# **Cables & Connectors**



### How To Order Custom Cables:

- 1. First determine whether the cable shall be ordered in English or Metric unit lengths
- 2. Choose the desired cable. (See "Standard Cable Types" below for cable specifications)
- 3. Find the connector that mates to the sensor.
- 4. Determine the length of cable required
- 5. Choose the cable termination connector. (See "Standard Connector Types" below)
- 6. Fill the squares with appropriate letter or number designation:

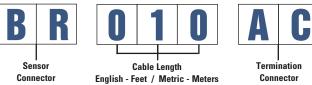


Standard Cable Types						
Shielded, Twisted Pair Diameter Max Temp.						
	044	Coiled, polyurethane jacket	0.170 in (4.6 mm)	+ 176 °F (+80 °C)		
	045	High temperature, PFA jacket	0.204 in (5.2 mm)	+ 500 °F (+260 °C)		
	047	Steel armored, polyurethane	0.410 in (10.4 mm)	+ 250 °F (+121 °C)		
	048	Steel armored, high temperature FEP	0.268 in (6.8 mm)	+ 392 °F (+200 °C)		
	050	Coiled, lightweight, TPE jacket	0.210 in (5.3 mm)	+ 176 °F (+80 °C)		
Œ	052	General purpose, polyurethane jacket	0.250 in (6.4 mm)	+ 250 °F (+121 °C)		
Œ	053	High temperature, FEP jacket	0.157 in (4 mm)	+ 392 °F (+200 °C)		
	055	High temperature, FEP jacket	0.190 in (4.8 mm) + 392 °F (+			
Œ	058	Coiled, heavy duty, polyurethane	0.250 in (6.4 mm)	+ 250 °F (+121 °C)		
Sh	ielded	, Multi-conductor				
	043	Steel armored, 4-cond., polyurethane	0.410 in (10.4 mm)	+ 250 °F (+121 °C)		
	046	16 pair (32-conductor), PVC jacket	0.70 in (17.8 mm)	+ 221 °F (+105 °C)		
	049	12 pair (24-conductor), PVC jacket	0.60 in (15.2 mm)	+ 220 °F (+105 °C)		
	056	6 3-conductor, FEP jacket 0.190 in (4.8 mm) + 392 °		+ 392 °F (+200 °C)		
	057	4-conductor, FEP jacket	0.190 in (4.8 mm)	+ 392 °F (+200 °C)		
Œ	059	4-conductor, polyurethane jacket	0.250 in (6.4 mm)	+ 250 °F (+121 °C)		

# \* $\mathbf{CE}$ indicates that cable maintains CE conformance

### Example:

Model 052BR010AC defines a 10 ft, general purpose, polyurethane jacketed, shielded, twisted pair cable with a 2-pin socket MIL-style MS3106 composite sensor connector and a BNC plug termination connector.



Conne	ector English - Feet / Metric - Meters Connector
Standa	ard Connector Types
Code	Connector
2-socket	t Plugs
AE	MIL-style connector MS3106 with environmental boot
AM	MIL connector MS3106
AP	MIL connector MS3106 with strain relief
BP	MIL connector MS3106 for high temperatures with strain relief
BQ	MIL-style connector MS3108 right angle, composite
BR	MIL-style connector MS3106, composite
CJ	MIL-style connector MS3116 Bayonet style
DN	MIL-style connector MS3106, composite, with stainless steel clamp ring
EC	MIL-style connector MS3106 with environmental boot, lock ring and adaptor
ER	MIL-style connector for high temperatures
FV	MIL connector with environmentally sealed boot
ET	MIL-style connector "mini MIL" 7/16-27 Thread
LQ	2-socket MIL connector extended strain relief
LU	3-pin half of break-away connector (mates with LV)
LV	3-socket half of break-away connector (mates with LU)
PA	High temperature 2-socket MIL connector
PB	High temperature right angle 2-socket MIL connector
Other M	ulti-pin or Socket
AN	4-socket, MIL connector MS3116
BV	3-socket, MIL-style connector MS3106
BY	28-pin Bayonet, for switch box MO option 691B47
CE	MIL-style connector with strain relief
CV	25-pin D style for CSI data collector interface
CW	25-pin D style for SKF data collector interface
DP	7-pin LEMO style for Entek data collector interface
DR	4-socket MIL-style connector MS3116 Bayonet style
DS	3-pin MIL-style connector MS3106 with environmental boot
EF	3-socket, MIL-style connector MS3106, nylon
EG	Multi-pin bayonet
FY	3-socket, MIL-style connector with environmental boot
GV	11-pin Fischer style for DLI data collector interface
HC	4-socket, MIL-style connector MS3116
HM	6-pin Fischer style for DLI data collector interface
HX	5-pin Turck for CSI 2130 DAQ
LG	Two BNC double splice, BNC's labeled vib & temp
NF	Three BNC triple splice, BNC's labeled x, y, z, shield grounded
Coaxial	
AB	BNC jack
AC	BNC plug
Miscella	aneous Terminations
AD	Pigtail (leads stripped and tinned)
BZ	Blunt cut





