



Industry Leading Tube/Bore and Thread Connectors

- Lower manufacturing costs through testing efficiency
- Maximize production capacity with high volume automated testing
- Durable & reliable high performance seal material
- Uniform seal movement ensures leak tight connection
- Instant connections for testing up to 500 psi

FE Series and FI Series connectors use pneumatic pressure to expand seals, creating a leak-tight external or internal connection to virtually any type of port. FE Series and FI Series connectors are ideal for automation in high volume production testing.



- **Pneumatic actuation** accommodates high volume production testing
- **Capable of sealing** smooth, porous, rough, threaded, and out-of-round ports
- **Delicate touch seals** thin wall materials will not mar test piece
- **Adaptable for pick and place** robotic applications
- **Simple maintenance** for extended life

NEW Connection Verification™

SMART FE and FI test connection tools verify a successful connection has been made! FasTest's **Connection Verification™** allows users to:



Green LED indicates successful connection

- **Verify connections prior** to starting a leak test
- **Eliminate waste** caused by False Failures
- **Collect data** to verify operators have made the correct connection
- **Improve reliability** throughout the testing process

AT REST



FI Series connectors use pneumatic pressure to expand seals, creating a leak-tight or internal connection to virtually any type of port.

PROPER CONNECTION



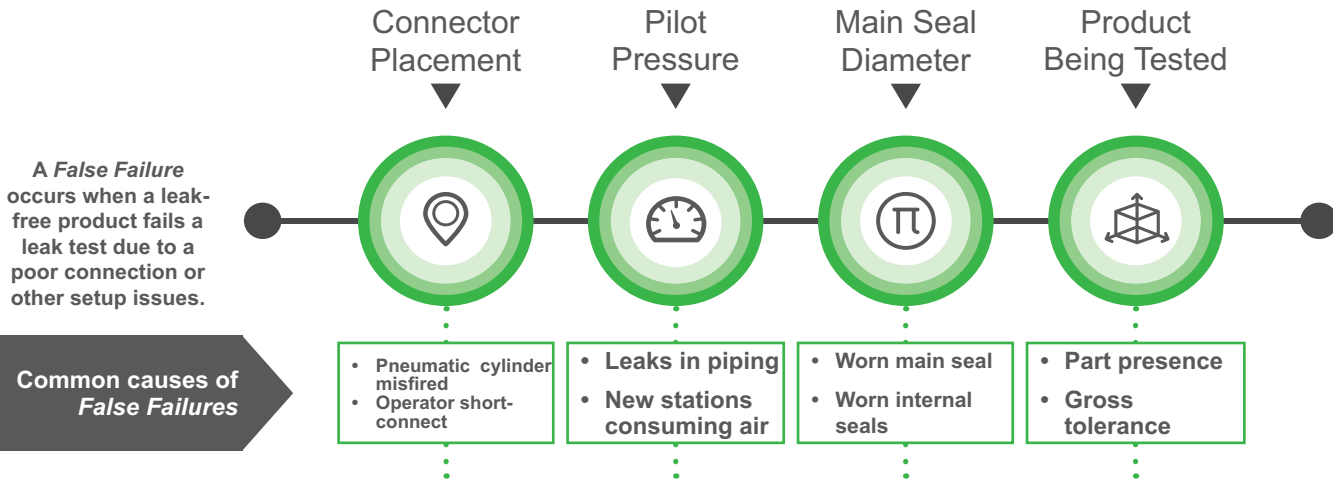
SMART FI quick connectors monitor and relay connector status and will signal when the connection has been properly made.

FAILED CONNECTION

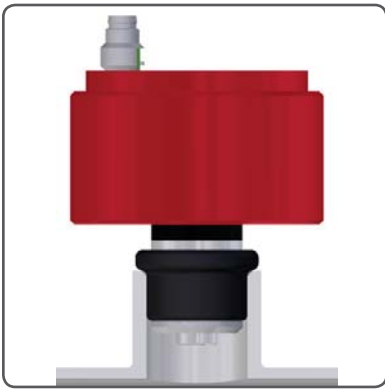


The lack of a green LED signals that the connection has failed. Properly connect to start a leak test.

