ACB 1 databus connectors

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.

Advantages

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.

ACB1 DATABUS CONNECTOR

Pin and socket contact

for ACB1 connectors

SPECIFICATIONS

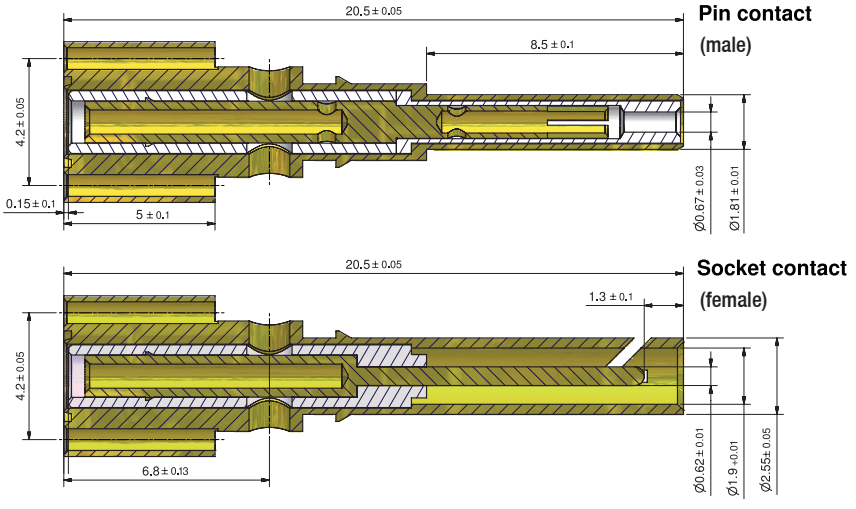
MIL-STD-1553B
Digital time division command/ response multiplex databus

MIL-STD-1344
General environmental tests

ASTM-B-196
Material for contact

MIL-G-45204 Class 1
Surface treatment for contact

ACB1 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

ACB1	X
AXON' CONNECTOR BUS TYPE 1	**TYPE OF CONTACT** **P :** pin contact **S :** socket contact

Materials and surface treatment

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 MΩ minimum at 500 VDC
Dielectric withstanding voltage : - between inner and outer contacts (sea level)	900 V rms maximum
Contact resistance	8 mΩ 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»

Databus connector

STRAIGHT & THREADED VERSION

ACB1 / BK - bulkhead jack series

SPECIFICATIONS

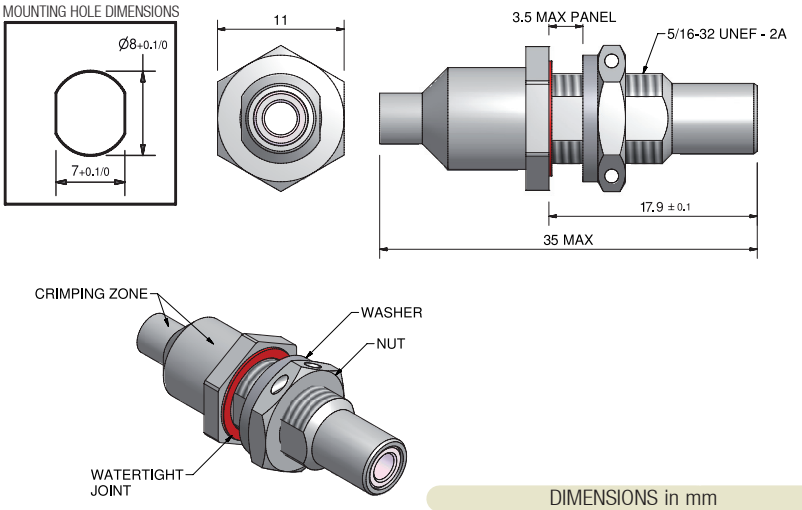
MIL-STD-1553B
Digital time division command/ response multiplex databus

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



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	BK	01	X	Sxx
AXON' CONNECTOR BUS TYPE 1	**TYPE OF CONNECTOR** **BK :** bulkhead jack	**TYPE OF CONFIGURATION** **01 :** threaded	**TYPE OF CONTACT** **P :** pin contact **S :** socket contact	**TYPE OF FERRULE** **S34** : straight for cable diameter < 3.4 mm **S38** : straight for cable diameter between 3.4 and 3.8 mm

