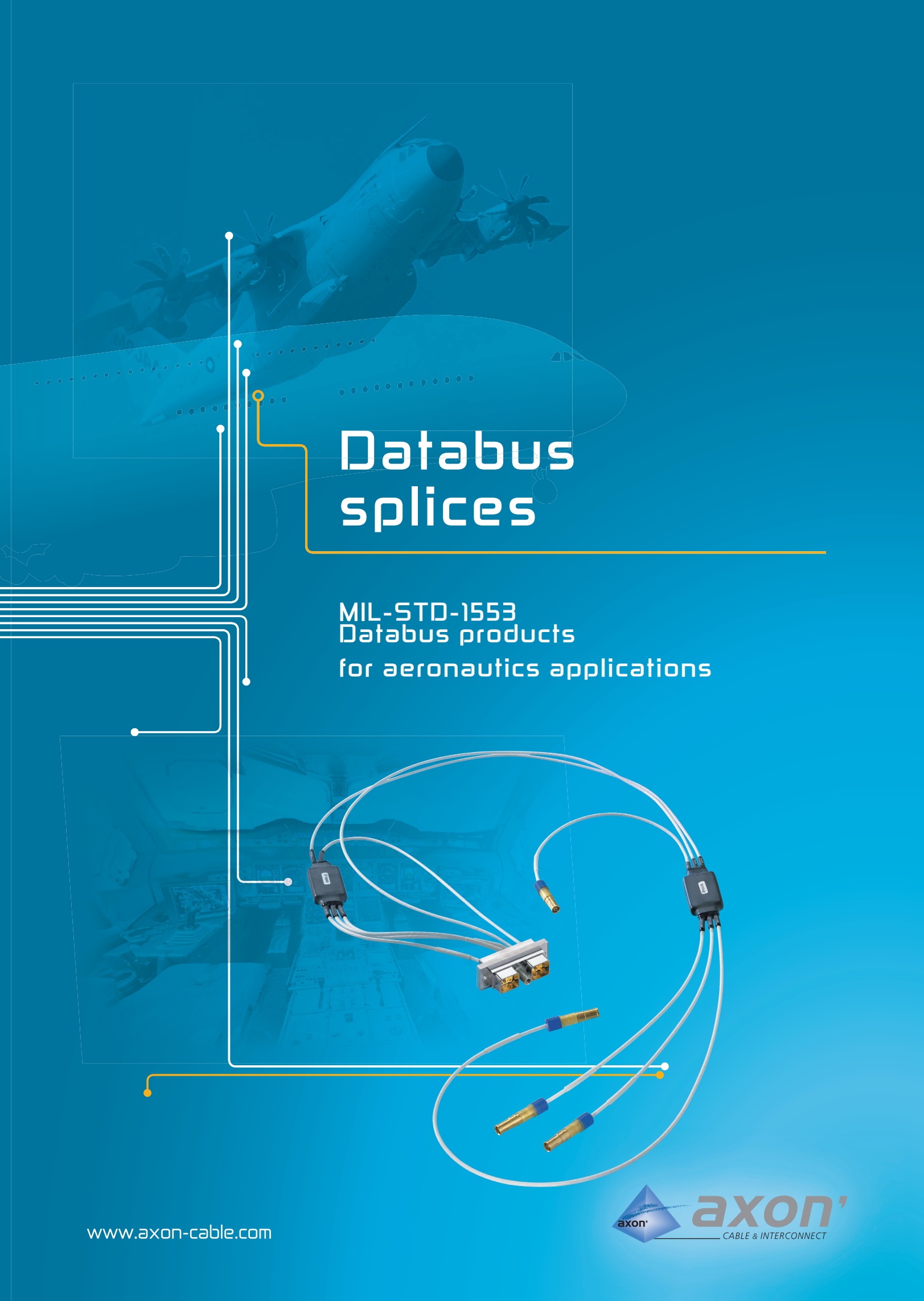
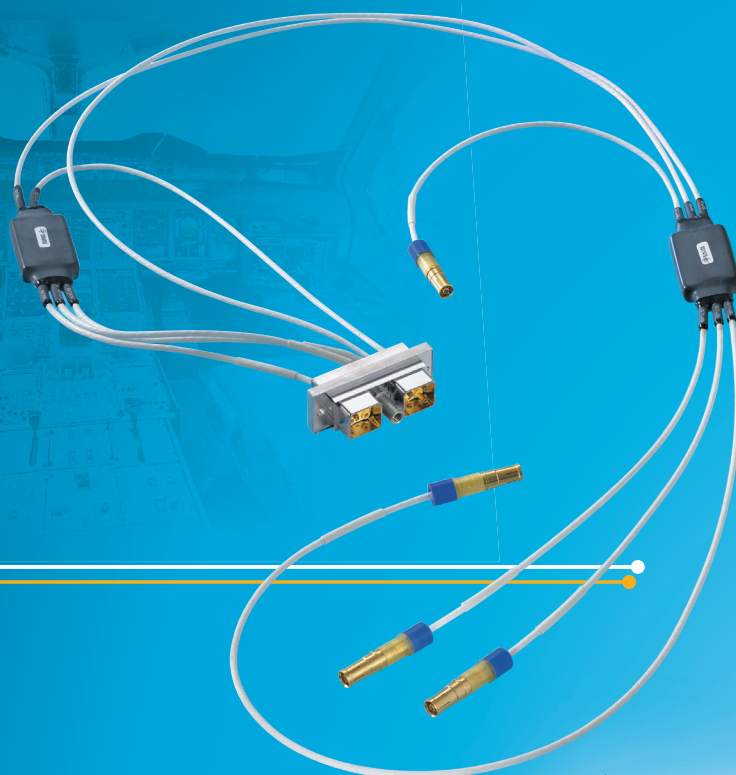