# Polyurethane Cable, 2-conductor Twisted Pair, Shielded

Model 052 Cable

- Flexible cable, durable and easy to work with.
- Braided shield twists into drain wire
- Seals out moisture



# Cable Information & Cordset Options Model 052 Cable Cable Construction Technical Specifications Cable Jacket Material Temperature Range -50 to 121 °C Capacitance -50 to 1

Black Polyurethane Jacket

Popular Cable Assemblies



Braid Shield

22 AWG Drain Wire

Molded Composite
2-socket MIL to Blunt Cut
Model 052BRXXXBZ

Silicone Environmental Push-On
Boot 2-socket MIL to Blunt Cut
Model 052BRXXXBZ



Molded Composite 2-socket MIL To BNC Plug Model 052BRXXXAC



Cable Jacket Diameter

Number of Conductors

Shield Type

AWG (Gauge)

Molded Composite Right Angle 2-socket MIL To BNC Plug Model 052BQXXXAC

6.35 mm

Braid (90% minimum coverage)

20



ı				
Performance	ce Typical Usage Stock Cable Lengths			
052BRXXXBZ	Indoor/outdoor permanent mount sensor applications	3 m, 6 m, 9 m, 12 m, 15 m, 30 m		
052BQXXXBZ	Indoor/outdoor permanent mount sensor applications where low profile is required	3 m, 9 m, 15 m		
052AEXXXBZ	Indoor/outdoor applications where sensor will need to endure extreme wet conditions	9 m, 15 m		
052BRXXXAC	Straight cable with BNC for route-based data collection or permanent mount installations	3 m		
052BOXXXAC	Straight cable with BNC and right angle 2-socket MII for route-based data collection	Built to order		





### **Cable Information & Cordset Options** Model 053 Cable Cable Construction **Technical Specifications** Cable Jacket Material FEP Red FEP Jacket -90 to 392 °F Temperature Range Conductor #1 -70 to 200 °C Red (signal) 51 pF/ft Capacitance 167.3 pF/m .154 in Conductor #2 Cable Jacket Diameter 3.91 mm Black (ground) Number of Conductors Foil Shield Drain Wire Shield Type Aluminum / Mylar AWG (Gauge 18 Popular Cable Assemblies



Molded Composite 2-socket MIL to Blunt Cut Model 053BRXXXBZ



Molded Composite Right Angle 2-socket MIL-style to Blunt Cut Model 053BQXXXBZ



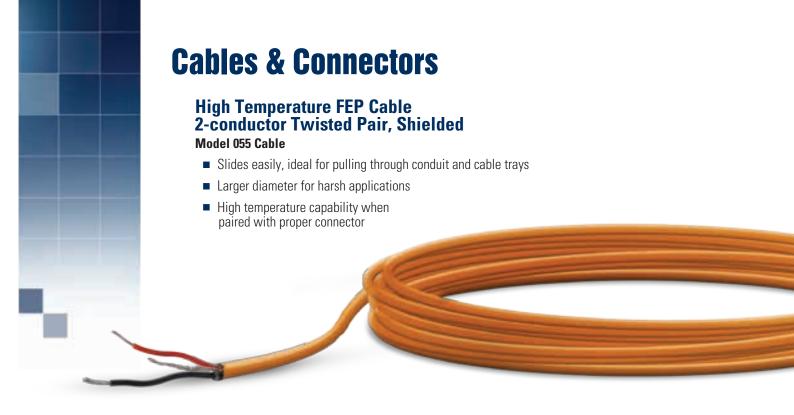
Silicone Environmental Push-On Boot 2-socket MIL-style to Blunt Cut Model 053AEXXXBZ