Materials and surface treatment

PARTS	ACTUAL
Body	Brass / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
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)
Ferrule	Copper alloy / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
Insulator	PTFE
Shrinkable strain relief	Polyolefin flexible crosslinked in accordance with MIL-I-23053/5

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	8 mΩ maximum
Insulation resistance (sea level)	5 000 MΩ 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)
Bulkhead jack with ferrule and contact weight	9 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
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»

Databus connector

ELBOW & THREADED VERSION

ACB1 / BK - bulkhead jack series

SPECIFICATIONS

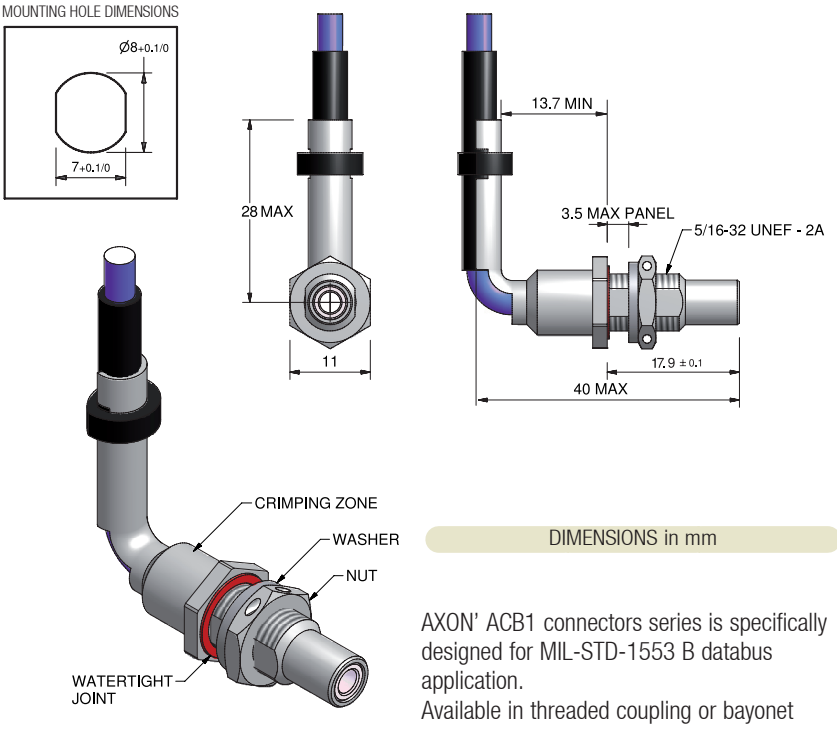
MIL-STD-1553B
Digital time division command/ response
multiplex databus

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



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	BK	01	X	Rxx
AXON' CONNECTOR BUS TYPE 1	**TYPE OF CONNECTOR** **BK :** bulkhead jack	**TYPE OF CONFIGURATION** **01** : threaded	**TYPE OF CONTACT** **P :** pin contact **S :** socket contact	**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

Materials and surface treatment

PARTS	ACTUAL
Body	Brass / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
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)
Ferrule	Copper alloy / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
Insulator	PTFE
Shrinkable strain relief	Polyolefin flexible crosslinked in accordance with MIL-I-23053/5

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	8 mΩ maximum
Insulation resistance (sea level)	5 000 MΩ 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 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
Swept elbow connectors	Contact	M 22520/5-01	AX-CD-03
	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