Proper connections are dependent on four key attributes:

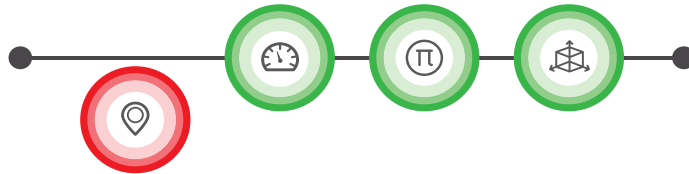


Connection Verification™ technology can alert when there are changes to critical attributes in the testing environment. **Drastically reducing the number of leak test *False Failures*!**



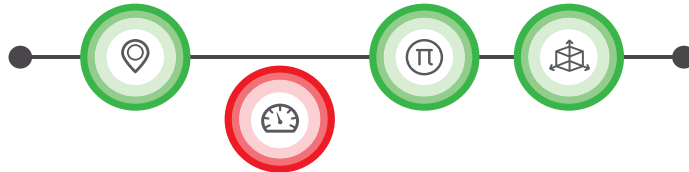
Inconsistent Seal Placement

Consistently placing a seal for a leak test is a challenge for operators on many production lines. Poor placement and “short-connects” lead to false failures and wasteful re-testing of products. The Connection Verification™ LED instantly alerts operators that the seal is placed correctly, leading to consistently accurate test results.



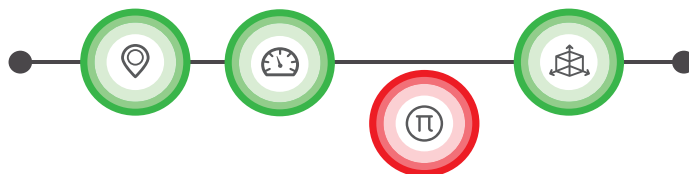
Erratic Pilot Pressure

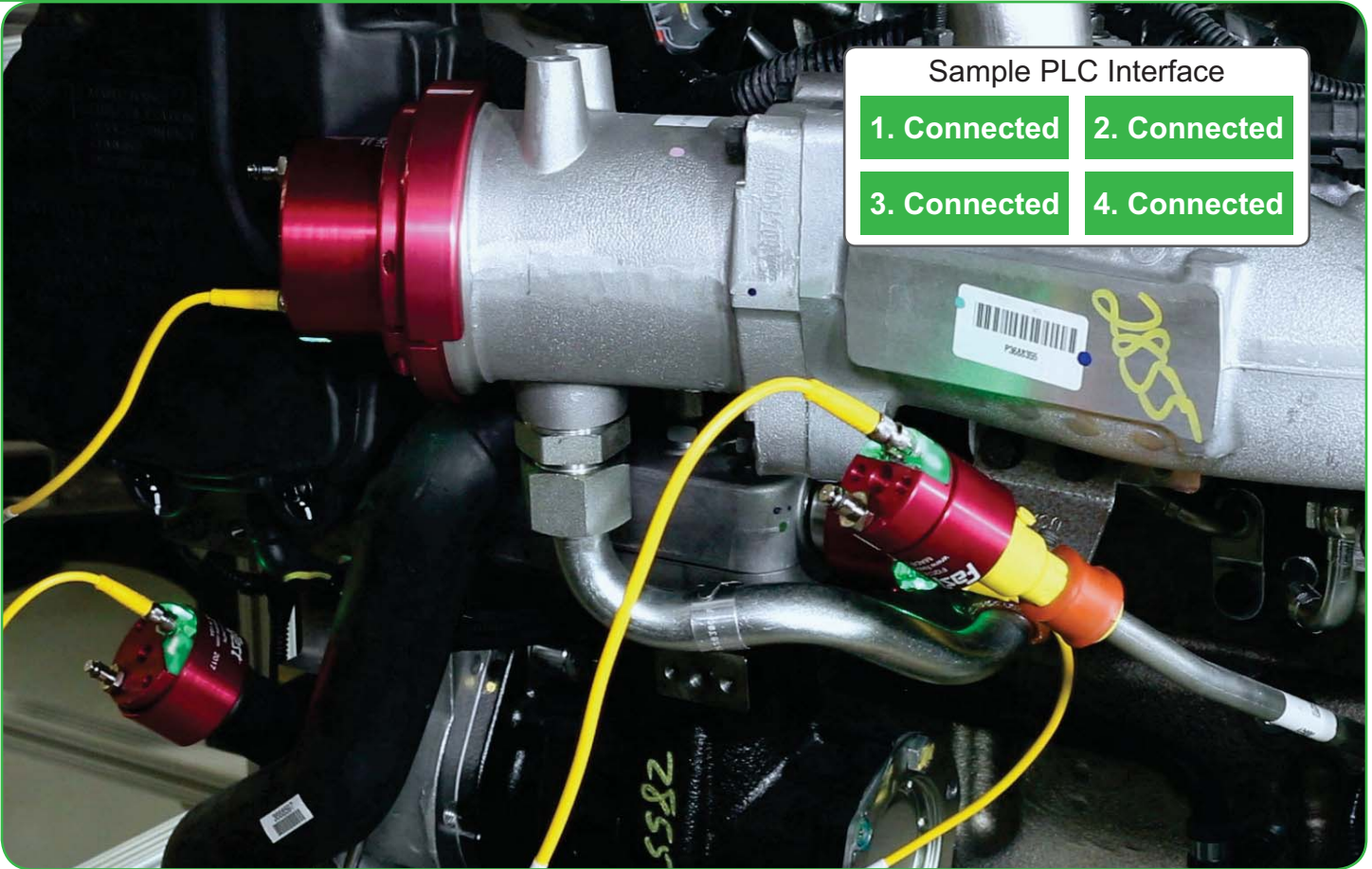
Pneumatic connection tools require consistent pilot pressure to apply identical sealing force for every actuation. New production lines, leaks and peak usage demands can all change the sealing force of an FI or FE connection tool, creating false failures. Connection Verification™ can alert operators to changes in the setup parameters prior to starting a test.