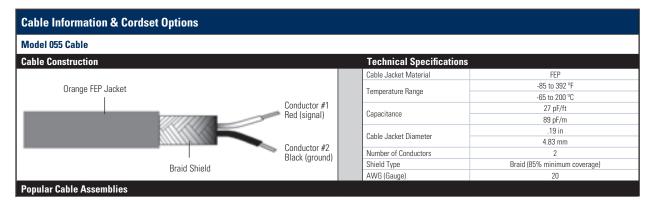


Aluminum 2-socket MIL with Collar Strain Relief to Blunt Cut Model 053BPXXXBZ

Performance	Typical Usage	Stock Cable Lengths	
053BRXXXBZ	Indoor/Outdoor permanent mount sensor applications	3 m, 6 m, 9 m, 15 m	
053BQXXXBZ	Indoor/Outdoor permanent mount sensor applications where low profile is required	Built to order	
053AEXXXBZ	High temperature installations (over 250 °F) and extreme wet conditions	Built to order	
053BPXXXBZ	High temperature installations (over 250 °F) where metal sensor connector is preferred	Built to order	









Silicone Environmental Push-on Boot 2-socket MIL-style to Blunt Cut Model 055AEXXXBZ



Aluminum 2-socket MIL with Collar Strain Relief to Blunt Cut Model 055BPXXXBZ



High Temperature Molded Composite Right Angle 2-socket MIL-style to Blunt Cut Model 055PBXXXBZ

High Temperature Molded Composite 2-socket MIL-style to Blunt Cut Model 055PAXXXBZ



Silicone Environmental Push-On Boot with Steel Locking Ring 2-socket MIL-style to Blunt Cut Model 055ECXXXBZ



FKM Environmental Push-On Boot 2-socket MIL-style to Blunt Cut Model 055M05/XXX

Performance	Typical Usage	Stock Cable Lengths
055PAXXXBZ	High temperature (over 250 °F) permanent mount sensor applications	Built to order
055PBXXXBZ	High temperature (over 250 °F) permanent mount sensor applications where low profile is required	9 m, 15 m
055AEXXXBZ	High temperature installations (over 250 °F) and extreme wet conditions	Built to order
055ECXXXBZ	High temperature installations (over 250 °F), extreme wet conditions, cable must be locked on sensor	Built to order
055BPXXXBZ	High temperature installations (over 250° F) where metal sensor connector is preferred	Built to order
055M05	Acidic or corrosive installations	Built to order



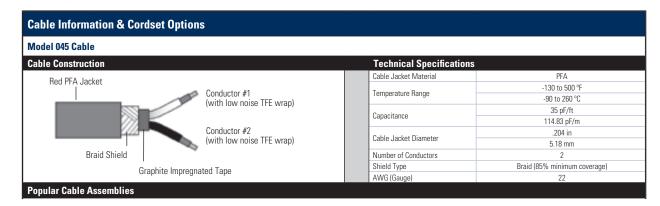




# Very High Temperature Low Noise PFA Cable 2-conductor Twisted Pair, Shielded

# Model 045 Cable

- Designed for extreme high temperature applications
- Slides easily, ideal for pulling through conduit & cable trays
- Larger diameter for harsh applications





Extreme High Temperature 2-socket MIL to Blunt Cut Model 045ERXXXBZ



Extreme High Temperature 2-socket Mini-MIL to Blunt Cut Model 045ETXXXBZ

Performance	Typical Usage	Stock Cable Lengths
045ERXXXBZ	Extreme high temperature installations up to 500 °F	Built to order
045ETXXXBZ	Connects to on-turbine combustion dynamics pressure sensors	Built to order



# Cables & Connectors High Temperature Armor Jacketed FEP Cable 2-conductor, Twisted Pair with Drain, Shielded

Model 048 Cable

- Armor jacket protects cable from abuse
- Small diameter armor jacket makes for easy handling and installation
- High temperature capability when paired with proper connector



### **Cable Information & Cordset Options** Model 048 Cable **Cable Construction Technical Specifications** Cable Jacket Material FEP Foil Shield Stainless Steel Armor Jacket -90 to 392 °F Temperature Range Conductor #2 -70 to 200 °C Blue (ground) 51 pF/ft Capacitance 167.3 pF/m .154 in Conductor #1 Cable Jacket Diameter 3.91 mm Number of Conductors FEP Jacket 20 AWG Drain Wire Shield Type Aluminum / Mylar AWG (Gauge) **Popular Cable Assemblies**