Databus connector

STRAIGHT & BAYONET VERSION

ACB1 / BK - bulkhead jack series

SPECIFICATIONS

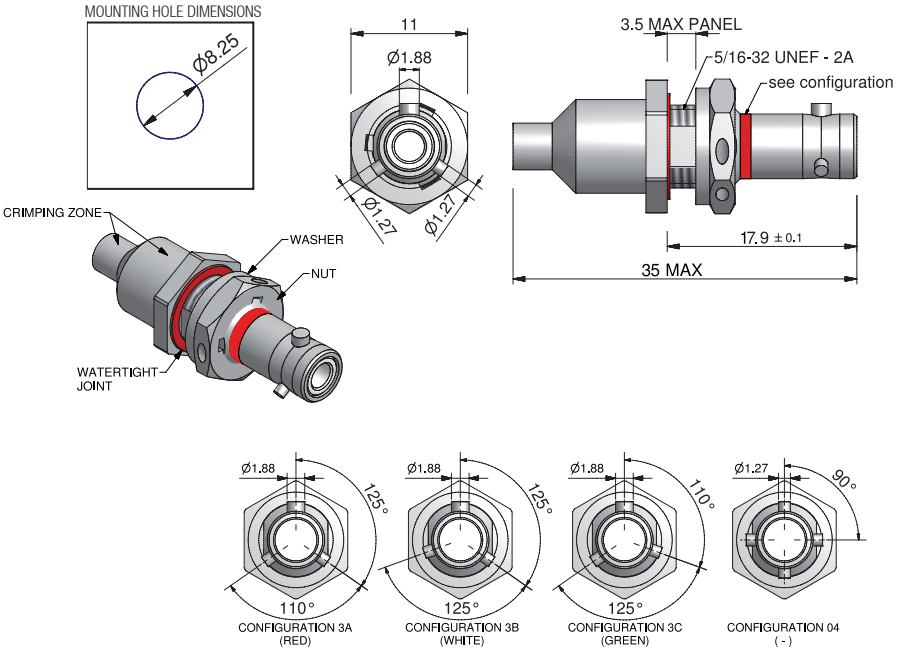
MIL-STD-1553B
Digital time division command/ response multiplex databus

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



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	BK	XX	X	Sxx
AXON' CONNECTOR BUS TYPE 1	**TYPE OF CONNECTOR** **BK :** bulkhead jack	**TYPE OF CONFIGURATION** **3A** : config 3A / RED **3B** : config 3B / WHITE **3C** : config 3C / GREEN **04** : config 04 / -	**TYPE OF CONTACT** **P :** pin contact **S :** socket contact	**TYPE OF FERRULE** **S34** : straight for cable diameter < 3.4 mm **S38** : straight for cable diameter between 3.4 and 3.8 mm

Materials and surface treatment

PARTS	ACTUAL
Body	Brass / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
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)
Ferrule	Copper alloy / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
Insulator	PTFE
Shrinkable strain relief	Polyolefin flexible crosslinked in accordance with MIL-I-23053/5

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	8 mΩ maximum
Insulation resistance (sea level)	5 000 MΩ 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)
Bulkhead jack with ferrule and contact weight	9 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

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»

Databus connector

ELBOW & BAYONET VERSION

ACB1 / BK - bulkhead jack series

SPECIFICATIONS

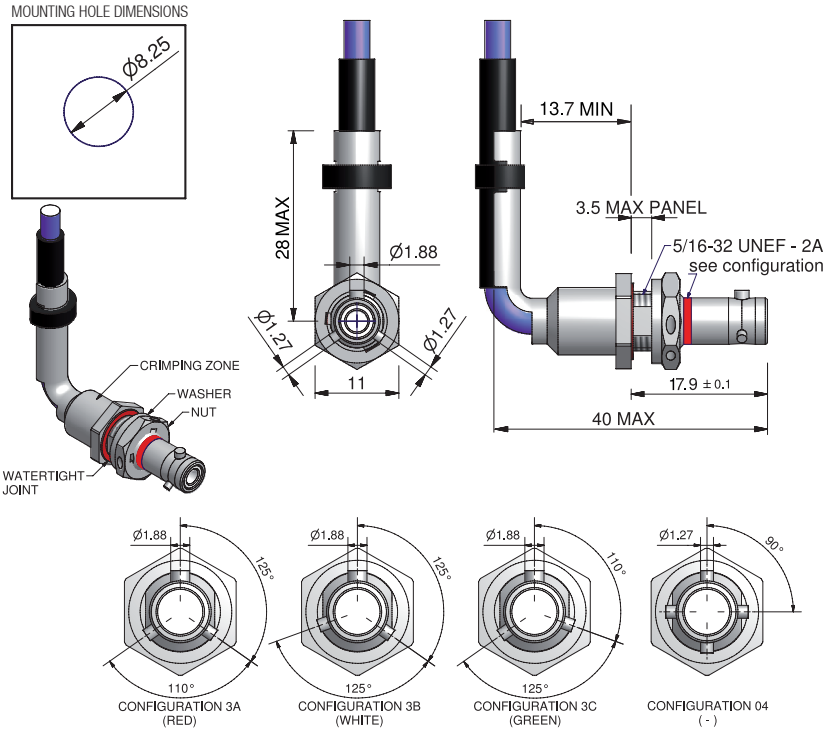
MIL-STD-1553B
Digital time division command/ response multiplex databus

