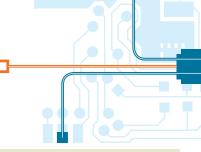
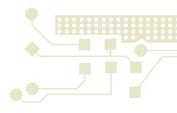
ACB 1 databus connectors





Advantages

AXON' have developed a triaxial connector called ACB1 (AXON' Connector Bus series 1) suitable for any type of twisted shielded AWG 24 pair cables. The connector is crimped on to cables and assemblies designed and manufactured to MIL-STD-1553.

A single crimping tool M22520/5-01 with an AXON' die is required to assemble the connector :

no need for two crimp tools, one die and one or two positioning tools like most connectors.

- > ACB1 connectors make assembly easier.
- > ACB1 connectors reduce the time for mounting.
- > No potting is required.
- > ACB1 connectors and mating halves can integrate with either pin or socket contacts : the connector is mounted to your needs.
- > ACB1 connectors have gone through test sequences defined by the EN3716 standard.
- > The only connector approved to ESCC3401/079 by ESA. (see the specifications for the variants available).

Versions

- > 3 types of connectors :
 - bulkhead jack series (BK),
 - Plug series (PG),
 - Jack series (JK).
- > For each type of connectors, there are 2 versions available :
 - bayonet (4 keyings),
- threaded.



Pin and socket contact

for ACB) connectors

SPECIFICATIONS

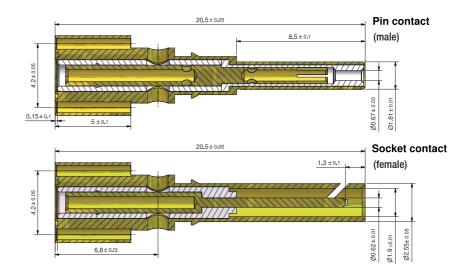
MIL-STD-1553B Digital time division command/ response multiplex databus

MIL-STD-1344
General environmental tests

ASTM-B-196 Material for contact

MIL-G-45204 Class 1 Surface treatment for contact

ACBI SERIES



DIMENSIONS in mm

AXON's ACB1 series contact (pin or socket) are designed for databus applications. This contact is to be crimped on AWG24 databus cable and mounted on ACB1 connectors series.

Identification code

ACB

AXON' CONNECTOR BUS TYPE 1

TYPE OF CONTACT

P: pin contact S: socket contact





PARAMETERS	ACTUAL
Socket contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 µm)
Pin contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 µm)
Insulator	PTFE

Electrical characteristics

PARAMETERS	ACTUAL
Insulation resistance between inner and outer contacts (sea level)	5 000 M Ω minimum at 500 Vpc
Dielectric withstanding voltage : - between inner and outer contacts (sea level)	900 V rms maximum
Contact resistance	8 m Ω maximum

Mechanical and environmental characteristics

PARAMETERS	ACTUAL	
Operating temperature	-65°C + 150°C	
Socket contact weight	1.5 g maximum	
Pin contact weight	1.5 g maximum	
Durability (mounting / dismounting)	500 cycles	
Vibration	MIL-STD-1344 method 2005, test condition IV 10-2000Hz 20 g peak level	
Shock	MIL-STD-1344 method 2004, test condition B, Half sine, 75 g, 6 ms duration	

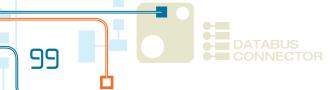
Type of cables

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

Tooling used for crimping the contact on the cable

TYPE OF CRIMPING	CRIMPING TOOL	DIE
Contact	M 22520/5-01	AX-CD-02 or AX-CD-03 (*)
(*) Depends on the connector version (refers to technical data sheet) Crimping according to assembly instructions «CON-1553-GF-27»		





STRAIGHT & THREADED VERSION

SPECIFICATIONS

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

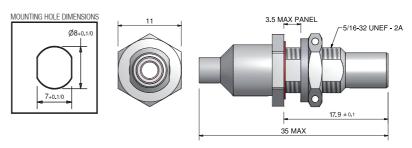
MIL-STD-1344 General environmental tests

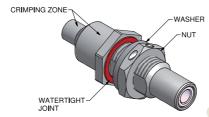
ASTM-B-733 or MIL-C-26074 Surface treatment for body and ferrule

MIL-G-45204 Class 1 Surface treatment for contact

MIL-I-23053/5
Insulation sleeving,
electrical heat shrinkable,
polyolefin
flexible crosslinked

ACB) / BK - bulkhead jack series





DIMENSIONS in mm

AXON' ACB1 connectors series is specifically designed for MIL-STD-1553 B databus application.

Available in threaded coupling or bayonet coupling 3A, 3B, 3C or 4 .

These connectors are to be crimped on AWG 24 databus cables.

Bulkhead jack are designed to be fixed by using a jam nut and a washer.

CHARACTERISTICS

The connector is composed by 4 main pieces:

- > 1 ferrule,
- > 1 body,
- ▶ 1 insulator and
- > 1 contact (pin or socket),

and 4 additional pieces:

- > 1 nut,
- > 1 washer,
- 1 watertight joint and
- > 1 heat shrinkable strain relief.

Identification code

ACB1

AXON'

CONNECTOR

BUS TYPE 1

RK

BK: bulkhead jack

TYPE OF

CONNECTOR

TYPE OF

01: threaded

CONFIGURATION

TYPE OF

CONTACT

P: pin contact S: socket contact 5xx

TYPE OF FERRULE

 ${\bf S34}$: straight for cable diameter < 3.4 mm

S38 : straight for cable diameter between 3.4 and 3.8 mm



PARTS	ACTUAL
Body	Brass / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 $\mu m)$
Socket contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 μm)
Pin contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 $\mu m)$
Ferrule	Copper alloy / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 $\mu m)$
Insulator	PTFE
Shrinkable strain relief	Polyolefin flexible crosslinked in accordance with MIL-I-23053/5

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	8 m Ω maximum
Insulation resistance (sea level)	5 000 M Ω minimum at 500 Vpc
Voltage strength (sea level)	900 V rms maximum
Operating voltage (sea level to 30000 m)	200 V rms maximum

Mechanical and environmental characteristics

PARAMETERS	ACTUAL
Operating temperature	-65°C +150°C (-65°C +125°C if the heat shrinkable strain relief is used)
Bulkhead jack with ferrule and contact weight	9 g maximum
Thickness panel	3.5 mm maximum
Torque of fixing nut	$2.0 \pm 0.1 \text{ N.m}$
Salt spray	500 hours
Durability (mounting / dismounting)	500 cycles
Vibration	MIL-STD-1344 method 2005, test condition IV 10-2000Hz 20g peak level
Shock	MIL-STD-1344 method 2004, test condition B, Half sine, 75g, 6 ms duration

Type of cables

PARAMETERS		ACTUAL
Type of cables		All types of AWG 24 twisted shield pair with an outer diameter $<$ 3.8 mm

Contact

This connector will accommodate the following AXON' contacts. See technical data sheets / (see page 97).

