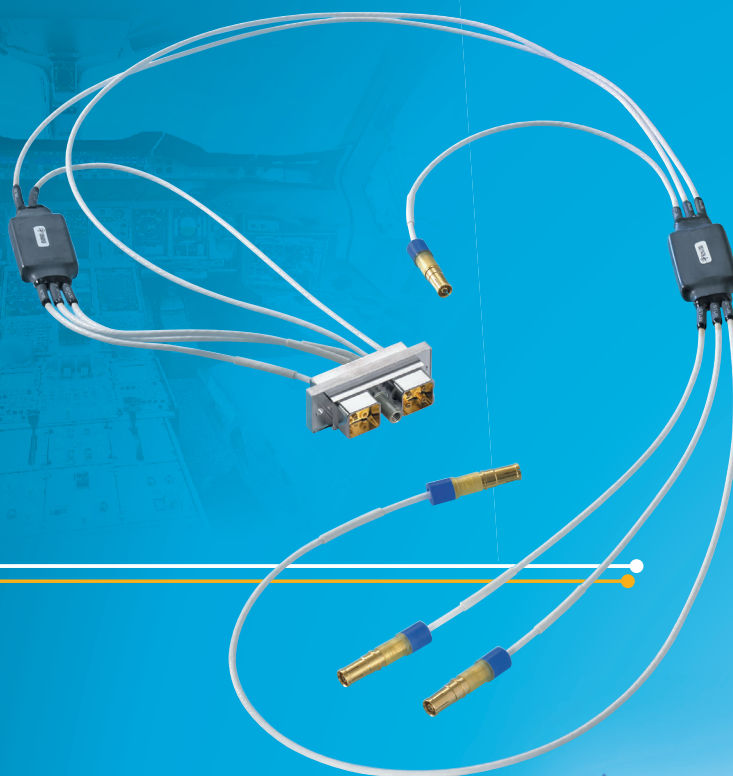


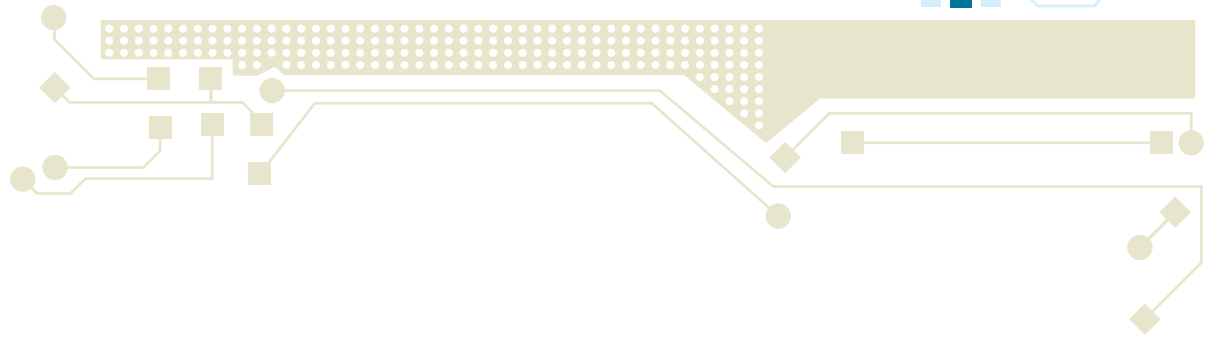


ACC couplers

MIL-STD-1553
Databus products
for aeronautics applications



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ACC couplers

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THIS CATALOGUE IS INTENDED AS A GUIDE TO AID SELECTION OF AXON' PRODUCTS.
THE INFORMATION IN THIS CATALOGUE IS ACCURATE TO THE BEST OF OUR KNOWLEDGE AT TIME OF GOING TO PRINT,
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CHANGES AND MODIFICATIONS CAN BE MADE TO THIS BROCHURE AT ANY TIME WITHOUT PRIOR NOTICE.



ACC couplers

More flexibility for the databus designer
AXON' has developed a new concept of coupler which enables customers to build their Bus network for on-board equipment for themselves. This is an ideal solution covering the various options of space modelling, maintenance and service equipment. This coupler provides flexibility to the databus designer. It meets the MIL-STD-1553B standard.

Advantages of AXON' crimp Couplers (ACC)

- › Standard components : the coupler (1 to 4 stubs), the connector, the terminator, the cable and accessories are offered as standard off the shelf components that the customer can order in kit form (even before the definition of the network).
- › Easy assembling : the cable is first crimped to the connectors, which are in turn mated to the coupler. The whole harness is then integrated into the on-board equipment : the coupler can be either laced directly into the wire bundles or else fixed to the structure with adhesive tape or cable ties.
- › Easy to change damaged harness branches.
- › Flexible solution for the data bus designer: it is very easy to modify the network topology.
- › The Cabling Coupler can replace a damaged inline coupler as both are designed to meet the same environmental requirements (according to EN3567).
- › Dismountable and lightweight : the Cabling Coupler has all the advantages of both inline couplers (see page 12) and dismountable couplers (see page 42) but with none of the drawbacks.
- › AXON' is able to do a network simulation from the design.
- › AXON' offers a portable test bench to test the network in site (see page 140).



