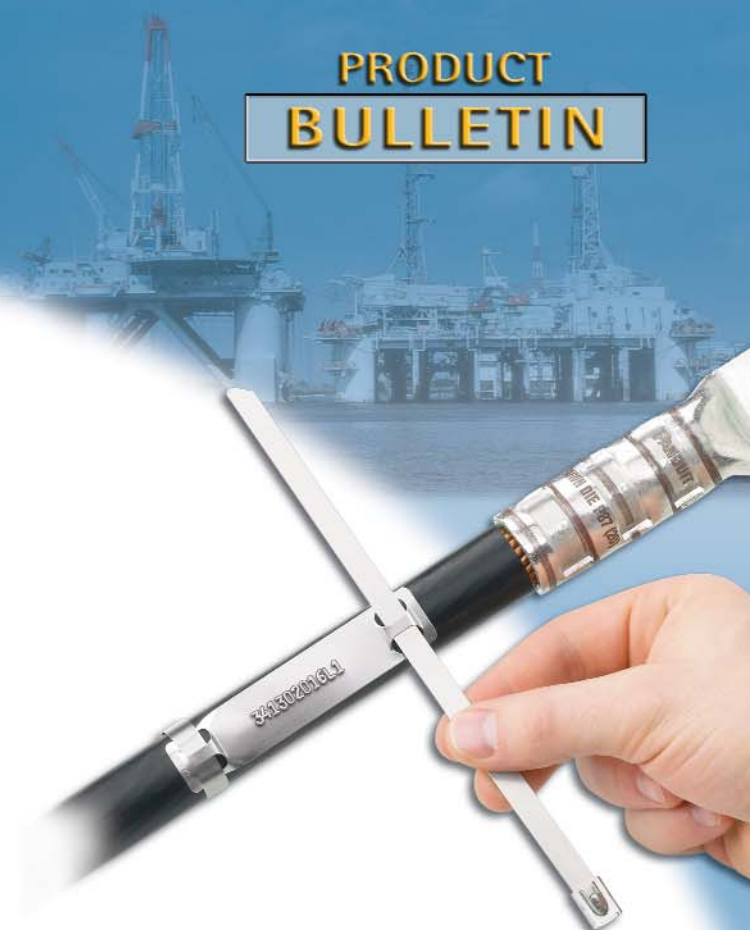
Applications

Cable Identification

Pipe Identification

Valve/Device Identification

General Mechanical

Technical Information

	PAN-STEEL® Stainless Steel, Marker Plates, Tags, and Cable Ties	*PAN-ALUM*™ Aluminum Marker Plates and Cable Ties	Brass Tags
Material:	304 and 316 Grade Stainless Steel	Aluminum – Natural and Anodized	Brass
Maximum temperature rating:	538°C (1000°F)	100°C (212°F)	704°C (1300°F)
Minimum temperature rating:	-80°C (-112°F)	-80°C (-112°F)	-80°C (-112°F)
RoHS:	Compliant	Compliant	Compliant
Flammability:	Non-flammable	Non-flammable	Non-flammable
Ultraviolet light resistance:	Excellent	Good	Excellent

Permanent Identification System

PANDUIT **offers the largest selection of permanent identification systems to meet the demands of your specific applications – enabling reliable, safe, and efficient identification throughout the physical infrastructure.**

Key Features   Benefits

On-Site Custom Marking Tools

NEW! **Portable embossing system**	Easily moved from job site to job site; the system creates raised characters on stainless steel and aluminum marker plates, to deliver maximum visibility for applications that are exposed to dirt and paint
Metal indenting machine	Stable bench top tool safely indents on marker plates, tags, ties and straps to provide quick identification

PANDUIT Factory Custom Marking Service

|	
Factory custom marking service	Creates embossed or laser etched metal plates, tags, and ties to speed installation time and reduce labor costs
Rapid shipment worldwide	Provides quick product availability at job site to keep projects on schedule
Embossing capability	Creates raised characters for maximum visibility in applications that are exposed to dirt and paint
Laser etching capability	Provides crisp, high quality text and graphics for improved visibility