-	
PART NUMBER	DESCRIPTION
ACB1 / P	Pin contact (male)
ACB1 / S	Socket contact (female)

Tooling used for crimping the connector on the cable

TYPE OF CONNECTOR	TYPE OF CRIMPING	CRIMPING TOOL	DIE
Straight versions	Contact	M 22520/5-01	AX-CD-02
	Straight ferrule	M 22520/5-01	AX-CD-02
Crimping according to assembly instructions «CON-1553-GF-27»			





ELBOW & THREADED

SPECIFICATIONS

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

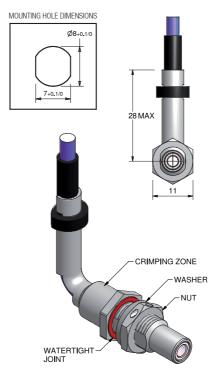
MIL-STD-1344
General environmental tests

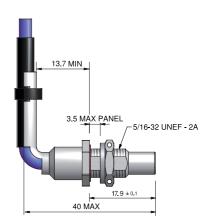
ASTM-B-733 or MIL-C-26074 Surface treatment for body and ferrule

MIL-G-45204 Class 1 Surface treatment for contact

MIL-I-23053/5
Insulation sleeving,
electrical heat shrinkable,
polyolefin
flexible crosslinked

ACB) / BK - bulkhead jack series





DIMENSIONS in mm

AXON' ACB1 connectors series is specifically designed for MIL-STD-1553 B databus application.

Available in threaded coupling or bayonet coupling 3A, 3B, 3C or 4.

These connectors are to be crimped on AWG 24 databus cables.

Bulkhead jack are designed to be fixed by using a jam nut and a washer.

CHARACTERISTICS

The connector is composed by 4 main pieces:

- > 1 elbow ferrule,
- > 1 body,
- > 1 insulator and
- > 1 contact (pin or socket), and 5 additional pieces:
- > 1 nut,
- > 1 washer,
- > 1 watertight joint,
- > 1 heat shrinkable strain relief.

Identification code

ACB1

CONNECTOR

BUS TYPF 1

AXON'

BK

TYPE OF CONNECTOR

BK: bulkhead jack

01

TYPE OF CONFIGURATION 01: threaded

TYPE OF

CONTACT P: pin contact

S: socket contact

Rxx

TYPE OF FERRULE
R34 : right angle for cable
diameter < 3.4 mm
R38 : right angle for cable

diameter between 3.4 and 3.8 mm





PARTS	ACTUAL
Body	Brass / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 $\mu\text{m})$
Socket contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 $\mu m)$
Pin contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 $\mu m)$
Ferrule	Copper alloy / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 $\mu m)$
Insulator	PTFE
Shrinkable strain relief	Polyolefin flexible crosslinked in accordance with MIL-I-23053/5

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	8 m Ω maximum
Insulation resistance (sea level)	5 000 M Ω minimum at 500 Vpc
Voltage strength (sea level)	900 V rms maximum
Operating voltage (sea level to 30000 m)	200 V rms maximum

Mechanical and environmental characteristics

PARAMETERS	ACTUAL
Operating temperature	-65°C +150°C (-65°C +125°C if heat the shrinkable strain relief is used)
Bulkhead jack with ferrule and contact weight	11.3 g maximum
Thickness panel	3.5 mm maximum
Torque of fixing nut	2.0 ± 0.1 N.m
Salt spray	500 hours
Durability (mounting / dismounting)	500 cycles
Vibration	MIL-STD-1344 method 2005, test condition IV 10-2000Hz 20g peak level
Shock	MIL-STD-1344 method 2004, test condition B, Half sine, 75g, 6 ms duration

Type of cables

PARAMETERS	ACTUAL
Type of cables	All types of AWG 24 twisted shield pair with an outer diameter < 3.8 mm

Contact

This connector will accommodate the following AXON' contacts. See technical data sheets / (see page 97).

	PART NUMBER	DESCRIPTION
ACB1 / P		Pin contact (male)
ACB1 / S		Socket contact (female)

Tooling used for crimping the connector on the cable

TYPE OF CONNECTOR	TYPE OF CRIMPING	CRIMPING TOOL	DIE
Cwent albem connectors	Contact	M 22520/5-01	AX-CD-03
Swept elbow connectors Swept elbow ferrule		M 22520/5-01	AX-CD-03
Swept eidow terrule IVI 22520/5-01 AX-CD-03			

Crimping according to assembly instructions «CON-1553-GF-27»

A tie-wrap or a lacing lane can be used to maintain the cable onto the ferrule. These items can be provided upon request





STRAIGHT & BAYONET VERSION

SPECIFICATIONS

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

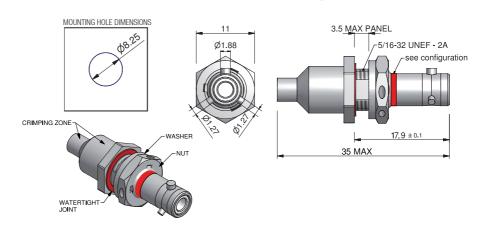
MIL-STD-1344
General environmental tests

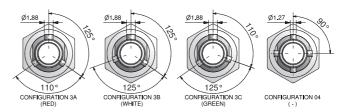
ASTM-B-733 or MIL-C-26074 Surface treatment for body and ferrule

MIL-G-45204 Class 1 Surface treatment for contact

MIL-I-23053/5
Insulation sleeving,
electrical heat shrinkable,
polyolefin
flexible crosslinked

ACB) / BK - bulkhead jack series





DIMENSIONS in mm

AXON' ACB1 connectors series is specifically designed for MIL-STD-1553 B databus application. Available in bayonet coupling 3A, 3B, 3C or 4. These connectors are to be crimped on AWG 24 databus cables.