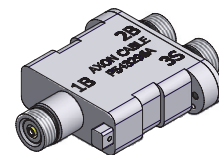
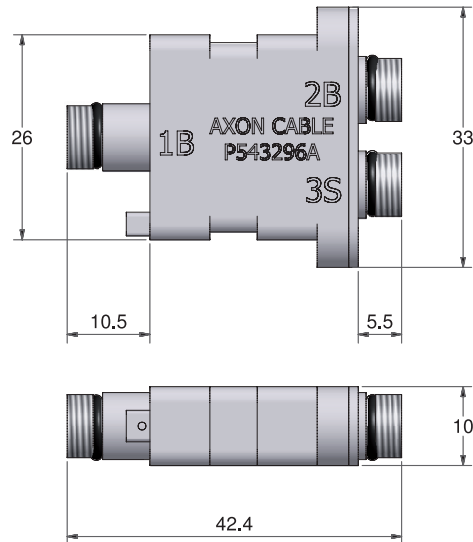
ACC COUPLER

1 way ACC coupler

SPECIFICATIONS

MIL-STD-1553B
[STANAG 3838]
EN-3567-001
SAE AS 4115

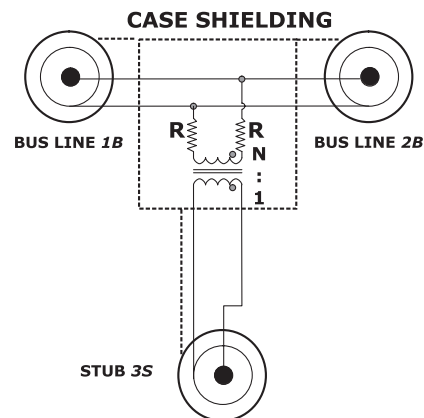
ACC / A - C1



DIMENSIONS in mm

Electrical scheme

$N = 1.41 \pm 3\%$
R = fault protection resistor
 $R = 0.75 Z_0 = 57.6 \Omega \pm 1\%$



Identification code

ACC

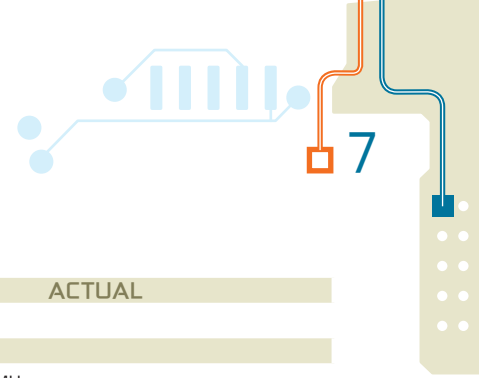
AXON'
CRIMPABLE
COUPLER

A

A : AERONAUTICS VERSION
(for space applications, please contact us)

C1

ONE WAY COUPLER



Electrical characteristics

PARAMETERS	REQUIRED	ACTUAL
Nominal line impedance (*)	70 to 84 Ω	70 to 84 Ω
Turn ratio	$\sqrt{2} \pm 3 \%$	$\sqrt{2} \pm 3 \%$
CMR	< -45 dB at 1 MHz	< -45 dB at 1 MHz
Input impedance	> 3000 Ω in the frequency range (75 KHz to 1 MHz) and in the indicated temp. range (-65°C to 150°C)	> 3000 Ω
Fault protection insulation resistors in series on each bus winding connection	0.75 $Z_0 \pm 2 \%$	57.6 $\Omega \pm 1 \%$
Insulation resistance between : - bus line / stub line - inner conductors / shield	> 1000 M Ω at 250 Vdc > 1000 M Ω at 500 Vdc	> 1 000 M Ω at 250 Vdc > 1 000 M Ω at 500 Vdc
Shield continuity	< 20 m Ω	< 20 m Ω
Shield coverage	Connection 75 %	Connection 100 %
Dielectric withstanding strength : - between shield and inner conductors	500 V rms	500 V rms

(*) Impedance : seen from the stub when the bus line is loaded with Z_0 at both sides of the coupler.

Mechanical and environmental characteristics

PARAMETERS	REQUIRED	ACTUAL
Operating temperature	-65°C to +150°C	-65°C to +150°C
Mass of the coupler without connector	20.5 g maximum	20.5 g maximum
Mass of the connector	5 g maximum	5 g maximum
Vibration and shock resistance : - random vibrations - gunfire vibrations - mechanical shocks	44 g rms, 8 hours in all directions 49 g rms 30 g half sine, 3 ms	44 g rms, 8 hours in all directions 49 g rms 30 g, half sine, 3 ms
Low pressure resistance	11 mbars	11 mbars
Tensile strength of a mated branch	70 N (*) with twinax bus 71 databus cable	70 N (*) with twinax bus 71 databus cable
Sealing	-	IP55
Life test	1000 hours at +127°C	1000 hours at +127°C Bus operating with MIL-STD-1553B signal
Thermal test	-65°C to +150°C, 10 cycles	-65°C to +150°C, 10 cycles of 1 hour
Good resistance to onboard fluids and to salt spray (up to 500 hours)		
MTBF available following MIL-HDBK 217 (environment and operating temperature to be specified)		
(*) the value of tensile strength depends on the cable construction (please consult us).		

Transformer characteristics

PARAMETERS	REQUIRED VALUES (MIL-STD-1553 or SAE AS 4115)	NOMINAL VALUES OR AXON' REQUIRED VALUES	
		NOMINAL VALUES	REQUIRED BY AXON' / QUALITY PLAN
Curie point	-	-	Over 195°C
Turn ratio	$\sqrt{2} \pm 3 \%$	$\sqrt{2} \pm 3 \%$	$\sqrt{2} \pm 3 \%$
Secondary DC resistance	$R_s < 5 \Omega$	$R_s = 2 \Omega$	$R_s < 2.5 \Omega$
Insulation resistance (winding to winding)	$R_i > 100 M\Omega$	-	$R_i > 1 000 M\Omega$ with a 250 Vdc test voltage
Primary open circuit impedance (from 75 kHz to 1 MHz)	$ Z > 3 k\Omega$ on full temperature operating range	$ Z > 10 k\Omega$ at 25°C $ Z > 4.8 k\Omega$ at -65°C $ Z > 4 k\Omega$ at -85°C	$ Z \geq 9.4 k\Omega$ at 25°C (***)
Primary parallel inductance	-	$L_p = 22 mH$	$L_p \geq 20 mH$
Primary parallel capacitance	-	$C_p = 10 pF$	$C_p \leq 11.4 pF$
Inter-winding capacitance	-	$C_i = 45 pF$	-
Primary leakage inductance	-	-	$L_f \leq 6 \mu H$
Droop (*)	$D < 20 \%$	$D = 4.5 \%$ (**)	$D < 20 \%$
Overshoot and ringing (*)	$0 < \pm 1 V$	$0 = 0.3 V$ (**)	$0 < \pm 1 V$

JN 1081 approved DDP-J-403-A-0222

(*) Tested with a 250 kHz square wave of 27 Vpp with 100ns rise and fall times through a $360 \pm 5 \Omega$ resistor.