Stainless Steel and Aluminum Marker Plates, Tags, and Cable Ties

Smooth surfaces and rounded edges	Protects the cable bundle and the installer for improved productivity, job site safety, and reliability
Easy feed cable tie slot	Raised slot provides easy cable tie insertion to speed installation (available on select marker plates)
PATENTED **Self-locking cable tie design**	Reduces the number of installation steps required to provide lowest installed cost
Smooth cable tie cut-off	Eliminates burrs and sharp edges after installation to protect installer and adjacent bundles
Flexible, lightweight material and color options of aluminum marker plates and cable ties	Easy to handle for improved productivity and provides quick visual identification for a wide range of applications

NEW! Portable Embossing System*

- Easily moved from job site to job site to deliver a permanent identification solution where it's needed, when it's needed
- Creates raised characters on stainless steel and aluminum marker plates, to deliver maximum visibility for medium to high volume applications that are exposed to dirt and paint
- Improves productivity by providing a reliable connection from the embossing machine to your PC using *EASY-MARK™* Software
- *EASY-MARK™* Software allows for a quick print legend and exact preview, saving time and reducing print costs
- Easy loading hopper allows for easy stacking of up to 250 plates, saving time and money
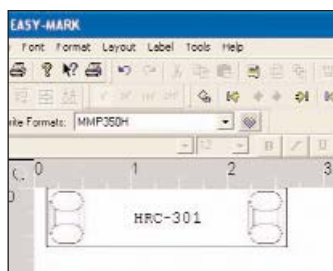
Part Number	Description	Used with *PAN-STEEL* ® Marker Plates	Std. Pkg. Qty.
PES197	Portable embossing system 3/16" (5mm) character, 11.5" (292mm) x 21.0" (534mm) x 19.0" (483mm), 95 lbs. (43 kg), 115 volt, 60 Hz with *EASY-MARK™* Software***	MMP350-M, MMP350-M316, MMP350H-M**, MMP350W38-M, MMP350W38M-316	1
PES197/E	Portable embossing system 3/16" (5mm) character, 11.5" (292mm) x 21.0" (534mm) x 19.0" (483mm), 95 lbs. (43 kg), 230 volt, 50 Hz with *EASY-MARK™* Software***	MMP350-M, MMP350-M316, MMP350H-M**, MMP350W38-M, MMP350W38M-316	1

*For use with 1000 pack marker plates only.
**Available in 304 and 316 stainless steel and aluminum (Natural, Blue, Green, Red, Black, Yellow).

*****System Requirements:**
Designed for Windows^ 98, Windows MS, Windows 2000, Windows NT 4.x, Windows XP, Windows Vista
64 MB hard drive space, and 64 MB RAM (256 MB RAM recommended).
Female DB9 serial communication port.

^Windows is either a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries.

Metal Indenting Machine

- Provides quick, easy, and permanent identification with aluminum marker plates and cable ties and stainless steel marker plates, tags, cable ties and straps for low to medium volume applications
- Automatic table indexing advances material forward for convenience and improved productivity
- Aluminum base for tool stability and durable construction

Part Number	Description	Std. Pkg. Qty.
Indenting Machine		
MIM094	Indenting machine with 3/32" (2.38mm) character wheel, 11.25" (286mm) x 16.25" (413mm) x 11.75" (298mm), 41 lbs. (18.6 kg)	1
MIM125	Indenting machine with 1/8" (3.18mm) character wheel, 11.25" (286mm) x 16.25" (413mm) x 11.75" (298mm), 41 lbs. (18.6 kg)	1
MIM187	Indenting machine with 3/16" (4.77mm) character wheel, 11.25" (286mm) x 16.25" (413mm) x 11.75" (298mm), 41 lbs. (18.6 kg)	1
Interchangeable Wheel Kits		
MIW094	3/32" (2.38mm) character wheel kit (wheel and indexing gear).	1
MIW125	1/8" (3.18mm) character wheel kit (wheel and indexing gear).	1
MIW187	3/16" (4.77mm) character wheel kit (wheel and indexing gear).	1

PANDUIT Factory Custom Marking Service

PANDUIT factory custom marking service simplifies identification with high quality, made-to-order custom embossed marker plates and tags or laser etched cable ties, marker plates, and tags. *PANDUIT* offers rapid direct shipment with fast turn around on custom marking orders worldwide. Work with *PANDUIT* to create an effectively identified infrastructure.