The bulkhead jacks are designed to be fixed by using a jam nut and a washer.

CHARACTERISTICS

The connector is composed by 4 main pieces:

- > 1 ferrule,
- > 1 body,
- > 1 insulator and
- ➤ 1 contact (pin or socket), and 4 additional pieces:
- > 1 nut.
- > 1 washer,
- > 1 watertight joint and
- > 1 heat shrinkable strain relief.

Identification code

ACB1

AXON'

CONNECTOR

BUS TYPE 1

BK

TYPE OF CONNECTOR BK: bulkhead jack

TYPE OF CONFIGURATION

3A : config 3A / RED **3B** : config 3B / WHITE

XX

3C : config 3C / GREEN **04** : config 04 / -

X

TYPE OF CONTACT

P: pin contact S: socket contact 5xx

TYPE OF FERRULE

3.8 mm





ACTUAL
Brass / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 $\mu\text{m})$
Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 µm)
Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 µm)
Copper alloy $$ / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 μ m)
PTFE
Polyolefin flexible crosslinked in accordance with MIL-I-23053/5

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	8 m Ω maximum
Insulation resistance (sea level)	5 000 M Ω minimum at 500 Vpc
Voltage strength (sea level)	900 V rms maximum
Operating voltage (sea level to 30000 m)	200 V rms maximum

Mechanical and environmental characteristics

PARAMETERS	ACTUAL
Operating temperature	-65°C +150°C (-65°C +125°C if the heat shrinkable strain relief is used)
Bulkhead jack with ferrule and contact weight	9 g maximum
Thickness panel	3.5 mm maximum
Torque of fixing nut	$2.0 \pm 0.1 \text{ N.m}$
Salt spray	500 hours
Durability (mounting / dismounting)	500 cycles
Vibration	MIL-STD-1344 method 2005, test condition IV 10-2000Hz 20g peak level
Shock	MIL-STD-1344 method 2004, test condition B, Half sine, 75g, 6 ms duration

Type of cables

	PARAMETERS	ACTUAL
Type of cables		All types of AWG 24 twisted shield pair with an outer diameter < 3.8 mm

Contact

This connector will accommodate the following AXON' contacts. See technical data sheets

PART NUMBER

DESCRIPTION

ACB1 / P

Pin contact (male)

ACB1 / S

Socket contact (female)

Tooling used for crimping the connector on the cable

TYPE OF CONNECTOR	TYPE OF CRIMPING	CRIMPING TOOL	DIE
Ctraight varaiona	Contact	M 22520/5-01	AX-CD-02
Straight versions	Straight ferrule	M 22520/5-01	AX-CD-02
Crimping according to assembly instructions «CON-1553-GF-27»			





SPECIFICATIONS

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

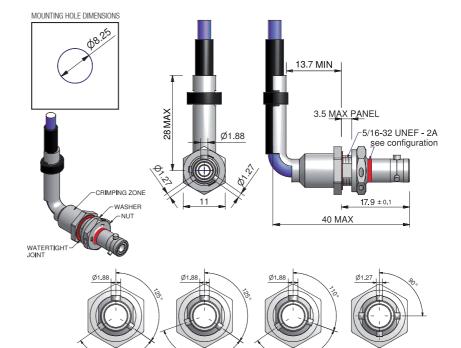
MIL-STD-1344 General environmental tests

ASTM-B-733 or MIL-C-26074 Surface treatment for body and ferrule

MIL-G-45204 Class 1 Surface treatment for contact

MIL-I-23053/5 Insulation sleeving, electrical heat shrinkable, polyolefin flexible crosslinked

ACB) / BK - bulkhead jack series



DIMENSIONS in mm

CONFIGURATION 3C

CONFIGURATION 04

AXON' ACB1 connectors series is specifically designed for MIL-STD-1553 B databus application.

Available in bayonet coupling 3A, 3B, 3C or 4.

These connectors are to be crimped on AWG 24 databus cables. The bulkhead jacks are designed to be fixed by using a jam nut and a washer.

CHARACTERISTICS

CONFIGURATION 3B

(WHITE)

The connector is composed by 4 main pieces:

> 1 ferrule,

CONFIGURATION 3A

- > 1 body,
- > 1 insulator and
- > 1 contact (pin or socket), and 4 additional pieces:
- > 1 nut,
- > 1 washer,
- > 1 watertight joint and
- > 1 heat shrinkable strain relief.

Identification code

ACB1

AXON'

BK

TYPF OF CONNECTOR CONNECTOR **BUS TYPE 1** BK: bulkhead jack XX

TYPE OF CONFIGURATION

04 : config 04 / -

3A : config 3A / RED 3B: config 3B / WHITE 3C: config 3C / GREEN TYPE OF CONTACT

P: pin contact S: socket contact **Rxx**

TYPE OF FERRULE

R34 : right angle for cable diameter < 3.4 mm R38 : right angle for cable diameter between 3.4

and 3.8 mm





PARTS	ACTUAL	
Body	Brass / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 $\mu m)$	
Socket contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 $\mu m)$	
Pin contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 µm)	
Ferrule	Copper alloy / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 $\mu m)$	
Insulator	PTFE	
Shrinkable strain relief	Polyolefin flexible crosslinked in accordance with MIL-I-23053/5	

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	$8~\text{m}\Omega$ maximum
Insulation resistance (sea level)	5 000 M Ω minimum at 500 Vpc
Voltage strength (sea level)	900 V rms maximum
Operating voltage (sea level to 30000 m)	200 V rms maximum

Mechanical and environmental characteristics

PARAMETERS	ACTUAL
Operating temperature	-65°C +150°C (-65°C +125°C if the heat shrinkable strain relief is used)
Bulkhead jack with ferrule and contact weight	11.3 g maximum
Thickness panel	3.5 mm maximum
Torque of fixing nut	2.0 ± 0.1 N.m
Salt spray	500 hours
Durability (mounting / dismounting)	500 cycles
Vibration	MIL-STD-1344 method 2005, test condition IV 10-2000Hz 20g peak level
Shock	MIL-STD-1344 method 2004, test condition B, Half sine, 75g, 6 ms duration

Type of cables

PARAMETERS	ACTUAL
Type of cables	All types of AWG 24 twisted shield pair with an outer diameter $<$ 3.8 mm

Contact

This connector will accommodate the following AXON' contacts. See technical data sheets / (see page 97).