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



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	BK	XX	X	Rxx
AXON' CONNECTOR BUS TYPE 1	**TYPE OF CONNECTOR** **BK :** bulkhead jack	**TYPE OF CONFIGURATION** **3A** : config 3A / RED **3B** : config 3B / WHITE **3C** : config 3C / GREEN **04** : config 04 / -	**TYPE OF CONTACT** **P :** pin contact **S :** socket contact	**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

Materials and surface treatment

PARTS	ACTUAL
Body	Brass / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
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)
Ferrule	Copper alloy / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
Insulator	PTFE
Shrinkable strain relief	Polyolefin flexible crosslinked in accordance with MIL-I-23053/5

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	8 mΩ maximum
Insulation resistance (sea level)	5 000 MΩ 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)
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
Swept elbow connectors	Contact	M 22520/5-01	AX-CD-03
	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

Databus connector

STRAIGHT & THREADED VERSION

ACB1 / PG - Plug series

SPECIFICATIONS

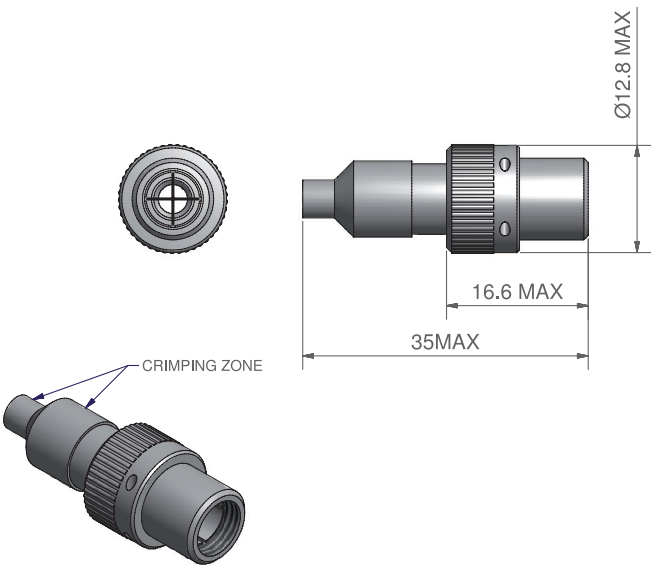
MIL-STD-1553B
Digital time division command/ response
multiplex databus

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



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	01	X	Sxx
AXON' CONNECTOR BUS TYPE 1	**TYPE OF CONNECTOR** **PG :** plug	**TYPE OF CONFIGURATION** **01 :** threaded	**TYPE OF CONTACT** **P :** pin contact **S :** socket contact	**TYPE OF FERRULE** **S34** : straight for cable diameter < 3.4 mm **S38** : straight for cable diameter between 3.4 and 3.8 mm

Materials and surface treatment

PARTS	ACTUAL
Body	Brass / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
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)
Ferrule	Copper alloy / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
Insulator	PTFE
Shrinkable strain relief	Polyolefin flexible crosslinked in accordance with MIL-I-23053/5

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	8 mΩ maximum
Insulation resistance (sea level)	5 000 MΩ 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 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).

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»