(**) Average values taken during the JN 1081N qualification. - (***) 9.4 k Ω at 25°C guarantees 3 k Ω minimum from -65°C to 150°C

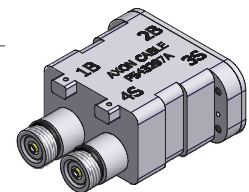
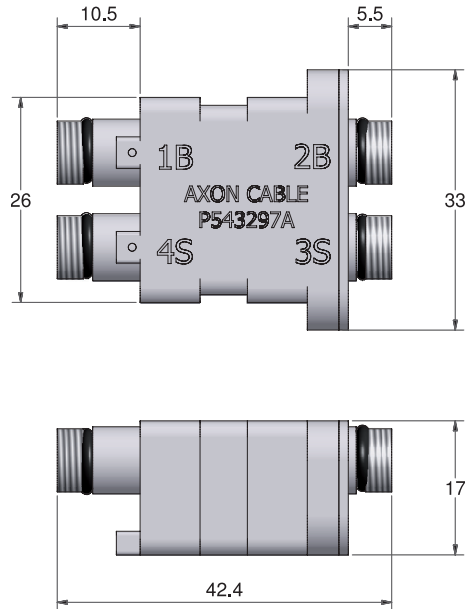


2 way ACC coupler

SPECIFICATIONS

MIL-STD-1553B
[STANAG 3838]
EN-3567-001
SAE AS 4115

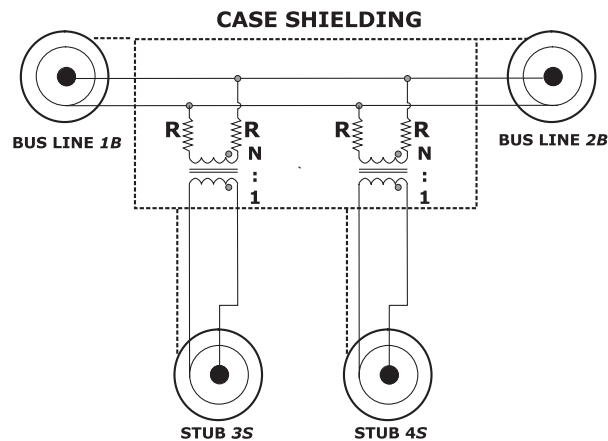
ACC / A - C2



DIMENSIONS in mm

Electrical scheme

$N = 1.41 \pm 3\%$
R = fault protection resistor
 $R = 0.75 Z_0 = 57.6 \Omega \pm 1\%$



Identification code

ACC

AXON'
CRIMPABLE
COUPLER

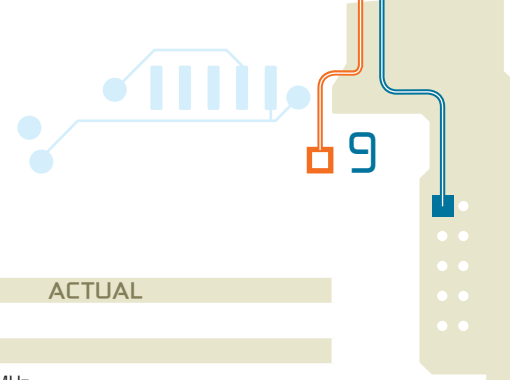
A

A : AERONAUTICS
VERSION
(for space applications, please contact us)

C2

TWO WAY COUPLER

NOTE : POSSIBILITY TO INTEGRATE A BUS TERMINATOR (77 Ω) INSIDE THE COUPLER. In this case, there is only one connector on the bus line.
For instance, ADB-R21-XX is a coupler with a bus connector, three stub connectors and a terminator inside the housing.



Electrical characteristics

PARAMETERS	REQUIRED	ACTUAL
Nominal line impedance (*)	70 to 84 Ω	70 to 84 Ω
Turn ratio	$\sqrt{2} \pm 3\%$	$\sqrt{2} \pm 3\%$
CMR	< -45 dB at 1 MHz	< -45 dB at 1 MHz
Input impedance	> 1500 Ω in the frequency range (75 KHz to 1 MHz) and in the indicated temp. range (-65°C to 150°C)	> 1500 Ω
Fault protection insulation resistors in series on each bus winding connection	0.75 $Z_0 \pm 2\%$	57.6 $\Omega \pm 1\%$
Insulation resistance between : - bus line / stub line - inner conductors / shield	> 1000 M Ω at 250 Vdc > 1000 M Ω at 500 Vdc	> 1 000 M Ω at 250 Vdc > 1 000 M Ω at 500 Vdc
Shield continuity	< 20 m Ω	< 20 m Ω
Shield coverage	Connection 75 %	Connection 100 %
Dielectric withstanding strength : - between shield and inner conductors	500 V rms	500 V rms

(*) Impedance : seen from the stub when the bus line is loaded with Z_0 at both sides of the coupler.

Mechanical and environmental characteristics

PARAMETERS	REQUIRED	ACTUAL
Operating temperature	-65°C to +150°C	-65°C to +150°C
Mass of the coupler without connector	32.5 g maximum	32.5 g maximum
Mass of the connector	5 g maximum	5 g maximum
Vibration and shock resistance : - random vibrations - gunfire vibrations - mechanical shocks	44 g rms, 8 hours in all directions 49 g rms 30 g half sine, 3 ms	44 g rms, 8 hours in all directions 49 g rms 30 g, half sine, 3 ms
Low pressure resistance	11 mbars	11 mbars
Tensile strength of a mated branch	70 N (*) with twinax bus 71 databus cable	70 N (*) with twinax bus 71 databus cable
Sealing	-	IP55
Life test	1000 hours at +127°C	1000 hours at +127°C Bus operating with MIL-STD-1553B signal
Thermal test	-65°C to +150°C, 10 cycles	-65°C to +150°C, 10 cycles of 1 hour
Good resistance to onboard fluids and to salt spray (up to 500 hours)		
MTBF available following MIL-HDBK 217 (environment and operating temperature to be specified)		
(*) the value of tensile strength depends on the cable construction (please consult us).		