Embossing Service

- Used on rectangular metal marker plates and tags which are a maximum of .020 inches (.5mm) thick, and minimum .038 inches (10mm) width
- Excellent for applications that are exposed to dirt and paint
- Upper case "raised" characters
- Alphanumeric and sequential numbering

Available Character Sizes:	
1/8" (3.18mm)	For high character volume tags
3/16" (4.77mm)	The most common size
1/4" (6.35mm)	Excellent for military applications
5/16" (7.94mm)	Maximum visibility for tags requiring only a few characters

Laser Etching Service
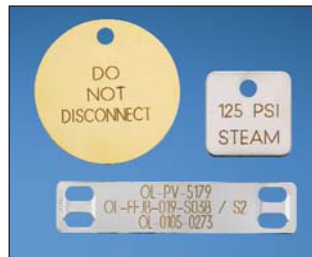
- Used on all metal marker plates, tags, and cable ties
- BOLD block letters
- Upper and lower case character capability
- Ability to create text and graphics
- Alphanumeric and sequential numbering

Use the online order form located at www.panduit.com/permanentid to:

- Receive support on selecting the proper marker plate or tag best suited for your application
- Obtain answers to frequently asked questions
- Gain knowledge on the various material options available
- Attach your custom legend template directly to your order

Once completed, email your order form to your authorized *PANDUIT* distributor for order placement or contact *PANDUIT* customer service for assistance.

Stainless Steel and Brass Marker Plates and Tags

- Provides permanent identification of pipes, conduit, valves, cables and equipment in harsh environments
- Delivers long life when exposed to chemicals, vibration, radiation, weathering and extreme temperatures
- Designed for use with *PAN-STEEL®* Stainless Steel Cable Ties for fast installation at lowest installed cost

- All marker plates can be embossed or laser etched with *PANDUIT* Factory Custom Marking Service
- For on-site custom marking use the metal indenting machine

MMP350-C

MMP350H-C

MMP350DB-C

MMP350W38-C

MMP172-C

MMP172W38-C
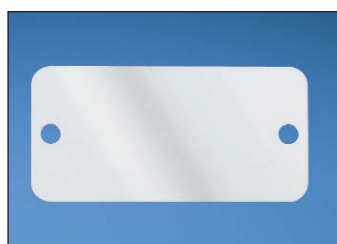
MMP350W17-Q

MMP338W21-Q

Part Number	Material	Color	Length/Diameter In.	mm	Width In.	mm	Custom Marking Parameters* Max. 3/16" (4.77mm) Character Per Line	Max. Lines of Text	Used with PAN-STEEL® Cable Ties**	Thickness In.	mm	Std. Pkg. Qty.^	Std. Ctn. Qty.
MMP350-C	304 Stainless Steel	Natural	3.50	89	.75	19	23	3	MLT-S	.010	.25	100	1000
MMP350-C316	316 Stainless Steel											100	1000
MMP350-M	304 Stainless Steel											1000	4000
MMP350-M316	316 Stainless Steel											1000	4000
MMP350H-C	304 Stainless Steel	Natural	3.50	89	.75	19	20	3	MLT-H	.010	.25	100	1000
MMP350H-C316	316 Stainless Steel											100	1000
MMP350H-M	304 Stainless Steel											1000	4000
MMP350H38-M316	316 Stainless Steel											1000	4000
MMP350W38-C	304 Stainless Steel	Natural	3.50	89	.38	10	23	1	MLT-S	.010	.25	100	1000
MMP350W38-C316	316 Stainless Steel											100	1000
MMP350W38-M	304 Stainless Steel											1000	4000
MMP350W38-M316	316 Stainless Steel											1000	4000
MMP350DB-C	304 Stainless Steel	Natural	3.50	89	1.12	29	20	3	MLT-H	.015	.38	100	1000
MMP350DB-C316	316 Stainless Steel											100	1000
MMP172-C	304 Stainless Steel	Natural	1.72	44	.75	19	8	3	MLT-S	.010	.25	100	1000
MMP172-C316	316 Stainless Steel											100	1000
MMP172W38-C	304 Stainless Steel	Natural	1.72	44	.38	10	8	1	MLT-S	.010	.25	100	1000
MMP172W38-C316	316 Stainless Steel											100	1000
MMP350W17-Q	304 Stainless Steel	Natural	3.50	89	1.73	44	26	6	MLT-S	.015	.38	25	250
MMP338W21-Q	304 Stainless Steel		3.38	86	2.13	54	22					25	250