Databus connector

ELBOW & THREADED VERSION

ACB1 / PG - Plug series

SPECIFICATIONS

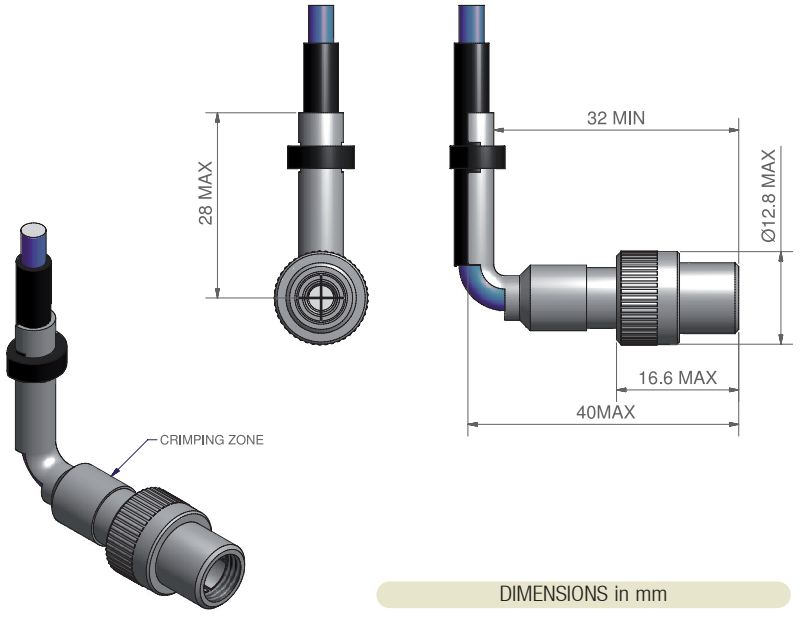
MIL-STD-1553B
Digital time division command/ response multiplex databus

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



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

and 1 additional piece :
- 1 heat shrinkable strain relief.

Identification code

ACB1	PG	01	X	Rxx
AXON' CONNECTOR BUS TYPE 1	**TYPE OF CONNECTOR** **PG :** plug	**TYPE OF CONFIGURATION** **01** : threaded	**TYPE OF CONTACT** **P :** pin contact **S :** socket contact	**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

Materials and surface treatment

PARTS	ACTUAL
Body	Brass / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
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)
Ferrule	Copper alloy / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
Insulator	PTFE
Shrinkable strain relief	Polyolefin flexible crosslinked in accordance with MIL-I-23053/5

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	8 mΩ maximum
Insulation resistance (sea level)	5 000 MΩ 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	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 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
Swept elbow connectors	Contact	M 22520/5-01	AX-CD-03
	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

Databus connector

STRAIGHT & BAYONET VERSION

ACB1 / PG - Plug series

SPECIFICATIONS

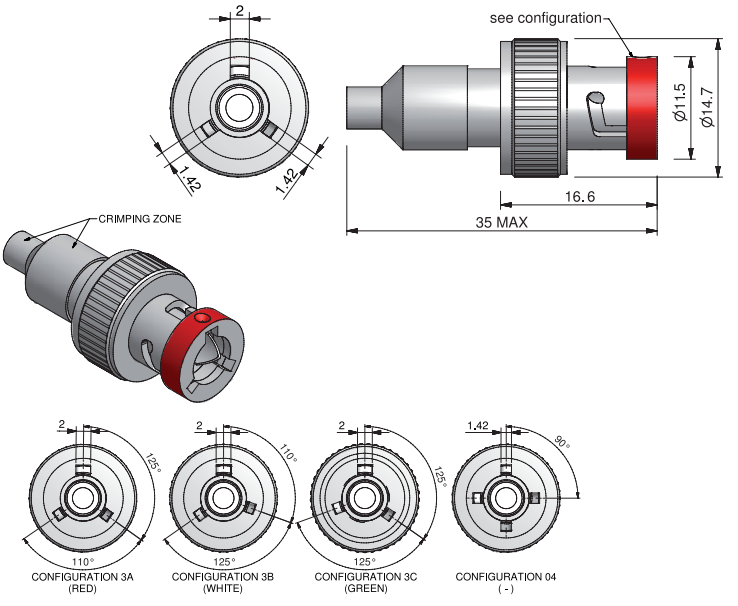
MIL-STD-1553B
Digital time division command/ response multiplex databus

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



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	PG	XX	X	Sxx
AXON' CONNECTOR BUS TYPE 1	**TYPE OF CONNECTOR** **PG :** plug	**TYPE OF CONFIGURATION** **3A** : config 3A / RED **3B** : config 3B / WHITE **3C** : config 3C / GREEN **04** : config 04 / -	**TYPE OF CONTACT** **P :** pin contact **S :** socket contact	**TYPE OF FERRULE** **S34** : straight for cable diameter < 3.4 mm **S38** : straight for cable diameter between 3.4 and 3.8 mm

Materials and surface treatment

PARTS	ACTUAL
Body	Brass / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
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)
Ferrule	Copper alloy / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
Insulator	PTFE
Shrinkable strain relief	Polyolefin flexible crosslinked in accordance with MIL-I-23053/5