Transformer characteristics

PARAMETERS	REQUIRED VALUES (MIL-STD-1553 or SAE AS 4115)	NOMINAL VALUES OR AXON' REQUIRED VALUES	
		NOMINAL VALUES	REQUIRED BY AXON' / QUALITY PLAN
Curie point	-	-	Over 195°C
Turn ratio	$\sqrt{2} \pm 3\%$	$\sqrt{2} \pm 3\%$	$\sqrt{2} \pm 3\%$
Secondary DC resistance	$R_s < 5 \Omega$	$R_s = 2 \Omega$	$R_s < 2.5 \Omega$
Insulation resistance (winding to winding)	$R_i > 100 M\Omega$	-	$R_i > 1 000 M\Omega$ with a 250 Vdc test voltage
Primary open circuit impedance (from 75 kHz to 1 MHz)	$ Z > 3 k\Omega$ on full temperature operating range	$ Z > 10 k\Omega$ at 25°C $ Z > 4.8 k\Omega$ at -65°C $ Z > 4 k\Omega$ at -85°C	$ Z \geq 9.4 k\Omega$ at 25°C (***)
Primary parallel inductance	-	$L_p = 22 mH$	$L_p \geq 20 mH$
Primary parallel capacitance	-	$C_p = 10 pF$	$C_p \leq 11.4 pF$
Inter-winding capacitance	-	$C_i = 45 pF$	-
Primary leakage inductance	-	-	$L_f \leq 6 \mu H$
Droop (*)	$D < 20\%$	$D = 4.5\%$ (**)	$D < 20\%$
Overshoot and ringing (*)	$0 < \pm 1 V$	$0 = 0.3 V$ (**)	$0 < \pm 1 V$

JN 1081 approved DDP-J-403-A-0222 -

(*) Tested with a 250 kHz square wave of 27 Vpp with 100ns rise and fall times through a $360 \pm 5\% \Omega$ resistor.

(**) Average values taken during the JN 1081N qualification. - (***) 9.4 k Ω at 25°C guarantees 3 k Ω minimum from -65°C to 150°C

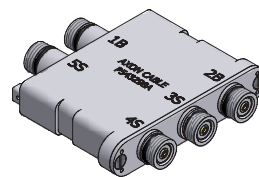
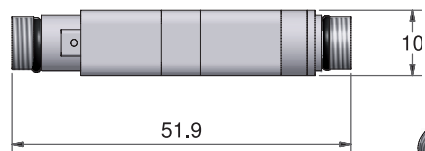
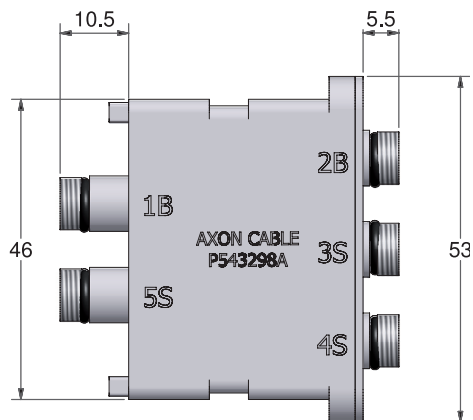


3 way ACC coupler

SPECIFICATIONS

MIL-STD-1553B
[STANAG 3838]
EN-3567-001
SAE AS 4115

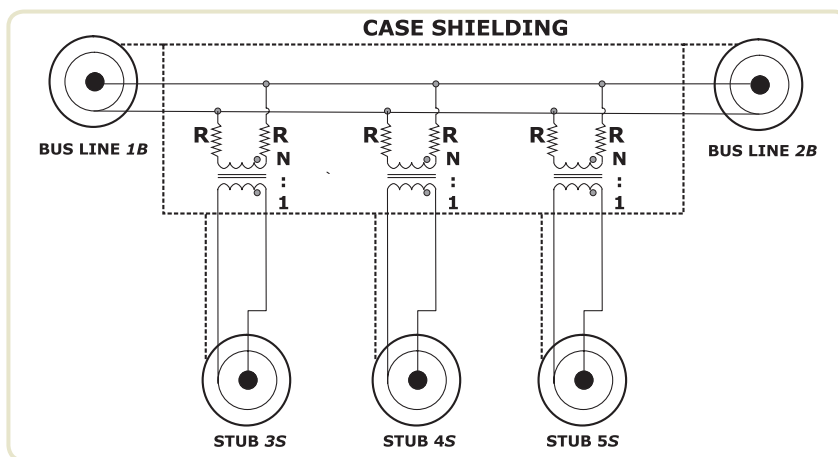
ACC / A - C3



DIMENSIONS in mm

Electrical scheme

$N = 1.41 \pm 3\%$
R = fault protection resistor
 $R = 0.75 Z_0 = 57.6 \Omega \pm 1\%$



Identification code

ACC

AXON'
CRIMPABLE
COUPLER

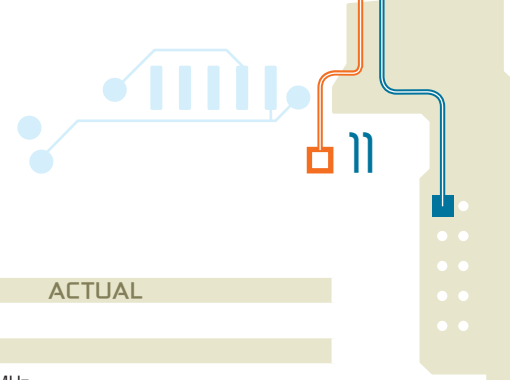
A

A : AERONAUTICS
VERSION
(for space applications, please contact us)

C3

THREE WAY COUPLER

NOTE : POSSIBILITY TO INTEGRATE A BUS TERMINATOR (77 Ω) INSIDE THE COUPLER. In this case, there is only one connector on the bus line.
For instance, ADB-R21-XX is a coupler with a bus connector, three stub connectors and a terminator inside the housing.