Aluminum 2-socket MIL with Collar Strain Relief to Blunt Cut Model 048APXXXBZ



High Temperature Aluminum 2-socket MIL with Collar Strain Relief to Blunt Cut Model 048BPXXXBZ



Silicone Environmental Push-On Boot 2-socket MIL-style to Blunt Cut Model 048AEXXXBZ



Silicone Environmental Push-On Boot with Steel Locking Ring 2-socket MIL-style to Blunt Cut Model 048ECXXXBZ

Performance	Typical Usage	Stock Cable Lengths
048APXXXBZ	Rugged installations where metal sensor connector is preferred	Built to order
048BPXXXBZ	Rugged high temperature installations (over 250 °F) where metal sensor connector is preferred	Built to order
048AEXXXBZ	Rugged high temperature installations (over 250 °F) and extreme wet conditions	Built to order
048ECXXXBZ	Rugged high temperature installations (over 250 °F), extreme wet conditions, cable must be locked on sensor	Built to order

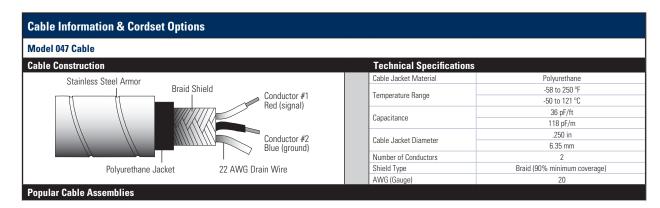






# Armor Jacketed Polyurethane Cable, 2-conductor Twisted Pair, Shielded Model 047 Cable

- Armor jacket protects cable from abuse
- Largest diameter armor jacket
- Heat-shrink at blunt end seals out moisture









Silicone Environmental Push-On Boot with Steel Locking Ring 2-socket MIL-style to Blunt Cut Model 047ECXXXBZ

Performance	Typical Usage	Stock Cable Lengths	
047AMXXXBZ	Rugged installations where metal sensor connector is preferred	Built to order	
047ECXXXBZ	Rugged installations (over 250 °F), wet conditions, cable must be locked on sensor	Built to order	

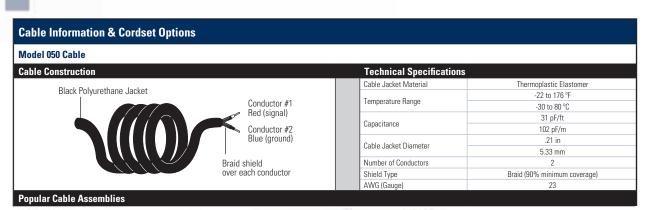


# **Cables & Connectors**



Model 050 Cable

- Ideal for route-based predictive maintenance with portable analyzer
- Many major data collector terminations available for immediate delivery
- Stays coiled despite heavy usage





2-socket MIL with Extended Strain Relief Ergonomic Design to BNC Plug Model 050LQXXXAC



2-socket MIL with Extended Strain Relief Ergonomic Design to 5-pin Connector Model 050LQXXXHX



2-socket MIL with Extended Strain Relief Ergonomic Design to 7-pin Connector Model 050LQXXXDP



2-socket MIL with Extended Strain Relief to 25-pin D-Sub Model 050FVXXXCV



2-socket MIL with Extended Strain Relief to 25-pin D-Sub Model 050FVXXXCW



2-socket MIL with Extended Strain Relief to 6-pin Connector Model 050FVXXXHM



BNC Plug to BNC Plug Model 050ACXXXAC



7-pin Connector to BNC Plug Model 050DPXXXAC



Five-pin Connector to BNC Plug Model 050HXXXXAC



BNC Plug to 25-pin D-sub Model 050ACXXXCV

Performance	Typical Usage	Stock Cable Lengths
050LQXXXAC	Commtest & Datastick analyzers	1.8 m, 3 m
050LQXXXHX	Emerson/CSI 2130 analyzer	1.8 m, 3 m
050LQXXXDP	Rockwell/Entek Datapak/Enpac analyzers	1.8 m
050FVXXXCV	Emerson/CSI 2110, 2115 & 2120 analyzers	Built to order
050FVXXXCW	SKF Microlog® analyzers	Built to order
050FVXXXHM	SKF GX® series & Azima-DLI DCA-31 analyzers	Built to order
050ACXXXAC	Connect accelerometer switch box outputs to Commtest & Datastick analyzers	Built to order
050DPXXXAC	Connect accelerometer switch box outputs to Rockwell/Entek Datapak/Enpac analyzers	Built to order
050HXXXXAC	Connect accelerometer switch box outputs to Emerson/CSI 2130 analyzer	Built to order
050ACXXXCV	Connect accelerometer switch box outputs to Emerson/CSI 2110, 2115 & 2120 analyzers	Built to order