PART NUMBER	DESCRIPTION
ACB1 / P	Pin contact (male)
ACB1 / S	Socket contact (female)

Tooling used for crimping the connector on the cable

TYPE OF CONNECTOR	TYPE OF CRIMPING	CRIMPING TOOL	DIE
Swant albaw connectors	Contact	M 22520/5-01	AX-CD-03
Swept elbow connectors	Swept elbow ferrule	M 22520/5-01	AX-CD-03
	•		

Crimping according to assembly instructions «CON-1553-GF-27»

A tie-wrap or a lacing lane can be used to maintain the cable onto the ferrule. These items can be provided upon request





STRAIGHT & **THREADED**

SPECIFICATIONS

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

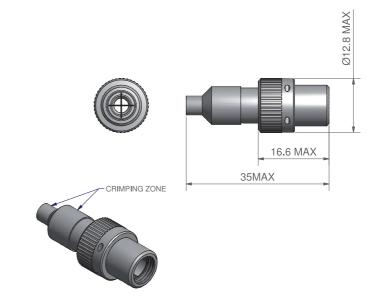
MIL-STD-1344 General environmental tests

ASTM-B-733 or MIL-C-26074 Surface treatment for body and ferrule

MIL-G-45204 Class 1 Surface treatment for contact

MIL-I-23053/5 Insulation sleeving, electrical heat shrinkable, polyolefin flexible crosslinked

ACB) / PG - Plug series



DIMENSIONS in mm

AXON' ACB1 connectors series is specifically designed for MIL-STD-1553 B databus application.

Available in threaded coupling or bayonet coupling 3A, 3B, 3C or 4.

These connectors are to be crimped on AWG 24 databus cables.

CHARACTERISTICS

The connector is composed by 4 main pieces:

- > 1 ferrule,
- > 1 body,
- > 1 insulator and
- > 1 contact (pin or socket), and 1 additional piece:
- > 1 heat shrinkable strain relief.

Identification code

ACB1

PG

TYPE OF FERRULE

S34 : straight for cable diameter < 3.4 mm

S38: straight for cable diameter between 3.4 and 3.8 mm

Sxx

AXON' CONNECTOR

BUS TYPE 1

TYPE OF CONNECTOR PG: plug

TYPE OF CONFIGURATION 01: threaded

CONTACT P: pin contact S: socket contact

TYPE OF





PARTS	ACTUAL
Body	Brass / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 $\mu m)$
Socket contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 μm)
Pin contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 $\mu m)$
Ferrule	Copper alloy / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 $\mu m)$
Insulator	PTFE
Shrinkable strain relief	Polyolefin flexible crosslinked in accordance with MIL-I-23053/5

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	$8~\text{m}\Omega$ maximum
Insulation resistance (sea level)	5 000 M Ω minimum at 500 Vpc
Voltage strength (sea level)	900 V rms maximum
Operating voltage (sea level to 30000 m)	200 V rms maximum

Mechanical and environmental characteristics

PARAMETERS	ACTUAL
Operating temperature	-65°C +150°C (-65°C +125°C if the heat shrinkable strain relief is used)
Plug with ferrule and contact weight	13 g maximum
Mating torque	1.00 to 1.25 N.m
Salt spray	500 hours
Durability (mounting / dismounting)	500 cycles
Vibration	MIL-STD-1344 method 2005, test condition IV 10-2000Hz 20g peak level
Shock	MIL-STD-1344 method 2004, test condition B, Half sine, 75g, 6 ms duration

Type of cables

	PARAMETERS	ACTUAL
Type of cables		All types of AWG 24 twisted shield pair with an outer diameter < 3.8 mm

Contact

This connector will accommodate the following AXON' contacts. See technical data sheets / (see page 97).

3	(1 3 /
PART NUMBER	DESCRIPTION
ACB1 / P	Pin contact (male)
ACB1 / S	Socket contact (female)

Tooling used for crimping the connector on the cable

		CRIMPING TOO	L DIE
Contact Contact		M 22520/5-01	AX-CD-02
Straight versions Straight fe	errule	M 22520/5-01	AX-CD-02

Crimping according to assembly instructions «CON-1553-GF-27»





ELBOW & **THREADED**

SPECIFICATIONS

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

MIL-STD-1344 General environmental tests

ASTM-B-733 or MIL-C-26074 Surface treatment for body and ferrule

MIL-G-45204 Class 1 Surface treatment for contact

MIL-I-23053/5 Insulation sleeving, electrical heat shrinkable, polyolefin flexible crosslinked

ACB1 / PG - Plug series



AXON' ACB1 connectors series is specifically designed for MIL-STD-1553 B databus application.

Available in threaded coupling or bayonet coupling 3A, 3B, 3C or 4.

These connectors are to be crimped on AWG 24 databus cables.

CHARACTERISTICS

The connector is composed by 4 main pieces:

- > 1 elbow ferrule,
- > 1 body,
- > 1 insulator and
- > 1 contact (pin or socket), and 1 additional piece:
- > 1 heat shrinkable strain relief.