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	8 mΩ maximum
Insulation resistance (sea level)	5 000 MΩ 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
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»

Databus connector

ELBOW & BAYONET VERSION

ACB1 / PG - Plug series

SPECIFICATIONS

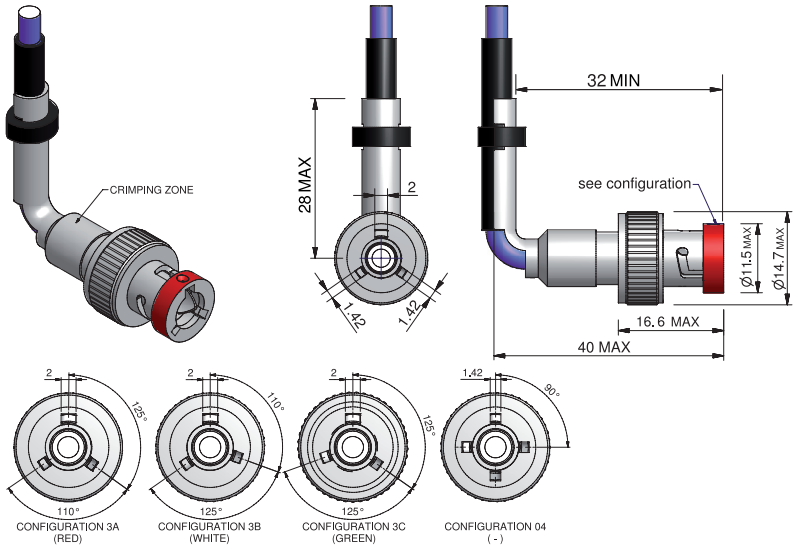
MIL-STD-1553B
Digital time division command/ response multiplex databus

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



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	PG	XX	X	Rxx
AXON' CONNECTOR BUS TYPE 1	**TYPE OF CONNECTOR** **PG :** Plug	**TYPE OF CONFIGURATION** **3A** : config 3A / RED **3B** : config 3B / WHITE **3C** : config 3C / GREEN **04** : config 04 / -	**TYPE OF CONTACT** **P :** pin contact **S :** socket contact	**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

Materials and surface treatment

PARTS	ACTUAL
Body	Brass / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
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)
Ferrule	Copper alloy / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
Insulator	PTFE
Shrinkable strain relief	Polyolefin flexible crosslinked in accordance with MIL-I-23053/5

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	8 mΩ maximum
Insulation resistance (sea level)	5 000 MΩ 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	15.8 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

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

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

Databus connector

STRAIGHT & THREADED VERSION

ACB1 / JK - Jack series

SPECIFICATIONS

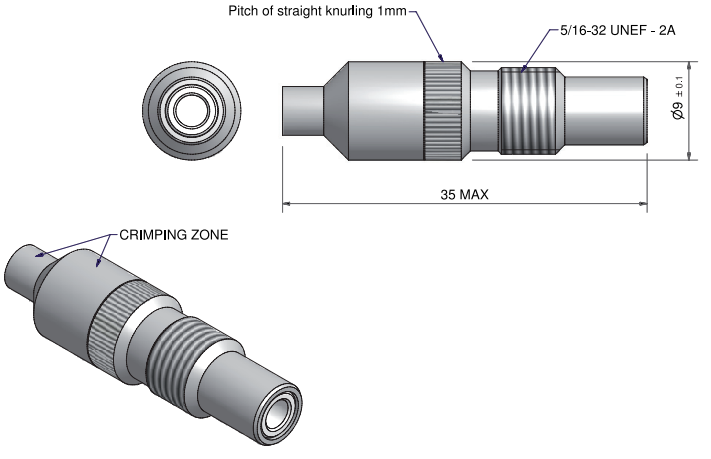
MIL-STD-1553B
Digital time division command/ response multiplex databus

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



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	X	Sxx
AXON' CONNECTOR BUS TYPE 1	**TYPE OF CONNECTOR** **JK :** jack	**TYPE OF CONFIGURATION** **01 :** threaded	**TYPE OF CONTACT** **P :** pin contact **S :** socket contact	**TYPE OF FERRULE** **S34** : straight for cable diameter < 3.4 mm **S38** : straight for cable diameter between 3.4 and 3.8 mm