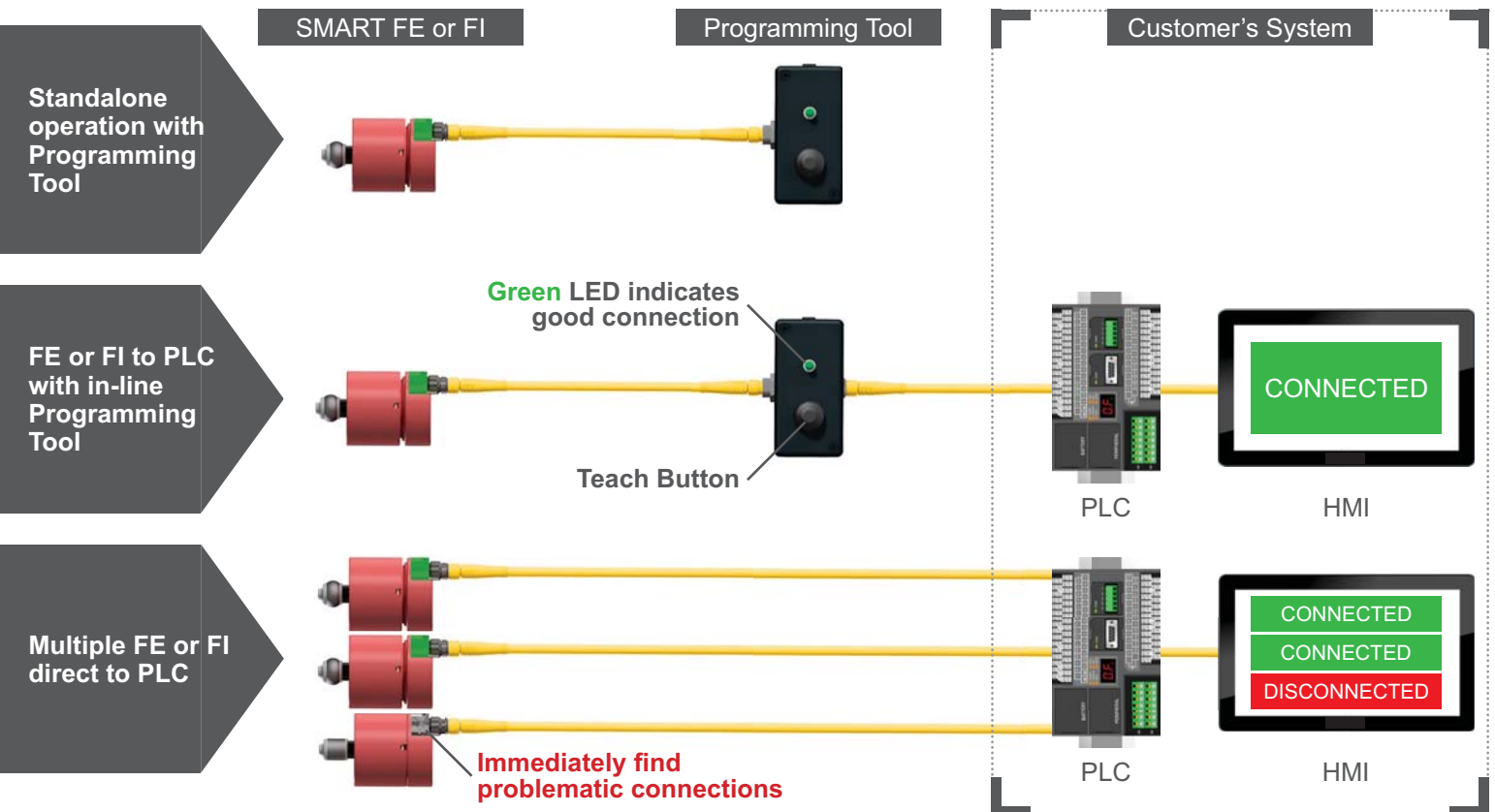
Worn Main Seal

The elastomeric main seal in FI and FE connection tools are critical components in leak testing. The high wear seals lose material as the connector actuates over time. Worn main seal leaks are the most common cause of false failures! Connection Verification™ can identify end of life for the main seal.