Identification code

ACB1

CONNECTOR

BUS TYPE 1

AXON'

PG

TYPE OF

PG: plug

CONNECTOR

TYPE OF CONFIGURATION 01: threaded

TYPE OF CONTACT P: pin contact

S: socket contact

TYPE OF FERRULE

Rxx

R34 : right angle for cable $diameter < 3.4 \ mm$ R38: right angle for cable diameter between

3.4 and 3.8 mm





PARTS	ACTUAL
Body	Brass / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 $\mu m)$
Socket contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 $\mu m)$
Pin contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 $\mu m)$
Ferrule	Copper alloy / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 $\mu m)$
Insulator	PTFE
Shrinkable strain relief	Polyolefin flexible crosslinked in accordance with MIL-I-23053/5

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	$8~\text{m}\Omega$ maximum
Insulation resistance (sea level)	5 000 M Ω minimum at 500 Vpc
Voltage strength (sea level)	900 V rms maximum
Operating voltage (sea level to 30000 m)	200 V rms maximum

Mechanical and environmental characteristics

PARAMETERS	ACTUAL
Operating temperature	-65°C +150°C (-65°C +125°C if the heat shrinkable strain relief is used)
Plug with ferrule and contact weight	15,3 g maximum
Mating torque	1.00 to 1.25 N.m
Salt spray	500 hours
Durability (mounting / dismounting)	500 cycles
Vibration	MIL-STD-1344 method 2005, test condition IV 10-2000Hz 20g peak level
Shock	MIL-STD-1344 method 2004, test condition B, Half sine, 75g, 6 ms duration

Type of cables

PARAMETERS	ACTUAL
Type of cables	All types of AWG 24 twisted shield pair with an outer diameter $< 3.8 \ \text{mm}$

Contact

This connector will accommodate the following AXON' contacts. See technical data sheets / (see page 97).

3	, ,
PART NUMBER	DESCRIPTION
ACB1 / P	Pin contact (male)
ACB1 / S	Socket contact (female)

Tooling used for crimping the connector on the cable

TYPE OF CONNECTOR	TYPE OF CRIMPING	CRIMPING TOOL	DIE
Cuant albay connectors	Contact	M 22520/5-01	AX-CD-03
Swept elbow connectors	Swept elbow ferrule	M 22520/5-01	AX-CD-03

Crimping according to assembly instructions «CON-1553-GF-27»

A tie-wrap or a lacing lane can be used to maintain the cable onto the ferrule. These items can be provided upon request





STRAIGHT & BAYONET VERSION

SPECIFICATIONS

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

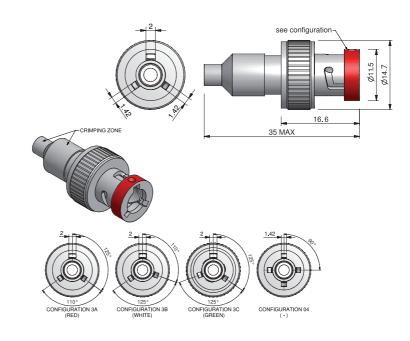
MIL-STD-1344
General environmental tests

ASTM-B-733 or MIL-C-26074 Surface treatment for body and ferrule

MIL-G-45204 Class 1 Surface treatment for contact

MIL-I-23053/5 Insulation sleeving, electrical heat shrinkable, polyolefin flexible crosslinked

ACB) / PG - Plug series



DIMENSIONS in mm

AXON' ACB1 connectors series is specifically designed for MIL-STD-1553 B databus application.

Available in bayonet coupling 3A, 3B, 3C or 4

These connectors are to be crimped on AWG 24 databus cables.

CHARACTERISTICS

The connector is composed by 4 main pieces:

- > 1 ferrule,
- > 1 body,
- > 1 insulator and
- 1 contact (pin or socket), and 1 additional piece :
- > 1 heat shrinkable strain relief.

Identification code

ACB1

PC

TYPE OF

TYPE OF CONTACT

P: pin contact

TYPE OF FERRULE

AXON' CONNECTOR BUS TYPE 1 TYPE OF CONNECTOR PG: plug

CONFIGURATION

3A: config 3A / RED

3B: config 3B / WHITE **3C**: config 3C / GREEN **04**: config 04 / -

nfig 3B / WHITE S: socket contact

S34 : straight for cable diameter < 3.4 mm S38 : straight for cable diameter between 3.4

and 3.8 mm





PARTS	ACTUAL
Body	Brass / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 $\mu\text{m})$
Socket contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 µm)
Pin contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 $\mu m)$
Ferrule	Copper alloy / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 $\mu m)$
Insulator	PTFE
Shrinkable strain relief	Polyolefin flexible crosslinked in accordance with MIL-I-23053/5

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	$8~\text{m}\Omega$ maximum
Insulation resistance (sea level)	5 000 M Ω minimum at 500 VDC
Voltage strength (sea level)	900 V rms maximum
Operating voltage (sea level to 30000 m)	200 V rms maximum

Mechanical and environmental characteristics

PARAMETERS	ACTUAL
Operating temperature	-65°C +150°C (-65°C +125°C if the heat shrinkable strain relief is used)
Plug with ferrule and contact weight	13.5 g maximum
Salt spray	500 hours
Durability (mounting / dismounting)	500 cycles
Vibration	MIL-STD-1344 method 2005, test condition IV 10-2000Hz 20g peak level
Shock	MIL-STD-1344 method 2004, test condition B, Half sine, 75g, 6 ms duration

Type of cables

PARAMETERS	ACTUAL
Type of cables	All types of AWG 24 twisted shield pair with an outer diameter < 3.8 mm

Contact

This connector will accommodate the following AXON' contacts. See technical data sheets / (see page 97).

PART NUMBER	DESCRIPTION
ACB1 / P	Pin contact (male)
ACB1 / S	Socket contact (female)

Tooling used for crimping the connector on the cable

TYPE OF CONNECTOR	TYPE OF CRIMPING	CRIMPING TOOL	DIE
Ctraight varaiona	Contact	M 22520/5-01	AX-CD-02
Straight versions	Straight ferrule	M 22520/5-01	AX-CD-02

Crimping according to assembly instructions «CON-1553-GF-27»





ELBOW & BAYONET

SPECIFICATIONS

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

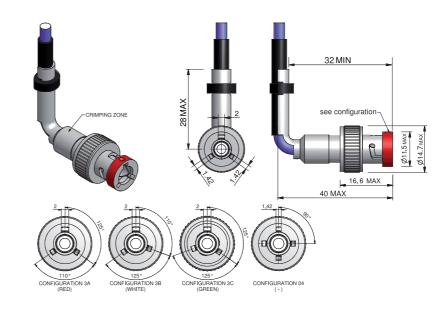
MIL-STD-1344
General environmental tests

ASTM-B-733 or MIL-C-26074 Surface treatment for body and ferrule

MIL-G-45204 Class 1 Surface treatment for contact

MIL-L-23053/5
Insulation sleeving,
electrical heat shrinkable,
polyolefin
flexible crosslinked

ACB) / PG - Plug series



DIMENSIONS in mm

AXON' ACB1 connectors series is specifically designed for MIL-STD-1553 B databus application.