Materials and surface treatment

PARTS	ACTUAL
Body	Brass / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
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)
Ferrule	Copper alloy / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
Insulator	PTFE
Shrinkable strain relief	Polyolefin flexible crosslinked in accordance with MIL-I-23053/5

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	8 mΩ maximum
Insulation resistance (sea level) - shield	5 000 MΩ 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)
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	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»

Databus connector

ELBOW & THREADED VERSION

ACB1 / JK - Jack series

SPECIFICATIONS

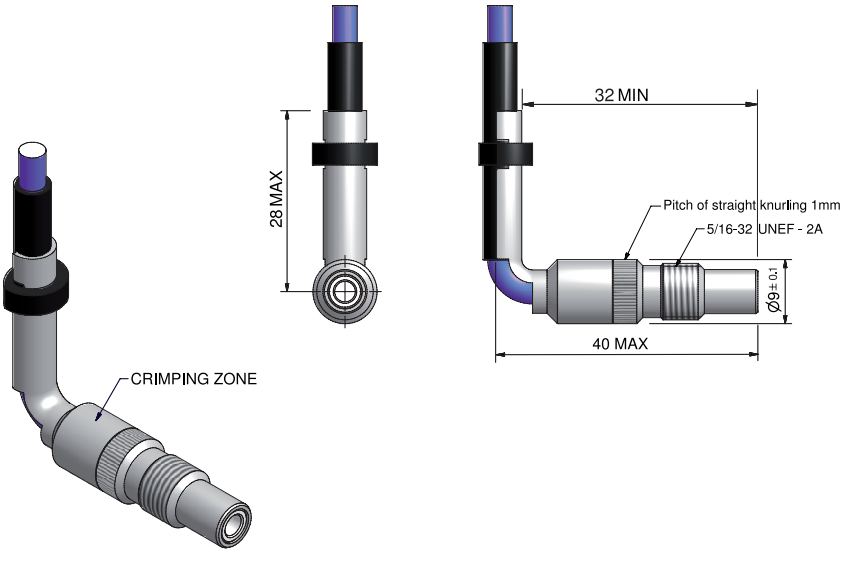
MIL-STD-1553B
Digital time division command/ response
multiplex databus

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



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	JK	01	X	Rxx
AXON' CONNECTOR BUS TYPE 1	**TYPE OF CONNECTOR** **JK :** jack	**TYPE OF CONFIGURATION** **01** : threaded	**TYPE OF CONTACT** **P :** pin contact **S :** socket contact	**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

Materials and surface treatment

PARTS	ACTUAL
Body	Brass / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
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)
Ferrule	Copper alloy / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
Insulator	PTFE
Shrinkable strain relief	Polyolefin flexible crosslinked in accordance with MIL-I-23053/5

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	8 mΩ maximum
Insulation resistance (sea level) - shield	5 000 MΩ 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)
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

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

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

Databus connector

STRAIGHT & BAYONET VERSION

ACB1 / JK - Jack series

SPECIFICATIONS

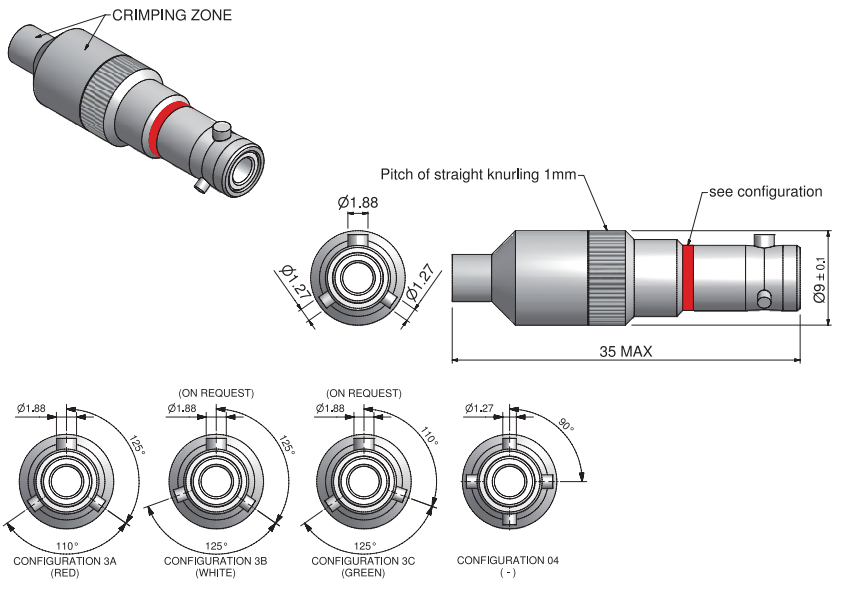
MIL-STD-1553B
Digital time division command/ response
multiplex databus