*See page 4 for *PANDUIT* Factory Custom Marking Service information.
**See last page for *PAN-STEEL®* Stainless Steel Cable Ties.
^Order number of pieces required, in multiples of Standard Package Quantity.

Prime items appear in **BOLD**

Stainless Steel and Brass Marker Plates and Tags (continued)

MT350-C

MT350W17-Q

MT338W21-Q

MT172-C

MT172W38-C

MTB150D-Q   **MTB213D-Q**   **MTB1D-Q**

MT125S-Q

Part Number	Material	Color	Length/Diameter In.	Length/Diameter mm	Width In.	Width mm	Custom Marking Parameters* Max. 3/16" (4.77mm) Character Per Line	Max. Lines of Text	Used with PAN-STEEL® Cable Ties**	Thickness In.	Thickness mm	Std. Pkg. Qty.^	Std. Ctn. Qty.
MT350-C	304 Stainless Steel	Natural	3.50	89	.75	19	26	3	MLT-S	.010	.25	100	1000
MT350-C316	316 Stainless Steel	Natural	3.50	89	.75	19	23	3	MLT-S	.010	.25	100	1000
MT350W17-Q	304 Stainless Steel	Natural	3.50	89	1.73	44	23	6	MLT-S	.015	.38	25	250
MT338W21-Q	304 Stainless Steel	Natural	3.38	86	2.13	54	22	6	MLT-S	.015	.38	25	250
MT172-C	304 Stainless Steel	Natural	1.72	44	.75	19	10	3	MLT-S	.010	.25	100	1000
MT172-C316	316 Stainless Steel	Natural	1.72	44	.75	19	10	3	MLT-S	.010	.25	100	1000
MT172W38-C	304 Stainless Steel	Natural	1.72	44	.38	10	10	1	MLT-S	.010	.25	100	1000
MT1D-Q	304 Stainless Steel	Natural	—	—	1.00	25	5	1	MLT-S	.035	.89	25	250
MT1D-Q316	316 Stainless Steel	Natural	—	—	1.00	25	5	1	MLT-S	.035	.89	25	250
MTB1D-Q	Brass	Brass	—	—	1.00	25	5	1	MLT-S	.040	1.02	25	250
MT150D-Q	304 Stainless Steel	Natural	—	—	1.50	38	5,6,5	3	MLT-S	.035	.89	25	250
MT150D-Q316	316 Stainless Steel	Natural	—	—	1.50	38	5,6,5	3	MLT-S	.035	.89	25	250
MTB150D-Q	Brass	Brass	—	—	1.50	38	5,6,5	3	MLT-S	.040	1.02	25	250
MT213D-Q	304 Stainless Steel	Natural	—	—	2.13	54	6,12,8	3	MLT-S	.015	.38	25	250
MT213D-Q316	316 Stainless Steel	Natural	—	—	2.13	54	6,12,8	3	MLT-S	.015	.38	25	250
MTB213D-Q	Brass	Brass	—	—	2.13	54	6,12,8	3	MLT-S	.015	.38	25	250
MT125S-Q	304 Stainless Steel	Natural	1.25	32	1.25	32	5	2	MLT-S	.035	.89	25	250

*See page 4 for *PANDUIT* factory custom marking service information.
**See last page for *PAN-STEEL®* Stainless Steel Cable Ties.
^Order number of pieces required, in multiples of Standard Package Quantity.