The **Connection Verification** system provides a complete solution for a wide variety of applications. Utilize the Programming Tool to quickly set limits, reduce setup time, and eliminate PLC coding time.



1 Choose your connector and accessories.

FE Series

External Tube and Thread Connections

FE Series connectors use pneumatic pressure to expand seals, creating a leak-tight external connection to virtually any type of male port. FE connectors are ideally suited for leak and functional testing.



Operating Pressure	500 psi (34 bar)
Connection Profile	External Tubes and Threads
Termination Profile	Female 10-32" UNF, M5X8, NPT/BSPP: 1/8" to 2 1/2"
Mounting Port	Female 10-32" to 3/8-24" UNF, M5X8 to M11X1.5, 4-40" to 3/8-24" UNC
Pilot Port	Female 10-32" UNF, M5X8, 1/8" NPT/BSPP
Pilot Pressure	60-600 psi
Housing Material	Aluminum and Stainless steel
Seal Material	Standard: Neoprene, Urethane Optional: FKM (Viton), Buna-N or EPDM
Operating Temperatures	0°F to 200°F (-17°C to 93°C) Neoprene 32°F to 175°F (0°C to 79°C) Urethane

Additional SMART Specs:
NPN (max 100 mA load) PNP (max 20 mA load) Analog (0-10V load)
Supply voltage range: 24V
Over-voltage protection
Sealed electronics
Internal memory stores calibration points

Accessories for FE Series



Pilot Booster For threaded ports

- Deliver actuation pressure up to 400-600 PSI using pneumatic pressure
- For FE only



Charge Valve

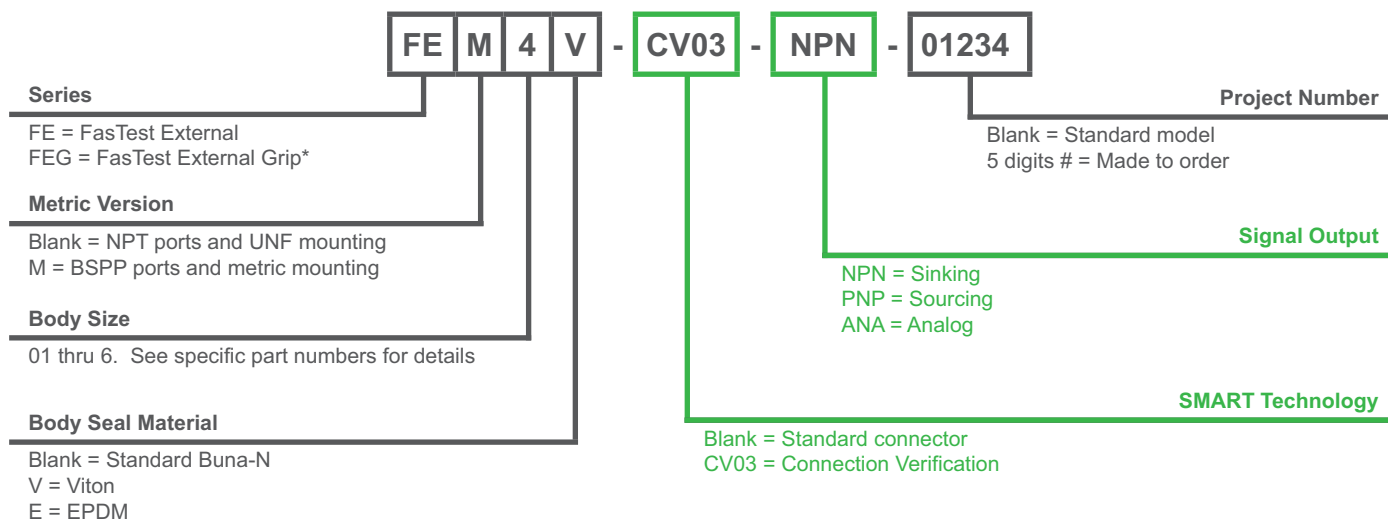
- Instant manual actuation



Slide Valve For threaded ports

- Fixed instant manual actuation

"FE Series" Part Number Key



Notes:

Part Number Keys are to assist in IDENTIFICATION ONLY. Verify new part numbers with factory; some configurations are not possible.

* FEG - Contact factory for sizing and application assistance.

Example:

FE3: Standard

FE3-CV03-NPN: SMART

FI Series

Internal Tube and Thread Connections



FI Series connectors use pneumatic pressure to expand seals, creating a leak-tight internal connection to virtually any type of port. FI connectors are ideal for automation in high volume leak testing.