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



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	JK	XX	X	Sxx
AXON' CONNECTOR BUS TYPE 1	**TYPE OF CONNECTOR** **JK :** jack	**TYPE OF CONFIGURATION** **3A** : config 3A / RED **3B** : config 3B / WHITE **3C** : config 3C / GREEN **04** : config 04 / -	**TYPE OF CONTACT** **P :** pin contact **S :** socket contact	**TYPE OF FERRULE** **S34** : straight for cable diameter < 3.4 mm **S38** : straight for cable diameter between 3.4 and 3.8 mm

Materials and surface treatment

PARTS	ACTUAL
Body	Brass / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
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)
Ferrule	Copper alloy / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
Insulator	PTFE
Shrinkable strain relief	Polyolefin flexible crosslinked in accordance with MIL-I-23053/5

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	8 mΩ maximum
Insulation resistance (sea level)	5 000 MΩ 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)
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 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»

Databus connector

ELBOW & BAYONET VERSION

ACB1 / JK - Jack series

SPECIFICATIONS

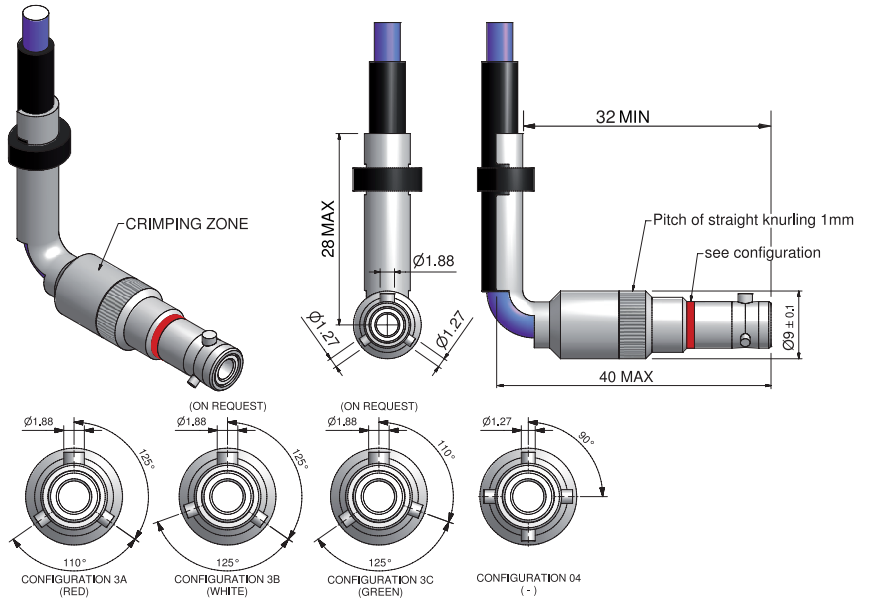
MIL-STD-1553B
Digital time division command/ response
multiplex databus

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



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	JK	XX	X	Rxx
AXON' CONNECTOR BUS TYPE 1	**TYPE OF CONNECTOR** **JK :** jack	**TYPE OF CONFIGURATION** **3A** : config 3A / RED **3B** : config 3B / WHITE (on request) **3C** : config 3C / GREEN (on request) **04** : config 04 / -	**TYPE OF CONTACT** **P :** pin contact **S :** socket contact	**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

Materials and surface treatment

PARTS	ACTUAL
Body	Brass / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
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)
Ferrule	Copper alloy / Electroless nickel plating according to ASTM-B-733 (5 ± 1 µm)
Insulator	PTFE
Shrinkable strain relief	Polyolefin flexible crosslinked in accordance with MIL-I-23053/5

Electrical characteristics

PARAMETERS	ACTUAL
Contact resistance	8 mΩ maximum
Insulation resistance (sea level)	5 000 MΩ 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)
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

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