Electrical characteristics

PARAMETERS	REQUIRED	ACTUAL
Nominal line impedance (*)	70 to 84 Ω	70 to 84 Ω
Turn ratio	$\sqrt{2} \pm 3 \%$	$\sqrt{2} \pm 3 \%$
CMR	< -45 dB at 1 MHz	< -45 dB at 1 MHz
Input impedance	> 1000 Ω in the frequency range (75 KHz to 1 MHz) and in the indicated temp. range (-65°C to 150°C)	> 1000 Ω
Fault protection insulation resistors in series on each bus winding connection	0.75 $Z_o \pm 2 \%$	57.6 $\Omega \pm 1 \%$
Insulation resistance between : - bus line / stub line - inner conductors / shield	> 1000 M Ω at 250 Vdc > 1000 M Ω at 500 Vdc	> 1 000 M Ω at 250 Vdc > 1 000 M Ω at 500 Vdc
Shield continuity	< 20 m Ω	< 20 m Ω
Shield coverage	Connection 75 %	Connection 100 %
Dielectric withstanding strength : - between shield and inner conductors	500 V rms	500 V rms

(*) Impedance : seen from the stub when the bus line is loaded with Z_o at both sides of the coupler.

Mechanical and environmental characteristics

PARAMETERS	REQUIRED	ACTUAL
Operating temperature	-65°C to +150°C	-65°C to +150°C
Mass of the coupler without connector	42.5 g maximum	42.5 g maximum
Mass of the connector	5 g maximum	5 g maximum
Vibration and shock resistance : - random vibrations - gunfire vibrations - mechanical shocks	44 g rms, 8 hours in all directions 49 g rms 30 g half sine, 3 ms	44 g rms, 8 hours in all directions 49 g rms 30 g, half sine, 3 ms
Low pressure resistance	11 mbars	11 mbars
Tensile strength of a mated branch	70 N (*) with twinax bus 71 databus cable	70 N (*) with twinax bus 71 databus cable
Sealing	-	IP55
Life test	1000 hours at +127°C	1000 hours at +127°C Bus operating with MIL-STD-1553B signal
Thermal test	-65°C to +150°C, 10 cycles	-65°C to +150°C, 10 cycles of 1 hour
Good resistance to onboard fluids and to salt spray (up to 500 hours)		
MTBF available following MIL-HDBK 217 (environment and operating temperature to be specified)		
(*) the value of tensile strength depends on the cable construction (please consult us).		

Transformer characteristics

PARAMETERS	REQUIRED VALUES (MIL-STD-1553 or SAE AS 4115)	NOMINAL VALUES OR AXON' REQUIRED VALUES	
		NOMINAL VALUES	REQUIRED BY AXON' / QUALITY PLAN
Curie point	-	-	Over 195°C
Turn ratio	$\sqrt{2} \pm 3 \%$	$\sqrt{2} \pm 3 \%$	$\sqrt{2} \pm 3 \%$
Secondary DC resistance	$R_s < 5 \Omega$	$R_s = 2 \Omega$	$R_s < 2.5 \Omega$
Insulation resistance (winding to winding)	$R_i > 100 M\Omega$	-	$R_i > 1 000 M\Omega$ with a 250 Vdc test voltage
Primary open circuit impedance (from 75 kHz to 1 MHz)	$ Z > 3 k\Omega$ on full temperature operating range	$ Z > 10 k\Omega$ at 25°C $ Z > 4.8 k\Omega$ at -65°C $ Z > 4 k\Omega$ at -85°C	$ Z \geq 9.4 k\Omega$ at 25°C (***)
Primary parallel inductance	-	$L_p = 22 mH$	$L_p \geq 20 mH$
Primary parallel capacitance	-	$C_p = 10 pF$	$C_p \leq 11.4 pF$
Inter-winding capacitance	-	$C_i = 45 pF$	-
Primary leakage inductance	-	-	$L_f \leq 6 \mu H$
Droop (*)	$D < 20 \%$	$D = 4.5 \%$ (**)	$D < 20 \%$
Overshoot and ringing (*)	$0 < \pm 1 V$	$0 = 0.3 V$ (**)	$0 < \pm 1 V$

JN 1081 approved DDP-J-403-A-0222 -

(*) Tested with a 250 kHz square wave of 27 Vpp with 100ns rise and fall times through a $360 \pm 5 \Omega$ resistor.

(**) Average values taken during the JN 1081N qualification. - (***) 9.4 k Ω at 25°C guarantees 3 k Ω minimum from -65°C to 150°C

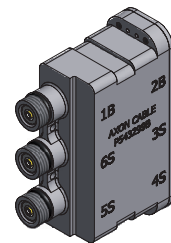
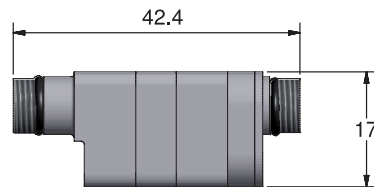
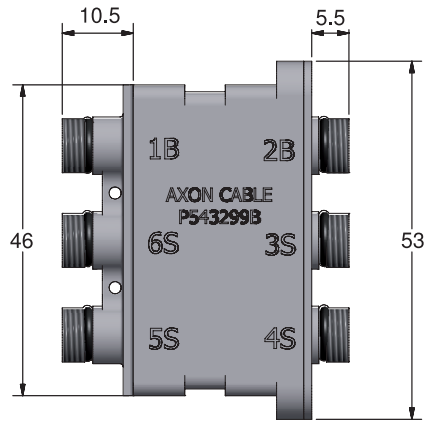