Operating Pressure	Vacuum to 120 psi (8 bar)
Connection Profile	Internal Tubes, Bores and Threads
Termination Profile	Female 10-32" UNF, M5X8, NPT/BSPP: 1/8" to 2 1/2"
Mounting Port	Female 10-32" to 3/8"-24" UNF, M5X8 to M11X1.5, 4-40" to 3/8"-24" UNC
Pilot Port	Female 10-32" UNF, M5X8, 1/8" NPT/BSPP
Pilot Pressure	60-90 psi
Housing Material	Aluminum and Stainless steel
Seal Material	Standard: Neoprene, Urethane Optional: FKM (Viton), Buna-N or EPDM
Operating Temperatures	0°F to 200°F (-17°C to 93°C) Neoprene 32°F to 175°F (0°C to 79°C) Urethane

Additional SMART Specs:
NPN (max 100 mA load) PNP (max 20 mA load) Analog (0-10V load)
Supply voltage range: 24V
Over-voltage protection
Sealed electronics
Internal memory stores calibration points

Accessories for FI Series



Shaft Extensions

1" or 2" Extensions Available

- Access remote ports
- Offset connectors when side-by-side mounting is unavailable



Additional Face Seal For threaded ports

- Prevent scratching of test pieces



Charge Valve

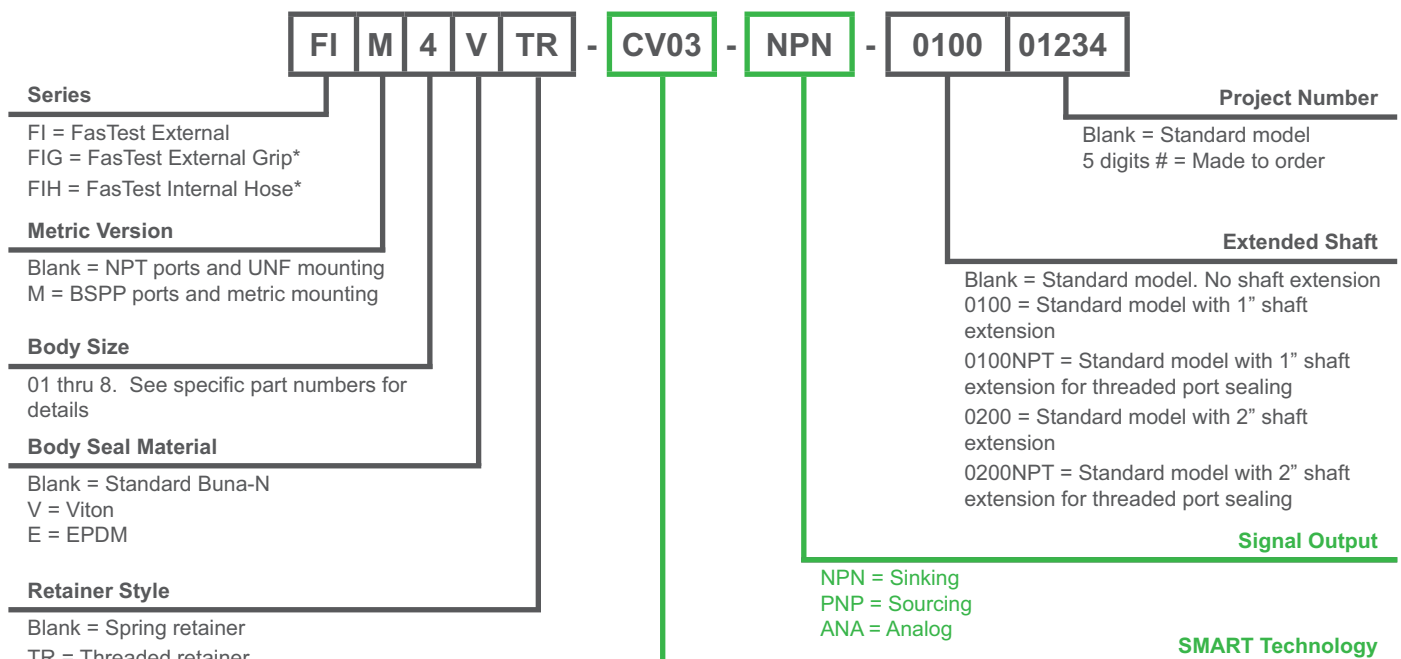
- Instant manual actuation



Slide Valve For threaded ports

- Fixed instant manual actuation

"FI Series" Part Number Key



Notes:

Part Number Keys are to assist in IDENTIFICATION ONLY.
Verify new part numbers with factory; some configurations are not possible.

② Choose your seal.