Databus splices

MIL-STD-1553
Databus products
for aeronautics applications



Contents

Databus splices

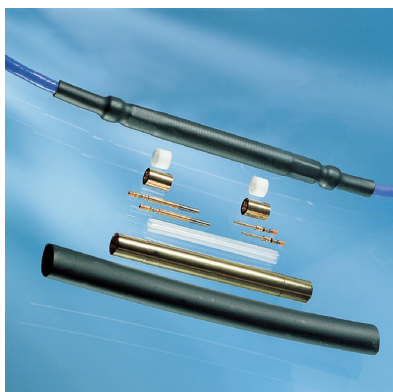
Crimps	5
Inline databus splice crimp	6
Inline databus splice crimp	8

Splices

Advantages

Splices are used to interconnect databus systems without connectors or for repair and maintenance :

- › Controlled impedance,
- › Good mechanical characteristics and sealed,
- › Cost-effective solution,
- › Installed with standard tooling,
- › Lightweight.



SPLICES

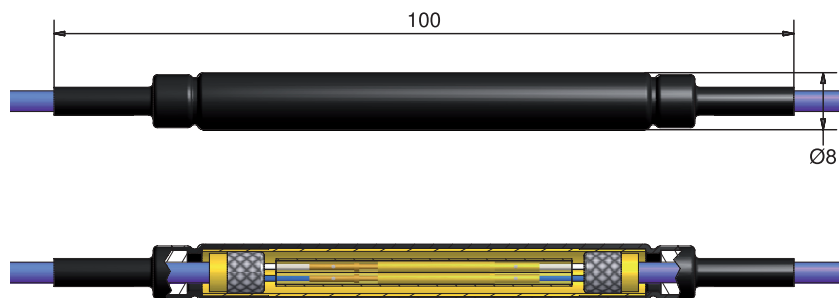
Inline databus splice crimp

SPECIFICATIONS

MIL-STD-1553 B
Digital time division
command / response multiplex
databus

MIL-C-39029
Contacts, electrical
connector, general
specification

AMB / A - S - XX



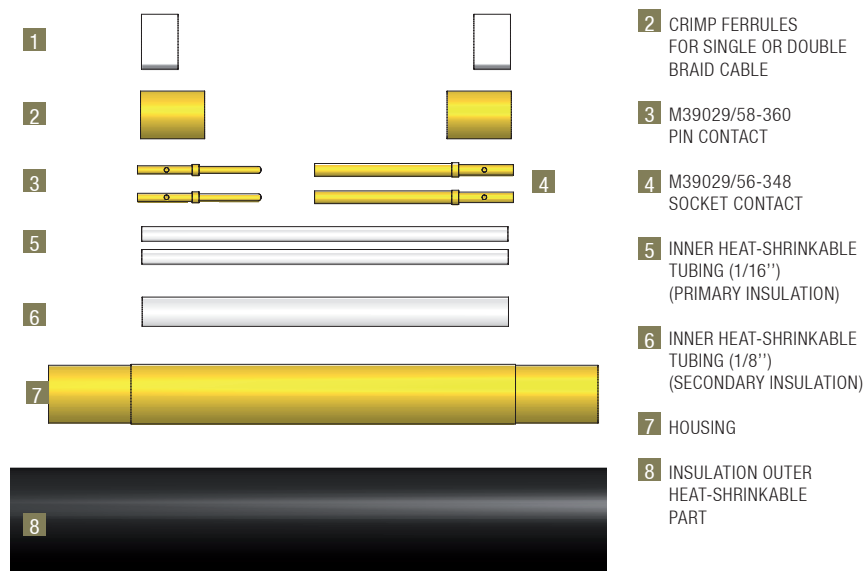
Length end-to-end including heat shrink tube.