4 way ACC coupler

SPECIFICATIONS

MIL-STD-1553B
[STANAG 3838]
EN-3567-001
SAE AS 4115

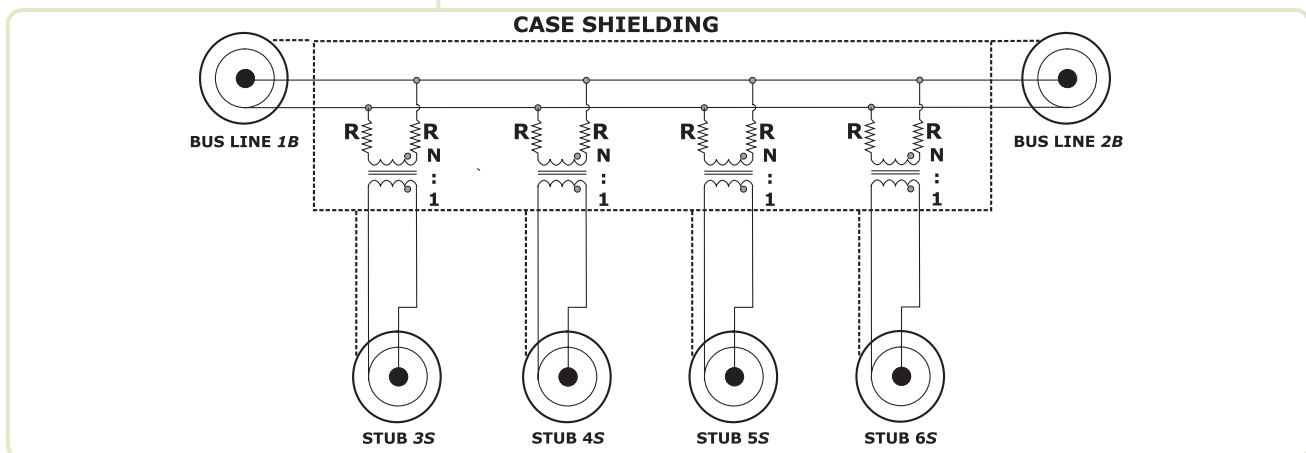
ACC / A - C4



DIMENSIONS in mm

Electrical scheme

$N = 1.41 \pm 3\%$
R = fault protection resistor
 $R = 0.75 Z_0 = 57.6 \Omega \pm 1\%$



Identification code

ACC

AXON'
CRIMPABLE
COUPLER

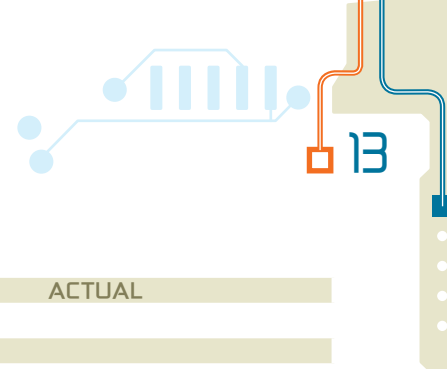
A

A : AERONAUTICS
VERSION
(for space applications, please contact us)

C4

FOUR WAY COUPLER

NOTE : POSSIBILITY TO INTEGRATE A BUS TERMINATOR (77 Ω) INSIDE THE COUPLER. In this case, there is only one connector on the bus line.
For instance, ADB-R21-XX is a coupler with a bus connector, three stub connectors and a terminator inside the housing.



Electrical characteristics

PARAMETERS	REQUIRED	ACTUAL
Nominal line impedance (*)	70 to 84 Ω	70 to 84 Ω
Turn ratio	$\sqrt{2} \pm 3\%$	$\sqrt{2} \pm 3\%$
CMR	< -45 dB at 1 MHz	< -45 dB at 1 MHz
Input impedance	> 750 Ω in the frequency range (75 KHz to 1 MHz) and in the indicated temp. range (-65°C to 150°C)	> 750 Ω
Fault protection insulation resistors in series on each bus winding connection	0.75 $Z_0 \pm 2\%$	57.6 $\Omega \pm 1\%$
Insulation resistance between : - bus line / stub line - inner conductors / shield	> 1 000 M Ω at 250 Vdc > 1 000 M Ω at 500 Vdc	> 1 000 M Ω at 250 Vdc > 1 000 M Ω at 500 Vdc
Shield continuity	< 20 m Ω	< 20 m Ω
Shield coverage	Connection 75 %	Connection 100 %
Dielectric withstanding strength : - between shield and inner connectors	500 V rms	500 V rms

(*) Impedance : seen from the stub when the bus line is loaded with Z_0 at both sides of the coupler.

Mechanical and environmental characteristics

PARAMETERS	REQUIRED	ACTUAL
Operating temperature	-65°C to +150°C	-65°C to +150°C
Mass of the coupler without connector	52.5 g maximum	52.5 g maximum
Mass of the connector	5 g maximum	5 g maximum
Vibration and shock resistance : - random vibrations - gunfire vibrations - mechanical shocks	44 g rms, 8 hours in all directions 49 g rms 30 g half sine, 3 ms	44 g rms, 8 hours in all directions 49 g rms 30 g, half sine, 3 ms
Low pressure resistance	11 mbars	11 mbars
Tensile strength of a mated branch	70 N (*) with twinax bus 71 databus cable	70 N (*) with twinax bus 71 databus cable
Sealing	-	IP55
Life test	1000 hours at +127°C	1000 hours at +127°C Bus operating with MIL-STD-1553B signal
Thermal test	-65°C to +150°C, 10 cycles	-65°C to +150°C, 10 cycles of 1 hour
Good resistance to onboard fluids and to salt spray (up to 500 hours)		
MTBF available following MIL-HDBK 217 (environment and operating temperature to be specified)		

(*) the value of tensile strength depends on the cable construction (please consult us).