Available in bayonet coupling 3A, 3B, 3C or 4

These connectors are to be crimped on AWG 24 databus cables.

CHARACTERISTICS

The connector is composed by 4 main pieces:

- > 1 ferrule,
- > 1 body,
- > 1 insulator and
- 1 contact (pin or socket), and 1 additional piece :
- > 1 heat shrinkable strain relief.

Rxx

Identification code

ACB1

CONNECTOR

BUS TYPE 1

AXON'

PG

TYPE OF

04 : config 04 / -

TYPE OF CONTACT

R

TYPE OF FERRULE

TYPE OF CONNECTOR PG : Plug

CONFIGURATION 3A: config 3A / RED **3B**: config 3B / WHITE

P: pin contact S: socket contact R34 : right angle for cable diameter < 3.4 mm R38 : right angle for cable diameter between 3.4 and 3.8 mm

3C : config 3C / GREEN



PARTS	ACTUAL
Body	Brass / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 $\mu m)$
Socket contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 $\mu m)$
Pin contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 $\mu m)$
Ferrule	Copper alloy / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 $\mu m)$
Insulator	PTFE
Shrinkable strain relief	Polyolefin flexible crosslinked in accordance with MIL-I-23053/5

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	$8~\mathrm{m}\Omega$ maximum
Insulation resistance (sea level)	5 000 M Ω minimum at 500 Vpc
Voltage strength (sea level)	900 V rms maximum
Operating voltage (sea level to 30000 m)	200 V rms maximum

Mechanical and environmental characteristics

ACTUAL
-65°C +150°C (-65°C +125°C if the heat shrinkable strain relief is used)
15.8 g maximum
500 hours
500 cycles
MIL-STD-1344 method 2005, test condition IV 10-2000Hz 20g peak level
MIL-STD-1344 method 2004, test condition B, Half sine, 75g, 6 ms duration

Type of cables

PARAMETERS	ACTUAL
Type of cables	All types of AWG 24 twisted shield pair with an outer diameter $<$ 3.8 mm

Contact

This connector will accommodate the following AXON' contacts. See technical data sheets / (see page 97).

PART NUMBER	DESCRIPTION	
ACB1 / P	Pin contact (male)	
ACB1 / S	Socket contact (female)	

Tooling used for crimping the connector on the cable

TYPE OF CONNECTOR	TYPE OF CRIMPING	CRIMPING TOOL	DIE
Cuant albaw connectors	Contact	M 22520/5-01	AX-CD-03
Swept elbow connectors	Swept elbow ferrule	M 22520/5-01	AX-CD-03

Crimping according to assembly instructions «CON-1553-GF-27»





STRAIGHT & THREADED VERSION

SPECIFICATIONS

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

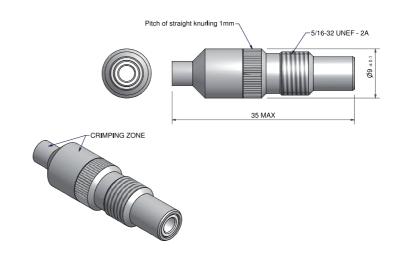
MIL-STD-1344 General environmental tests

ASTM-B-733 or MIL-C-26074 Surface treatment for body and ferrule

MIL-G-45204 Class 1 Surface treatment for contact

MIL-I-23053/5 Insulation sleeving, electrical heat shrinkable, polyolefin flexible crosslinked

ACB) / JK - Jack series



DIMENSIONS in mm

AXON' ACB1 jack threaded connectors series is specifically designed for MIL-STD-1553 B databus application.

Available in threaded coupling 3A, 3B, 3C or 4

These connectors are to be crimped on AWG 24 databus cables.

CHARACTERISTICS

The connector is composed by 4 main pieces:

- > 1 ferrule.
- > 1 body,
- > 1 insulator and
- 1 contact (pin or socket), and 1 additional piece:
- 1 heat shrinkable strain relief.

Identification code

ACB1

JK

01

TYPE OF CONTACT

Т

TYPE OF FERRULE

S34 : straight for cable diameter < 3.4 mm

\$38 : straight for cable diameter between 3.4 and 3.8 mm

Sxx

AXON' CONNECTOR BUS TYPE 1 TYPE OF CONNECTOR JK : jack

CONFIGURATION 01: threaded

TYPE OF

P: pin contact S: socket contact





PARTS	ACTUAL
Body	Brass / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 $\mu m)$
Socket contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 $\mu m)$
Pin contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 $\mu m)$
Ferrule	Copper alloy / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 $\mu m)$
Insulator	PTFE
Shrinkable strain relief	Polyolefin flexible crosslinked in accordance with MIL-I-23053/5

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	8 m Ω maximum
Insulation resistance (sea level) - shield	5 000 MΩ minimum at 500 Vpc
Voltage strength (sea level)	900 V rms maximum
Operating voltage (sea level to 30000 m)	200 V rms maximum

Mechanical and environmental characteristics

PARAMETERS	ACTUAL
Operating temperature	-65°C +150°C (-65°C +125°C if the heat shrinkable strain relief is used)
Jack with ferrule and contact weight	7.5 g maximum
Salt spray	500 hours
Durability (mounting / dismounting)	500 cycles
Vibration	MIL-STD-1344 method 2005, test condition IV 10-2000Hz 20g peak level
Shock	MIL-STD-1344 method 2004, test condition B, Half sine, 75 g, 6 ms duration

Type of cables

PARAMETERS	ACTUAL
Type of cables	All types of AWG 24 twisted shield pair with an outer diameter < 3.8 mm