Seals for FE Series



Example: FI5-51



Example: FI5-51UR

Neoprene Seals or Urethane Seals

Standard Seals for FE Connectors

- Neoprene for smooth bores and cast surfaces
- Premium Urethane for irregular surfaces and high wear applications and increased seal life expectancy

Sealing Range	FE Body Size	Connector Seal Set*	Bulk Seal Kit **
<i>External (FE) Connectors for Smooth Tubes - Neoprene Seals</i>			
0.030"-0.050"	FE001	FES001-0050	FEB001-0050
0.050"-0.080"		FES001-001	FEB001-001
0.080"-0.130"		FES001-002	FEB001-002
0.100"-0.180"	FE01	FES01-01	FEB01-01
0.180"-0.260"		FES01-02	FEB01-02
0.260"-0.340"		FES01-03	FEB01-03
0.340"-0.420"		FES01-04	FEB01-04
0.420"-0.510"		FES01-05	FEB01-05
0.433"-0.512"	FE1	FES1-15	FEB1-15
0.512"-0.591"		FES1-16	FEB1-16
0.591"-0.669"		FES1-17	FEB1-17
0.669"-0.750"		FES1-18	FEB1-18
0.750"-0.827"		FES1-19	FEB1-19
0.787"-0.866"	FE2	FES2-21	FEB2-21
0.866"-0.945"		FES2-22	FEB2-22
0.945"-1.024"		FES2-23	FEB2-23
1.024"-1.102"		FES2-24	FEB2-24
1.102"-1.181"		FES2-25	FEB2-25
1.181"-1.260"		FES2-26	FEB2-26
1.260"-1.339"		FES2-27	FEB2-27
1.339"-1.417"		FES2-28	FEB2-28
1.417"-1.510"		FES2-29	FEB2-29
1.496"-1.614"	FE3	FES3-31	FEB3-31
1.614"-1.732"		FES3-32	FEB3-32
1.732"-1.850"		FES3-33	FEB3-33
1.850"-1.969"		FES3-34	FEB3-34
1.969"-2.087"	FE4	FES4-41	FEB4-41
2.087"-2.205"		FES4-42	FEB4-42
2.205"-2.323"		FES4-43	FEB4-43
2.323"-2.441"		FES4-44	FEB4-44
2.441"-2.559"		FES4-45	FEB4-45
2.559"-2.677"		FES4-46	FEB4-46
2.677"-2.795"		FES4-47	FEB4-47
2.795"-2.913"		FES4-48	FEB4-48
2.913"-3.032"		FES4-49	FEB4-49

- FasTest also offers additional FE connectors sizes, up to a 5.040" ceiling range, for smooth tube connections

Seals for FI Series



Example: FI5-51



Example: FI5-51UR

Neoprene Seals or Urethane Seals

Standard Seals for FI Connectors

- Neoprene for smooth bores and cast surfaces
- Premium Urethane for irregular surfaces and high wear applications and increased seal life expectancy

Sealing Range	FI Body Size	Connector Seal Set*	Bulk Seal Kit **
<i>Internal (FI) Connectors for Smooth Tubes - Neoprene Seals</i>			
0.310"-0.330"	FI01	FIS01-0300	FIB01-0300
0.330"-0.394"		FIS01-01	FIB01-01
0.394"-0.472"	FI1	FIS1-11	FIB1-11
0.472"-0.551"		FIS1-12	FIB1-12
0.551"-0.630"		FIS1-13	FIB1-13
0.630"-0.709"	FI2	FIS2-21	FIB2-21
0.709"-0.787"		FIS2-22	FIB2-22
0.787"-0.866"		FIS2-23	FIB2-23
0.866"-0.945"	FI3	FIS3-31	FIB3-31
0.945"-1.024"		FIS3-32	FIB3-32
1.024"-1.102"		FIS3-33	FIB3-33
1.102"-1.181"	FI4	FIS4-41	FIB4-41
1.181"-1.260"		FIS4-42	FIB4-42
1.260"-1.339"		FIS4-43	FIB4-43
1.339"-1.457"	FI5	FIS5-51	FIB5-51
1.457"-1.575"		FIS5-52	FIB5-52
1.575"-1.693"		FIS5-53	FIB5-53
1.693"-1.850"	FI6	FIS6-61	FIB6-61
1.850"-2.008"		FIS6-62	FIB6-62
2.008"-2.165"		FIS6-63	FIB6-63
2.165"-2.305"	FI7	FIS7-71	FIB7-71
2.305"-2.445"		FIS7-72	FIB7-72
2.445"-2.585"		FIS7-73	FIB7-73
2.585"-2.725"	FI8	FIS8-81	FIB8-81
2.725"-2.865"		FIS8-82	FIB8-82
2.865"-3.005"		FIS8-83	FIB8-83

- FE and FI connectors are also designed for NPT, BSPT, BSPP, SAE and NPS style ports, please contact FasTest for more information
- English base connectors are designed for NPT and UNF ports; metric base connectors are designed for BSPP and metric ports
- *Includes main seals and washers for one seal change; must choose one seal set when purchasing base connector
- **Includes only main seals for five seal changes, please contact FasTest for more information