Transformer characteristics

PARAMETERS	REQUIRED VALUES (MIL-STD-1553 or SAE AS 4115)	NOMINAL VALUES OR AXON' REQUIRED VALUES	
		NOMINAL VALUES	REQUIRED BY AXON' / QUALITY PLAN
Curie point	-	-	Over 195°C
Turn ratio	$\sqrt{2} \pm 3\%$	$\sqrt{2} \pm 3\%$	$\sqrt{2} \pm 3\%$
Secondary DC resistance	$R_s < 5 \Omega$	$R_s = 2 \Omega$	$R_s < 2.5 \Omega$
Insulation resistance (winding to winding)	$R_i > 100 M\Omega$	-	$R_i > 1 000 M\Omega$ with a 250 Vdc test voltage
Primary open circuit impedance (from 75 kHz to 1 MHz)	$ Z > 3 k\Omega$ on full temperature operating range	$ Z > 10 k\Omega$ at 25°C $ Z > 4.8 k\Omega$ at -65°C $ Z > 4 k\Omega$ at -85°C	$ Z \geq 9.4 k\Omega$ at 25°C (***)
Primary parallel inductance	-	$L_p = 22 mH$	$L_p \geq 20 mH$
Primary parallel capacitance	-	$C_p = 10 pF$	$C_p \leq 11.4 pF$
Inter-winding capacitance	-	$C_i = 45 pF$	-
Primary leakage inductance	-	-	$L_f \leq 6 \mu H$
Droop (*)	$D < 20\%$	$D = 4.5\%$ (**)	$D < 20\%$
Overshoot and ringing (*)	$0 < \pm 1 V$	$0 = 0.3 V$ (**)	$0 < \pm 1 V$

JN 1081 approved DDP-J-403-A-0222 -

(*) Tested with a 250 kHz square wave of 27 Vpp with 100ns rise and fall times through a $360 \pm 5\%$ Ω resistor.

(**) Average values taken during the JN 1081N qualification. - (***) 9.4 k Ω at 25°C guarantees 3 k Ω minimum from -65°C to 150°C

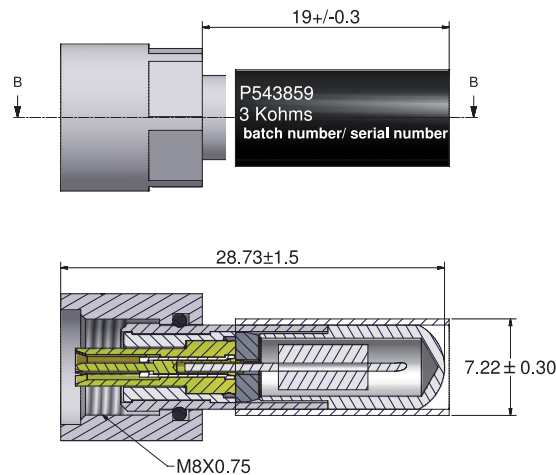


ACC 3K Ω stub load

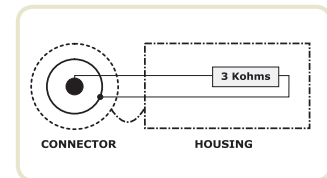
SPECIFICATIONS

MIL-STD-1553B
[STANAG 3838]
SAE AS 4115

ACC / A - D



DIMENSIONS in mm

Electrical
schemeRt = 3 k ohms \pm 1%

Electrical characteristics

PARAMETERS	REQUIRED	ACTUAL
Load resistance	3 K Ω \pm 1%	3 K Ω \pm 1%
Insulation resistance between : - inner conductors / shield	> 1 000 M Ω at 500 Vdc	> 1 000 M Ω at 500 Vdc
Shield continuity	-	< 20 m Ω maximum.
Shield coverage	Connection 75 %	Connection 100 %
Dielectric withstanding strength : between shield and inner conductors	500 Vrms	500 Vrms

Mechanical and environmental characteristics

PARAMETERS	REQUIRED	ACTUAL
Operating temperature	-65°C to +150°C	-65°C to +150°C
Mass of the terminator	7g maximum	7 g maximum
Vibration and shock resistance :		
- random vibrations	44 g rms, 8 hours in all directions	44 g rms, 8 hours in all directions
- gunfire vibrations	49 g rms	49 g rms
- mechanical shocks	30 g half sine, 3 ms	30 g, half sine, 3 ms
Low pressure resistance	11 mbars	11 mbars
Sealing	-	IP55
Life test	1000 hours at +127°C	1000 hours at +127°C Bus operating with MIL-STD-1553B signal
Thermal test	-65°C to +150°C, 10 cycles	-65°C to +150°C, 10 cycles of 1 hour

Good resistance to onboard fluids and to salt spray (up to 500 hours)

MTBF available following MIL-HDBK 217 (environment and operating temperature to be specified)

Identification code

ACC

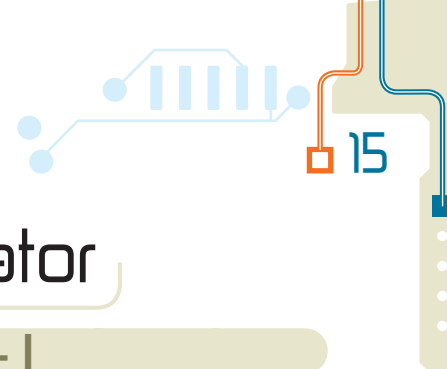
A

D

AXON' CRIMPABLE
COUPLER

A : AERONAUTICS VERSION
(for space applications, please contact us)

3K Ω STUB LOAD

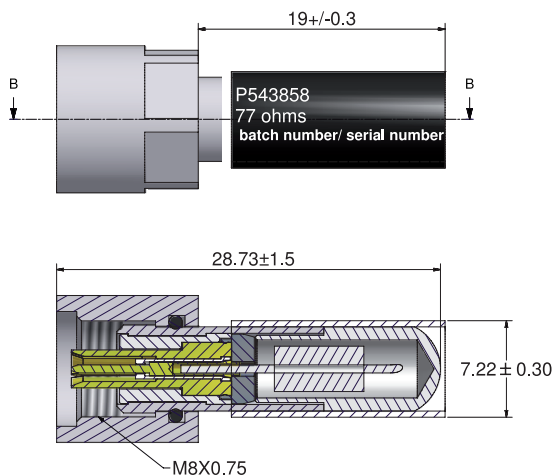


ACC 77Ω terminator

SPECIFICATIONS

MIL-STD-1553B
[STANAG 3838]
SAE AS 4115

ACC / A - I



DIMENSIONS in mm

Electrical scheme

Rt = 76.8 ohms ±1%

Electrical characteristics

PARAMETERS	REQUIRED	ACTUAL
Terminator resistance	76.8 Ω ± 1%	76.8 Ω ± 1%
Insulation resistance between : - inner conductors / shield	> 1 000 MΩ under 500 Vdc	> 1 000 MΩ under 500 Vdc
Shield continuity	-	< 20 mΩ maximum.
Shield coverage	Connection 75 %	Connection 100 %
Dielectric withstanding strength : between shield and inner conductors	500 Vrms	500 Vrms