P*AN*-A*LUM*™ Aluminum Marker Plates
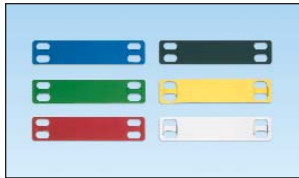
- Lightweight aluminum construction for flexibility and ease of handling
- Five color options in addition to natural aluminum finish provide quick visual identification; ideal for applications requiring color-coding
- Easy feed cable tie slot provides easy cable tie insertion to speed installation

Part Number	Material	Color	Length In.	Length mm	Width In.	Width mm	Thickness In.	Thickness mm	Custom Marking Parameters* Max. 3/16" (4.77mm) Characters Per Line	Max. Lines of Text	Used With P*AN*-A*LUM*™ Cable Tie**	Std. Pkg. Qty.^	Std. Ctn. Qty.
MMP350H-CALBU	Anodized Aluminum	Blue	3.50	88.9	.75	19.1	.012	.30	20	3	MLT1H-LPAL MLT2H-LPAL and MLT4H-LPAL	100	1000
MMP350H-MALBU		Blue	3.50	88.9	.75	19.1	.012	.30	20	3		1000	4000
MMP350H-CALGR		Green	3.50	88.9	.75	19.1	.012	.30	20	3		100	1000
MMP350H-MALGR		Green	3.50	88.9	.75	19.1	.012	.30	20	3		1000	4000
MMP350H-CALRD		Red	3.50	88.9	.75	19.1	.012	.30	20	3		100	1000
MMP350H-MALRD		Red	3.50	88.9	.75	19.1	.012	.30	20	3		1000	4000
MMP350H-CALBL		Black	3.50	88.9	.75	19.1	.012	.30	20	3		100	1000
MMP350H-MALBL		Black	3.50	88.9	.75	19.1	.012	.30	20	3		1000	4000
MMP350H-CALYL		Yellow	3.50	88.9	.75	19.1	.012	.30	20	3		100	1000
MMP350H-MALYL		Yellow	3.50	88.9	.75	19.1	.012	.30	20	3		1000	4000
MMP350H-CALAL	Aluminum	Natural	3.50	88.9	.75	19.1	.012	.30	20	3		100	1000
MMP350H-MALAL		Natural	3.50	88.9	.75	19.1	.012	.30	20	3		1000	4000

*See page 4 for *PANDUIT* factory custom marking service.
**See P*AN*-A*LUM*™ Ties below for matching natural finish and colors.
^Order number of pieces required, in multiples of Standard Package Quantity.

P*AN*-A*LUM*™ Aluminum Cable Ties

- Lightweight aluminum construction for flexibility and ease of handling
- Five color options in addition to natural aluminum finish for color-coding applications
- Smooth surfaces and rounded edges, protects the cable bundle and the installer for improved productivity, job site safety, and reliability
- Patented self-locking head design, reduces installation steps for improved productivity
- For use with P*AN*-A*LUM*™ Marker Plates for fast installation at the lowest installed cost

Part Number	Max. Bundle Diameter In.	Max. Bundle Diameter mm	Length In.	Length mm	Color	Min. Loop Tensile Strength** Lbs.	Min. Loop Tensile Strength** N	Min. Bundle Diameter In.	Min. Bundle Diameter mm	Width In.	Width mm	Thickness In.	Thickness mm	Recommended Installation Tool***	Std. Pkg. Qty.^	Std. Ctn. Qty.
MLT1H-LPALBU	1.0	25	5.5	140	Blue	50	222	.50	12.7	.31	7.9	.012	.03	ST2MT, HTMT	50	250
MLT2H-LPALBU	2.0	51	7.9	201	Blue										50	250
MLT4H-LPALBU	4.0	102	14.3	362	Blue										50	250
MLT1H-LPALGR	1.0	25	5.5	140	Green										50	250
MLT2H-LPALGR	2.0	51	7.9	201	Green										50	250
MLT4H-LPALGR	4.0	102	14.3	362	Green										50	250
MLT1H-LPALRD	1.0	25	5.5	140	Red										50	250
MLT2H-LPALRD	2.0	51	7.9	201	Red										50	250
MLT4H-LPALRD	4.0	102	14.3	362	Red										50	250
MLT1H-LPALBL	1.0	25	5.5	140	Black										50	250
MLT2H-LPALBL	2.0	51	7.9	201	Black										50	250
MLT4H-LPALBL	4.0	102	14.3	362	Black										50	250
MLT1H-LPALYL	1.0	25	5.5	140	Yellow										50	250
MLT2H-LPALYL	2.0	51	7.9	201	Yellow										50	250
MLT4H-LPALYL	4.0	102	14.3	362	Yellow										50	250
MLT1H-LPAL	1.0	25	5.5	140	Aluminum										50	250
MLT2H-LPAL	2.0	51	7.9	201	Aluminum										50	250
MLT4H-LPAL	4.0	102	14.3	362	Aluminum										50	250