Contact

This connector will accommodate the following AXON' contacts. See technical data sheets / (see page 97). **PART NUMBER** ACB1 / P Pin contact (male) ACB1 / S Socket contact (female)

Tooling used for crimping the connector on the cable

TYPE OF CONNECTOR	TYPE OF CRIMPING	CRIMPING TOOL	DIE
THE ST CONNECTOR	Contact	M 22520/5-01	AX-CD-02
Straight versions	Straight ferrule	M 22520/5-01	AX-CD-02
	, and the second	IVI ZZJZU/J=U I	AN-0D-02
Crimping according to assembly instructions «CON-1553-GF-27»			





ELBOW & THREADED VERSION

SPECIFICATIONS

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

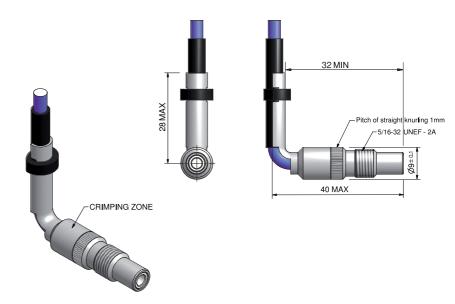
MIL-STD-1344
General environmental tests

ASTM-B-733 or MIL-C-26074 Surface treatment for body and ferrule

MIL-G-45204 Class 1 Surface treatment for contact

MIL-I-23053/5
Insulation sleeving,
electrical heat shrinkable,
polyolefin
flexible crosslinked

ACB1 / JK - Jack series



DIMENSIONS in mm

AXON' ACB1 jack threaded connectors series is specifically designed for MIL-STD-1553 B databus application.

Available in threaded coupling or bayonet coupling 3A, 3B, 3C or 4.

These connectors are to be crimped on AWG 24 databus cables.

CHARACTERISTICS

The connector is composed by 4 main pieces:

- > 1 elbow ferrule,
- > 1 body.
- 1 insulator and
- > 1 contact (pin or socket), and 2 additional pieces:
- > 1 heat shrinkable strain relief.

Identification code

ACB1

CONNECTOR

BUS TYPE 1

AXON'

TVD

TYPE OF CONNECTOR JK: jack

JK

0

TYPE OF CONFIGURATION 01: threaded

TYPE OF

CONTACT P: pin contact

S : socket contact

TYPE OF FERRULE

3.4 and 3.8 mm

R34 : right angle for cable diameter < 3.4 mm R38 : right angle for cable diameter between

Rxx





PARTS	ACTUAL
Body	Brass / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 $\mu m)$
Socket contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 $\mu m)$
Pin contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 $\mu m)$
Ferrule	Copper alloy / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 $\mu m)$
Insulator	PTFE
Shrinkable strain relief	Polyolefin flexible crosslinked in accordance with MIL-I-23053/5

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	$8~\text{m}\Omega$ maximum
Insulation resistance (sea level) - shield	5 000 MΩ minimum at 500 Vpc
Voltage strength (sea level)	900 V rms maximum
Operating voltage (sea level to 30000 m)	200 V rms maximum

Mechanical and environmental characteristics

PARAMETERS	ACTUAL
Operating temperature	-65°C +150°C (-65°C +125°C if the heat shrinkable strain relief is used)
Jack with ferrule and contact weight	9,8 g maximum
Salt spray	500 hours
Durability (mounting / dismounting)	500 cycles
Vibration	MIL-STD-1344 method 2005, test condition IV 10-2000Hz 20g peak level
Shock	MIL-STD-1344 method 2004, test condition B, Half sine, 75g, 6 ms duration

Type of cables

PARAMETERS	ACTUAL
Type of cables	All types of AWG 24 twisted shield pair with an outer diameter < 3.8 mm

Contact

This connector will accommodate the following AXON' contacts. See technical data sheets / (see page 97).

PART NUMBER

DESCRIPTION

ACB1 / P

Pin contact (male)

ACB1 / S

Socket contact (female)

Tooling used for crimping the connector on the cable

M 22520/5-01	AX-CD-03		
	AV-CD-02		
M 22520/5-01	AX-CD-03		
Crimping according to assembly instructions «CON-1553-GF-27»			
	IVI 2232U/3-U I		





STRAIGHT & BAYONET VERSION

SPECIFICATIONS

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

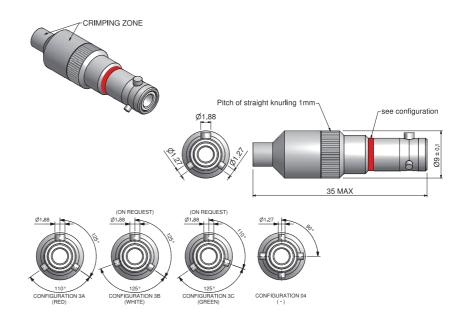
MIL-STD-1344
General environmental tests

ASTM-B-733 or MIL-C-26074 Surface treatment for body and ferrule

MIL-G-45204 Class 1 Surface treatment for contact

MIL-L-23053/5
Insulation sleeving,
electrical heat shrinkable,
polyolefin
flexible crosslinked

ACB) / JK - Jack series



DIMENSIONS in mm

AXON' ACB1 jack bayonet connectors series is specifically designed for MIL-STD-1553 B databus application.

Available in bayonet coupling or bayonet coupling 3A, 3B, 3C or 4.

These connectors are to be crimped on AWG 24 databus cables.

CHARACTERISTICS

The connector is composed by 4 main pieces:

- > 1 ferrule,
- > 1 body,
- > 1 insulator and
- > 1 contact (pin or socket), and 1 additional piece :
- 1 heat shrinkable strain relief.