3 Add Programming Tool.

Programming Tool

External Tube and Thread Connections



- Quickly set limits on the *FE* or *FI* connectors
- Eliminate the need for PLC programming
- LED connection status visual feedback
- Can be powered from wall adapter (included) or from a PLC (24VAC)

Programming Tool	Input Signal	Output Signal	Current Limit
SPCT-0101N	NPN	NPN	max 100 mA load
SPCT-0103P	PNP	PNP	max 20 mA load

4 Add Cable(s).



SPCASR0402APP

Straight Female M8 threaded Connector to straight Male M8 connector (4-wire 2m cable)



SPCASR0502C

Straight Female M8 to Flying Leads (4-wire 2m cable)



TSE00035

Straight Female M8 threaded Connector to straight Male M12 connector (4-wire 2m cable)

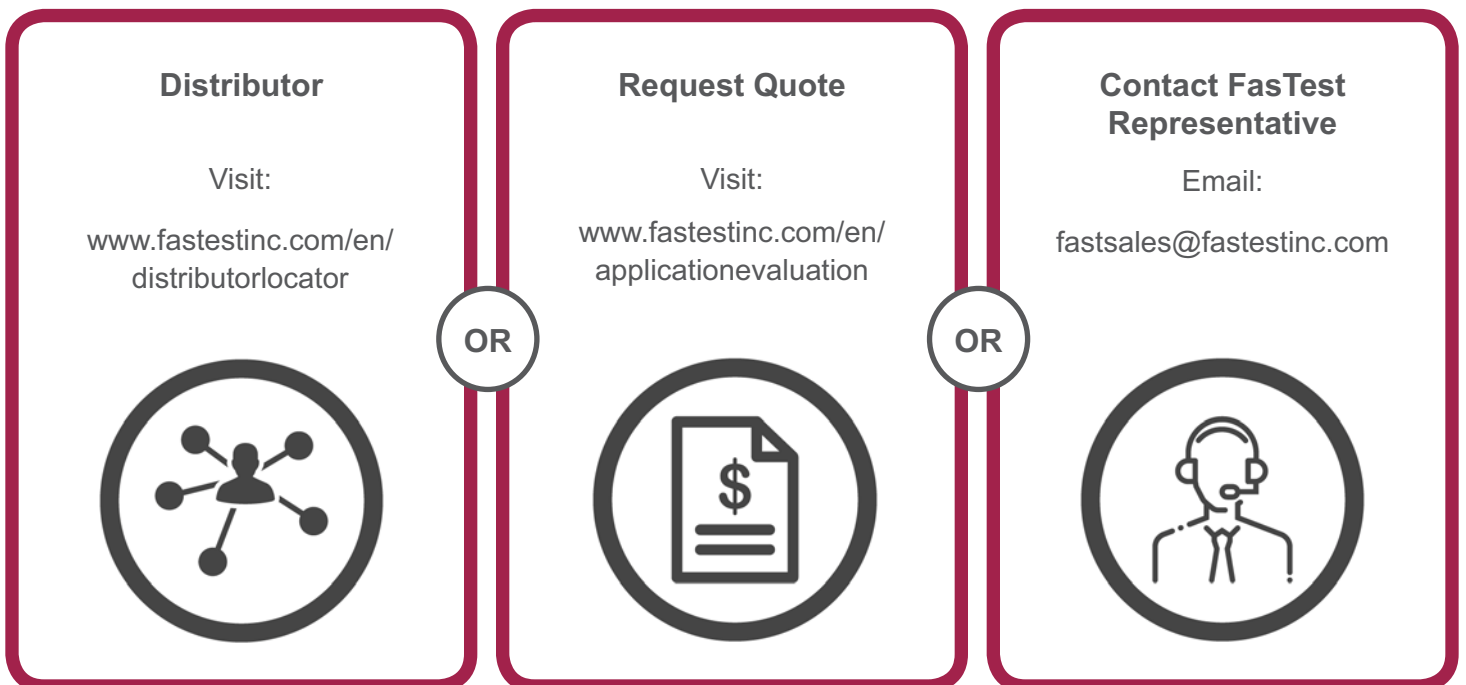
Cable Part Number	Cable Length	Description
SPCASR0402APP	2m	M8 to M8
SPCASR0502C	2m	M8 to Flying Lead
TSE00035	2m	M8 to M12