DIMENSIONS in mm

AXON's AMB/A-S-xx splices are designed for MIL-STD-1553 B databus applications. These splices are crimp terminated, can be fitted to AWG 24 & 26 databus cables and are designed to comply with MIL-STD-1553B.

Construction

The splice consists of 13 pieces as follows :



Identification code

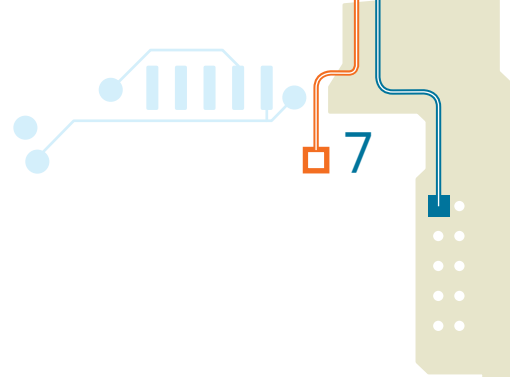
AMB / A - S

- XX

DESIGNATION

TYPE OF FERRULE

SB : for single braid cable
DB : for double braid cable



Materials and plating

COMPONENT	MATERIAL / PLATING
Inner contacts	Brass / Gold plated
Housing / ferrule	Brass / Gold plated
Sealing inserts	Silicon
Heat shrinkable sleeves	Polyolefin flexible crosslinked

Mechanical and environmental characteristics

PARAMETER	ACTUAL
Temperature range	-65°C + 150°C
Splice weight	6 g maximum

Electrical characteristics

PARAMETER	ACTUAL
Contact resistance	8 m Ω maximum
Insulation resistance	1 000 M Ω minimum at 500 Vdc
Nominal characteristic impedance	77 Ω

Type of cables

PARAMETER	ACTUAL
Type of cables	All types of AWG 26 to 24 shielded twisted pairs with an outer diameter < 3.8 mm

Tooling used for crimping the AMB/A-S-XX splice

AXON' CABLING INSTRUCTION : 95021-PM_SPLICE-01-A (respect the crimping rules for MIL-C-39029 contacts or ESA-ECSS-Q-70-26 for space applications)		
TYPE OF CRIMPING	CRIMPING TOOL	DIE
PIN CONTACT	M22520/2-01	M22520/2-09 Setting 2 for AWG 26 Setting 4 for AWG 24
SOCKET CONTACT	M22520/2-01	M22520/2-07 Setting 2 for AWG 26 Setting 4 for AWG 24
HOUSING	M22520/10-01	M22520/10-23



Inline databus splice crimp

SPECIFICATIONS

JN 1110 *

MIL-STD-1553B

Digital time division command/
response multiplex databus

02051-QTR-A01-AXON'
Qualification test report

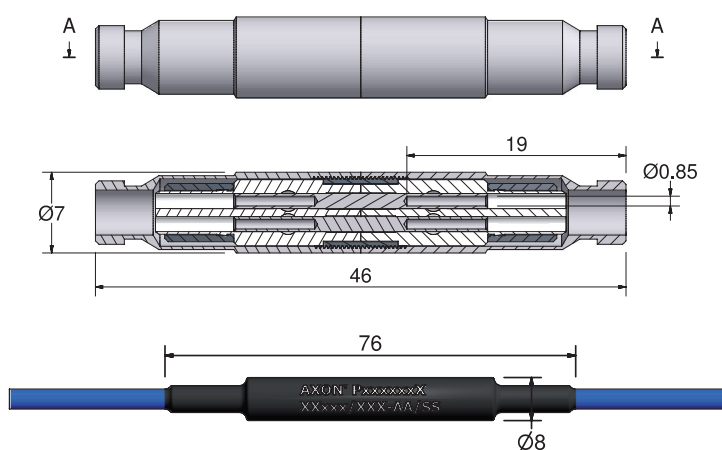
DDP-J403-A-02986
Declaration of design and
performance for aircraft
equipment /software

ASTM-B-733
Surface treatment
for housing
and ferrule

MIL-G-45204 Class 1
Surface treatment
for contact pin

* JN 1110
approval only concerns
AX 1110-01.
DDP reference :
DDP-J-403-A-0296.