Identification code

ACB1

CONNECTOR

BUS TYPE 1

AXON'

TYPE OF CONNECTOR JK: jack XX

TYPE OF CONFIGURATION

3A: config 3A / RED **3B**: config 3B / WHITE

3C : config 3C / GREEN **04** : config 04 / -

X

TYPE OF CONTACT

P: pin contact S: socket contact Sxx

TYPE OF FERRULE

S34: straight for cable diameter < 3.4 mm **S38**: straight for cable diameter between 3.4

and 3.8 mm





PARTS	ACTUAL	
Body	Brass / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 $\mu\text{m})$	
Socket contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 µm)	
Pin contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 $\mu m)$	
Ferrule	Copper alloy / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 $\mu m)$	
Insulator	PTFE	
Shrinkable strain relief	Polyolefin flexible crosslinked in accordance with MIL-I-23053/5	

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	8 m Ω maximum
Insulation resistance (sea level)	5 000 M Ω minimum at 500 Vpc
Voltage strength (sea level)	900 V rms maximum
Operating voltage (sea level to 30000 m)	200 V rms maximum

Mechanical and environmental characteristics

PARAMETERS	ACTUAL
Operating temperature	-65°C +150°C (-65°C +125°C if the heat shrinkable strain relief is used)
Jack with ferrule and contact weight	7.5 g maximum
Salt spray	500 hours
Durability (mounting / dismounting)	500 cycles
Vibration	MIL-STD-1344 method 2005, test condition IV 10-2000Hz 20g peak level
Shock	MIL-STD-1344 method 2004, test condition B, Half sine, 75g, 6 ms duration

Type of cables

	PARAMETERS	ACTUAL
Type of cables		All types of AWG 24 twisted shield pair with an outer diameter $<$ 3.8 mm

Contact

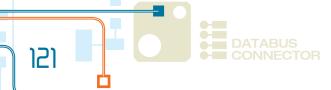
This connector will accommodate the following AXON' contacts. See technical data sheets / (see page 97).

PART NUMB	R DESCRIPTION
ACB1 / P	Pin contact (male)
ACB1 / S	Socket contact (female)

Tooling used for crimping the connector on the cable

TYPE OF CONNECTOR	TYPE OF CRIMPING	CRIMPING TOOL	DIE
Straight versions	Contact	M 22520/5-01	AX-CD-02
	Straight ferrule	M 22520/5-01	AX-CD-02
Crimping according to assembly instructions «CON-1553-GE-27»			





ELBOW & **BAYONET**

SPECIFICATIONS

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

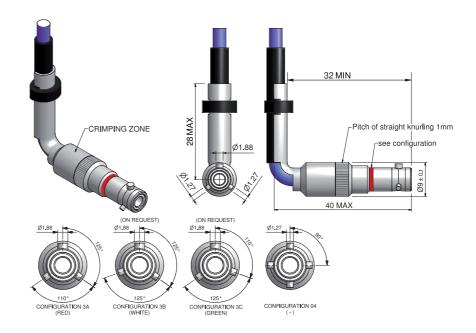
MIL-STD-1344 General environmental tests

ASTM-B-733 or MIL-C-26074 Surface treatment for body and ferrule

MIL-G-45204 Class 1 Surface treatment for contact

MIL-I-23053/5 Insulation sleeving, electrical heat shrinkable, polyolefin flexible crosslinked

ACB) / JK - Jack series



DIMENSIONS in mm

AXON' ACB1 jack bayonet connectors series is specifically designed for MIL-STD-1553 B databus application.

Available in bayonet coupling or bayonet coupling 3A, 3B, 3C or 4.

These connectors are to be crimped on AWG 24 databus cables.

CHARACTERISTICS

The connector is composed by 4 main pieces:

- > 1 elbow ferrule,
- > 1 body,
- > 1 insulator and
- > 1 contact (pin or socket), and 2 additional pieces:
- > 1 heat shrinkable strain relief.

Identification code

ACB1

CONNECTOR

BUS TYPE 1

AXON'

JK

TYPE OF CONNECTOR

JK: jack

XX

TYPE OF CONFIGURATION

3A: config 3A / RED

3B: config 3B / WHITE (on request) 3C : config 3C / GREEN (on request)

04 : config 04 / -

CONTACT

TYPE OF

S: socket contact

P: pin contact

Rxx

TYPE OF FERRULE R34: right angle for cable $diameter < 3.4 \ mm$

R38: right angle for cable diameter between 3.4 and 3.8 mm





PARTS	ACTUAL	
Body	Brass / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 $\mu m)$	
Socket contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 $\mu m)$	
Pin contact	Copper alloy / gold plating in accordance with MIL-G-45204 CLASS 1 (>1.27 $\mu m)$	
Ferrule	Copper alloy / Electroless nickel plating according to ASTM-B-733 (5 \pm 1 $\mu m)$	
Insulator	PTFE	
Shrinkable strain relief	Polyolefin flexible crosslinked in accordance with MIL-I-23053/5	

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	8 m Ω maximum
Insulation resistance (sea level)	5 000 M Ω minimum at 500 Vpc
Voltage strength (sea level)	900 V rms maximum
Operating voltage (sea level to 30000 m)	200 V rms maximum

Mechanical and environmental characteristics

PARAMETERS	ACTUAL
Operating temperature	-65°C +150°C (-65°C +125°C if the heat shrinkable strain relief is used)
Jack with ferrule and contact weight	9,8 g maximum
Salt spray	500 hours
Durability (mounting / dismounting)	500 cycles
Vibration	MIL-STD-1344 method 2005, test condition IV 10-2000Hz 20g peak level
Shock	MIL-STD-1344 method 2004, test condition B, Half sine, 75g, 6 ms duration

Type of cables

PARAMETERS	ACTUAL
Type of cables	All types of AWG 24 twisted shield pair with an outer diameter < 3.8 mm

Contact

This connector will accommodate the following AXON' contacts. See technical data sheets / (see page 97).

	ý .	, ,	
PART NUMBER		DESCRIPTION	
ACB1 / P		Pin contact (male)	
ACB1 / S		Socket contact (female)	

Tooling used for crimping the connector on the cable

TYPE OF CONNECTOR	TYPE OF CRIMPING	CRIMPING TOOL	DIE
Swont albow connectors	Contact	M 22520/5-01	AX-CD-03
Swept elbow connectors	Swept elbow ferrule	M 22520/5-01	AX-CD-03
	•		

Crimping according to assembly instructions «CON-1553-GF-27»

A tie-wrap or a lacing lane can be used to maintain the cable onto the ferrule. These items can be provided upon request