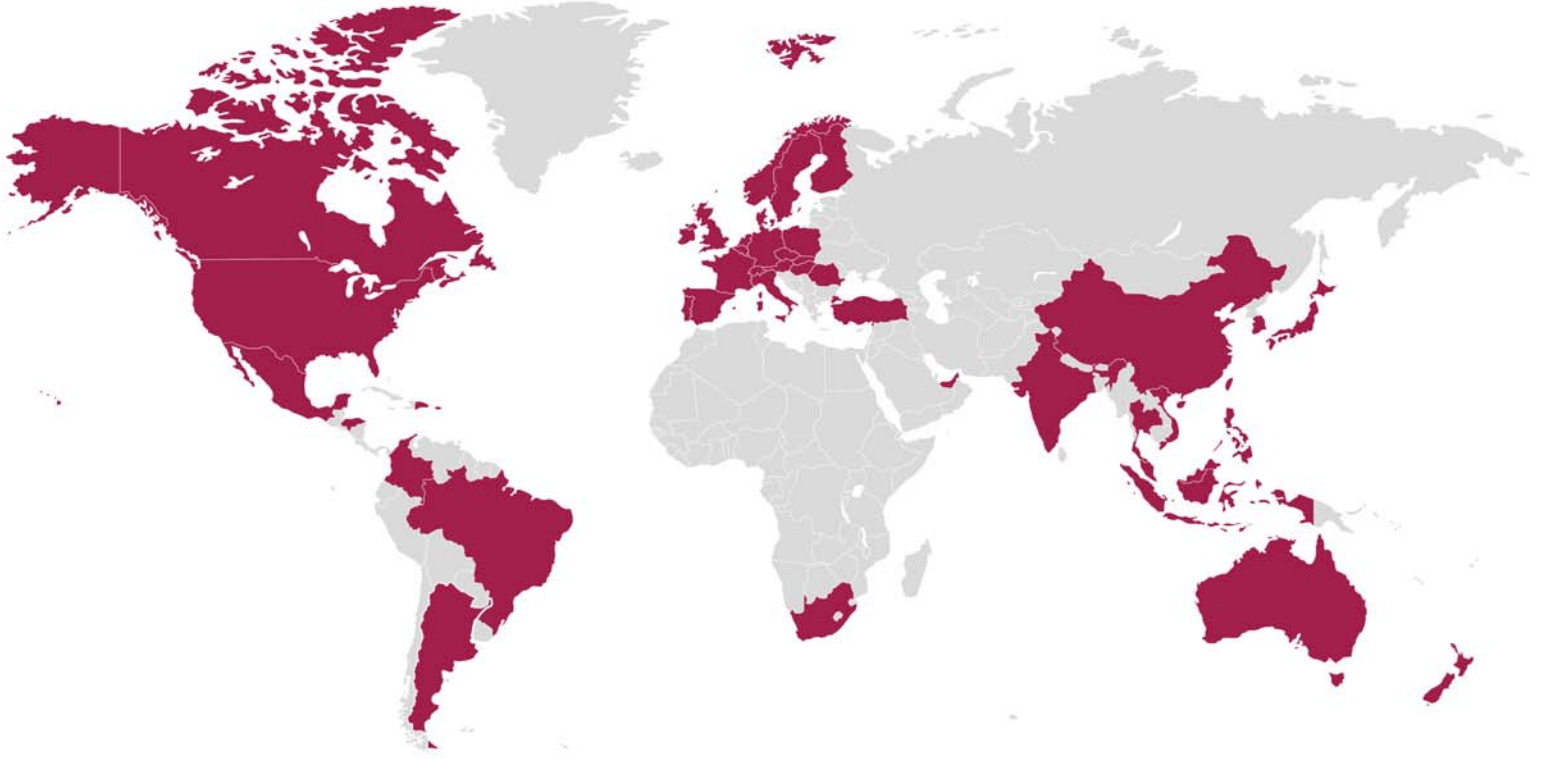
Before placing your order, make sure all parts of the checklist are completed.

1	Base Connector part number with Connection Verification™	<input checked="" type="checkbox"/>
2	Seal part number	<input checked="" type="checkbox"/>
3	Programming Tool part number	<input checked="" type="checkbox"/>
4	Cabling part number(s)	<input checked="" type="checkbox"/>

How to order:



FasTest Distribution Network | Global Coverage, Local Support



Industry 4.0 is driving disruption in manufacturing companies all over the world. Industry 4.0 technologies embrace sensors and analytics that facilitate six sigma and lean process improvement in manufacturing. Companies that embrace the Industry 4.0 movement will produce goods at lower costs, drive throughput efficiencies, and provide superior output quality than lagging competitors. Facilities that do not embrace sensors, analytics and other Industry 4.0 technologies will struggle to compete in this rapidly changing marketplace.

FasTest is committed to developing “Industry 4.0-ready” products by embedding sensors at the point of connection. The data and process improvement opportunities driven by FasTest’s SMART products enable faster, higher quality and safer in-process testing of manufactured goods.

FasTest

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