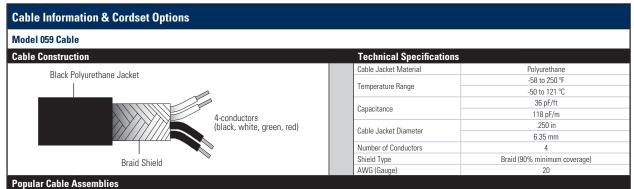




# 4-conductor, Shielded, Polyurethane Jacketed Cable

# Model 059 Cable

- Four conductor cable for use with triaxial, biaxial, dual temperature and vibration accelerometers
- Ideal for 4-20 mA loop-powered sensors with additional raw vibration or temperature output
- Braided shield twists into drain wire





Aluminum 4-socket MIL to Blunt Cut Model 059ANXXXBZ



Aluminum 4-socket MIL to 3 BNC's Labeled X, Y, Z, Shield Grounded Model 059ANXXXNF



Aluminum 4-socket MIL to 5-pin Connector Model 059ANXXXHX



Aluminum 4-socket MIL to 11-pin Connector Model 059ANXXXGV



Molded Composite 3-socket MIL-style to Blunt Cut Model 059BVXXXBZ



Molded Composite 3-socket MIL-style to 2 BNC's Labeled Temperature & Vibration Model 059BVXXXLH



Molded Composite 3-socket MIL-style to Blunt Cut Model 059EFXXXBZ



Molded Composite 3-socket MIL-style to 2 BNC's Labeled X & Y Model 059EFXXXLG



Aluminum 3-socket MIL to Blunt Cut Model 059GTXXXBZ



Aluminum 4-socket MIL to Blunt Cut Model 059HCXXXBZ

Performance	Typical Usage	Stock Cable Lengths
059ANXXXBZ	Triaxial accelerometers to terminal block	Built to order
059ANXXXNF	Triaxial accelerometers to DAQ with BNC jack input	3 m
059ANXXXHX	Triaxial accelerometers to CSI 2130 analyzer	Built to order
059ANXXXGV	Triaxial accelerometers to Azima-DLI DCX analyzer	Built to order
059BVXXXBZ	Dual temperature & vibration accelerometers, 4-20 mA transmitters with raw vibration to terminal block	Built to order
059BVXXXLG	Dual temperature & vibration accelerometers, 4-20 mA transmitters with raw vibration to DAQ with BNC jack input	Built to order
059EFXXXBZ	Bi-axial accelerometers to terminal block	Built to order
059EFXXXLG	Bi-axial accelerometers to DAQ with BNC jack input	Built to order
059GTXXXBZ	Rugged connection of temperature & vibration, bi-axial or 4-20 with raw vibration to terminal block	Built to order
059HCXXXBZ	4-20 mA vibration transmitters with temperature output (T064 series)	Built to order



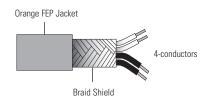


# **Cables & Connectors**

Contact IMI Sensors for more information on configurations for the cables featured on this page

# High Temperature FEP Cable 4-conductor, Shielded Model 057 Cable

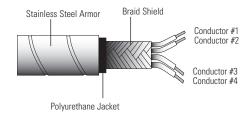
- Four-conductor cable for use with triaxial, biaxial, dual temperature and vibration accelerometers
- Ideal for 4-20 mA loop-powered sensors with additional raw vibration or temperature output
- For corrosive and high temperature applications when paired with proper connector

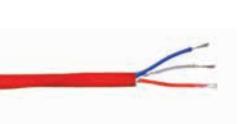




## Armor Jacketed, Polyurethane Cable, 4-conductor, Shielded Model 043 Cable

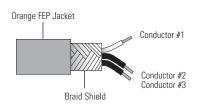
- Four-conductor cable for use with triaxial, biaxial, dual temperature and vibration accelerometers
- Ideal for 4-20 mA loop-powered sensors with additional raw vibration or temperature output
- Armor jacket protects cable from abuse