AX 1110 - XX



Length end-to-end including heat shrink tube.

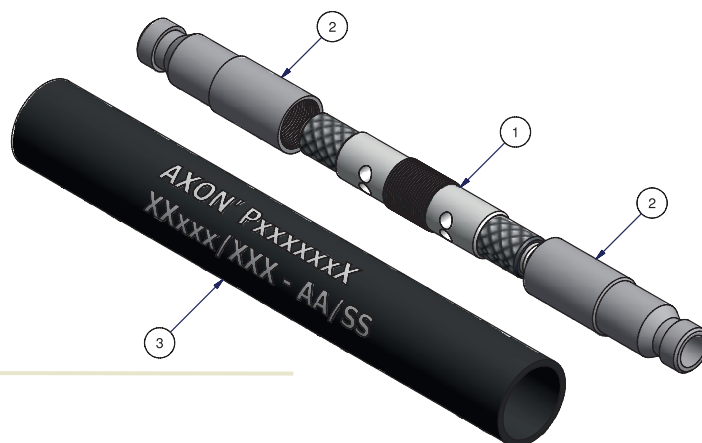
DIMENSIONS in mm

AXON's AX 1110-XX splices are designed for MIL-STD-1553B databus applications. These splices are crimp terminations to be fitted to AWG 24 databus cables.

Construction

The splice consists of 4 pieces :

- 1 - splice body
- 2 - crimp ferrule
- 3 - shrinkable tube



Identification code

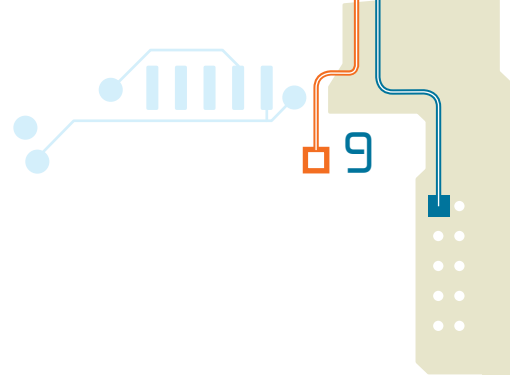
AX 1110

XX

DESIGNATION

TYPES :

- 01 : cable diameter between 3.4 and 3.8 mm (high temperature shrinkable boot 200°C)*
- 02 : cable diameter between 2.9 and 3.4 mm (standard temperature <150°C) (not a JN1110 item)
- 03 : cable diameter between 3.8 and 4.1 mm (standard temperature <150°C) (not a JN1110 item)
- 04 : cable diameter between 3.4 and 3.8 mm (standard temperature <150°C) (not a JN1110 item)



Materials and plating

COMPONENT	MATERIAL / FINISH
Inner contact	Brass / MIL-G-45204 class 1 (1.27 µm min)
Crimp ferrule	Brass / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
Body insulator	PTFE
Shrinkable tube	Flexible crosslinked Polyolefin

Mechanical and environmental characteristics

PARAMETER	ACTUAL
Operating temperature	-55°C to +200°C for type 01 -55°C to +150°C for types 02 to 04
Terminator / load weight	8.0 g maximum
Excellent vibration and shock resistance :	
- random vibrations	32 g rms, 1 hour in all directions 16 g rms, 120°C, 30 minutes in all directions
- gunfire vibrations	49 g rms in all directions
- mechanical shocks	15 g half sine, 11 ms in all directions
Acceleration	20 g in all directions
Thermal test	-55°C to +150°C, 10 cycles

Electrical characteristics

PARAMETER	ACTUAL
Contact resistance	8 mΩ maximum
Insulation resistance	1 000 MΩ minimum at 500 Vdc

Type of cables

PARAMETER	ACTUAL
Type of cables	All types of AWG 24 shielded twisted pairs with an outer diameter < 4.1 mm

Tooling used for crimping the AX 1110-XX splice

TYPE OF CRIMPING	CRIMPING TOOL	DIE
FERRULE	M22520/5-01	AX-CD-01
INNER CONTACTS	M22520/5-01	AX-CD-01



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