**Per SAE Standard AS23190/3 (formerly MIL).
***See last page for cable tie installation tooling.
^Order number of pieces required, in multiples of Standard Package Quantity.

Prime items appear in **BOLD**

PAN-STEEL® Stainless Steel Cable Ties

MLTS

MLTH

- Delivers strength, long life, and resistance to chemicals, vibration, radiation, weathering and extreme temperatures
- Use with PAN-STEEL® Marker Plates and Tags for fast installation at the lowest installed cost

- Smooth surfaces and rounded edges, protects the cable bundle and the installer for improved productivity, job site safety, and reliability
- Patented self-locking head reduces installation steps for improved productivity

Part Number	Max. Bundle Diameter In.	mm	Length* In.	mm	Min. Loop Tensile Strength** Lbs.	N	Min. Bundle Diameter In.	mm	Width In.	mm	Thickness In.	mm	Recommended PANDUIT Installation Tool	Std. Pkg. Qty.^	Std. Ctn. Qty.
AISI 304 Stainless Steel – For General Purpose															
Standard Cross Section															
MLT1S-CP	1.0	25	5.0	127	200	890	.50	12.7	.18	4.6	.010	.25	GS4MT, HTMT, ST2MT	100	500
MLT2S-CP	2.0	51	7.9	201											
MLT4S-CP	4.0	102	14.3	362											
MLT6S-CP	6.0	152	20.5	521											
Heavy Cross Section															
MLT2H-LP	2.0	51	7.9	201	450	2000	.50	12.7	.31	7.9	.010	.25	GS4MT, HTMT, ST2MT	50	250
MLT4H-LP	4.0	102	14.3	362											
MLT6H-LP	6.0	152	20.5	521											
AISI 316 Stainless Steel – For Superior Corrosion Resistance															
Standard Cross Section															
MLT1S-CP316	1.0	25	5.0	127	200	890	.50	12.7	.18	4.6	.010	.25	GS4MT, HTMT, ST2MT	100	500
MLT2S-CP316	2.0	51	7.9	201											
MLT4S-CP316	4.0	102	14.3	362											
MLT6S-CP316	6.0	152	20.5	521											
Heavy Cross Section															
MLT2H-LP316	2.0	51	7.9	201	450	2000	.50	12.7	.31	7.9	.010	.25	GS4MT, HTMT, ST2MT	50	250
MLT4H-LP316	4.0	102	14.3	362											
MLT6H-LP316	6.0	152	20.5	521											

*Other lengths available, contact customer service.
**Tested per SAE Standard AS23190/3 (formerly MIL).
^Order number of pieces required, in multiples of Standard Package Quantity.
See page 5 and 6 for stainless steel and brass marker plates and tags.

Cable Tie Installation Tools

- Tools speed installation
- Feature high reliability, low maintenance, long life

- GS4MT has automatic tension and cut-off capabilities for improved productivity and installer safety

HTMT

GS4MT

ST2MT

Part Number	Description	Std. Pkg. Qty.
Low Volume Use		
HTMT	Used with heavy cross section PAN-ALUM™ Type MLT Ties and standard and heavy cross section PAN-STEEL® Type MLT Ties.	1
Medium Volume Use		
GS4MT	Used with standard and heavy cross section PAN-STEEL® Type MLT Ties.	1
ST2MT	Used with heavy cross section PAN-ALUM™ Type MLT Ties and standard and heavy cross section PAN-STEEL® Type MLT Ties.	1

For a copy of PANDUIT product warranties, log on to www.panduit.com/warranty

For more information
Visit us at www.panduit.com

Contact Customer Service by email: cs@panduit.com
or by phone: 800-777-3300 and reference SSCB18

PANDUIT®