## High Temperature FEP Cable, 3-conductor Twisted, Shielded Model 056 Cable

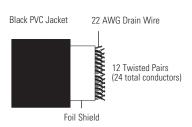
- Three-conductor cable for use with triaxial, biaxial, dual temperature and vibration accelerometers
- Ideal for 4-20 mA loop-powered sensors with additional raw vibration or temperature output
- For corrosive and high temperature applications when paired with proper connector





# 24-conductor Cable with Overall Shield and PVC Jacket Model 049 Cable

- Consolidate up to 12 channels worth of data into one cable bundle
- For use with cable interface boxes and cable-consolidating switch boxes
- Saves money and space over long cable runs to control room



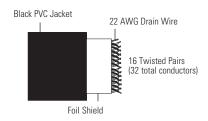






# PVC Cable, 32-conductor, Twisted Pairs, Overall Shielded Model 046 Cable

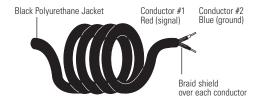
- Consolidate up to 16 channels worth of data into one cable bundle
- For use with model 691B47 16 channel cable-consolidating switch box
- Saves money and space over long cable runs to control room





# Coiled, Lightweight, Shielded, 2-conductor Model 044 Cable

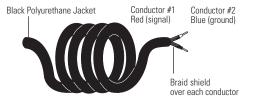
- Ideal for route-based predictive maintenance with portable analyzer
- Lightweight, easy to carry and handle
- Stays coiled despite heavy usage





# Coiled, Heavy Duty, Shielded, Twisted Model 058 Cable

- Ideal for route-based predictive maintenance with portable analyzer
- Heavy duty, thick cable designed for very rugged situations
- Stays coiled despite heavy usage



Technical Specifications							
Model Number	057 Cable	043 Cable	056 Cable	049 Cable	046 Cable	044 Cable	058 Cable
Cable Jacket Material	FEP	Polyurethane	FEP	Polyvinyl Chloride	Polyvinyl Chloride	Polyurethane	Polyurethane
Tamananatura Danas	-85 to 392 °F	-58 to 250 °F	-85 to 392 °F	-40 to 221 °F	-40 to 221 °F	-76 to 176 °F	-58 to 250 °F
Temperature Range	-65 to 200 °C	-50 to 121 °C	-65 to 200 °C	-40 to 105 °C	-40 to 105 °C	-60 to 80 °C	-50 to 121 °C
Cit	24 pF/ft	36 pF/ft	27 pF/ft	23 pF/ft	23 pF/ft	20 pF/ft	36 pF/ft
Capacitance	79 pF/m	118 pF/m	89 pF/m	76 pF/m	76 pF/m	66 pF/m	118 pF/m
Calda Jacket Bianceton	.19 in	.250 in	.19 in	.61 in	.70 in	.17 in	.250 in
Cable Jacket Diameter	4.83 mm	6.35 mm	4.83 mm	15.5 mm	17.8 mm	4.32 mm	6.35 mm
Number of Conductors	4	4	3	24	32	2	2
Shield Type	Braid (85% minimum coverage)	Braid (90% minimum coverage)	Braid (85% minimum coverage)	Aluminum / Mylar	Aluminum / Mylar	Spiral (90% minimum coverage)	Braid (97% minimum coverage)
AWG (Gauge)	22	20	20	20	20	20	20





# **Breakaway Safety Connector**

- Prevents technicians from being pulled into rotating machinery
- Flexible ordering options allows for quick, in-field adaptations
- Many popular data collector terminations in stock

Product shown at actual size





6 ft. Coiled Cable, 2-socket MIL with Extended Strain Relief to 3-pin Half Breakaway Connector

Model 050LQ006LU Cable\*

\*Model 050LQ006LU required. Choose option below that corresponds with your data acquisition equipment.



3-socket Half Breakaway Connector to 5-pin Connector Model 052LVXXXHX



3-socket Half Breakaway Connector to 6-pin Connector Model 0521/XXXXHM



3-socket Half Breakaway Connector to 7-pin Connector Model 052LVXXXDP



3-socket Half Breakaway Connector to 25-pin D-Sub Model 052LVXXXCV



3-socket Half Breakaway Connector to BNC Plug Model 052LVXXXAC



3-socket Half Breakaway Connector to 25-pin D-Sub Model 052LVXXXCW

Hochwertige Messtechnik und Beratung aus einer Hand



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