Mechanical and environmental characteristics

PARAMETERS	REQUIRED	ACTUAL
Operating temperature	-65°C to +150°C	-65°C to +150°C
Mass of the terminator	7g maximum	7 g maximum
Vibration and shock resistance :		
- random vibrations	44 g rms, 8 hours in all directions	44 g rms, 8 hours in all directions
- gunfire vibrations	49 g rms	49 g rms
- mechanical shocks	30 g half sine, 3 ms	30 g, half sine, 3 ms
Low pressure resistance	11 mbars	11 mbars
Sealing	-	IP55
Life test	1000 hours at +127°C	1000 hours at +127°C Bus operating with MIL-STD-1553B signal
Thermal test	-65°C to +150°C, 10 cycles	-65°C to +150°C, 10 cycles of 1 hour
Good resistance to onboard fluids and to salt spray (up to 500 hours)		

MTBF available following MIL-HDBK 217 (environment and operating temperature to be specified)

Identification code

ACC	A	I
AXON' CRIMPABLE COUPLER	A : AERONAUTICS VERSION (for space applications, please contact us)	77 Ω TERMINATOR

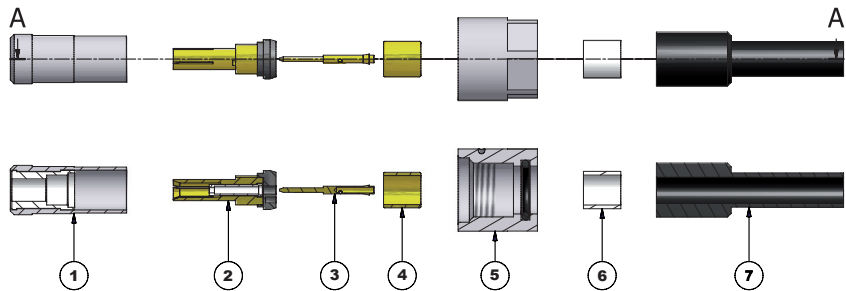


ACC plug connector

SPECIFICATIONS

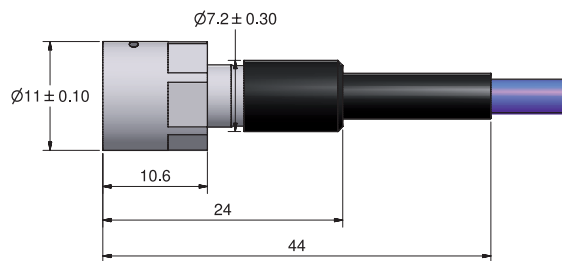
MIL-STD-1553B
[STANAG 3838]
SAE AS 4115

ACC / A - PG



- 1 - Connector body
- 2 - Intermediate contact
- 3 - Inner contact
- 4 - Ferrule for braid crimping
- 5 - Locking ring
- 6 - Spacer : insulation sleeve
- 7 - Strain relief

Connector sold in kit composed by 5 metallic pieces and 2 sleeves



Dimensions of the connector once wired

DIMENSIONS in mm

Identification code

ACC

AXON'
CRIMPABLE
COUPLER

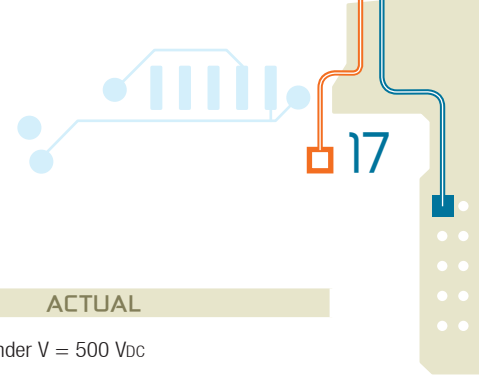
A

A : AERONAUTICS
VERSION
(for space applications, please contact us)

PG

PLUG CONNECTOR

ACC PLUG CONNECTOR WAS INITIALLY DESIGNED FOR TWINAX BUS 71 DATABUS CABLE BUT IS ALSO COMPATIBLE WITH OTHER REFERENCES. PLEASE CONSULT US FOR FURTHER INFORMATION



Electrical characteristics

PARAMETERS	REQUIRED	ACTUAL
Insulation resistance between : - inner conductors / shield	> 1 000 MΩ under V = 500 Vdc	> 1 000 MΩ under V = 500 Vdc
Shield continuity	-	< 20 mΩ maximum.
Shield coverage	Connection 75 %	Connection 100 %
Dielectric withstanding strength : between shield and inner conductors	500 V rms	500 V rms

Mechanical and environmental characteristics

PARAMETERS	REQUIRED	ACTUAL
Operating temperature	-65°C to +150°C	-65°C to +150°C
Mass of the connector	5 g maximum	5 g maximum
Vibration and shock resistance : - random vibrations - gunfire vibrations - mechanical shocks	44 g rms, 8 hours in all directions 49 g rms 30 g half sine, 3 ms	44 g rms, 8 hours in all directions 49 g rms 30 g, half sine, 3 ms
Low pressure resistance	11 mbars	11 mbars
Tensile strength of a mated branch	70 N (*) with twinax bus 71 databus cable	70 N (*) with twinax bus 71 databus cable
Sealing	-	IP55
Life test	1000 hours at +127°C	1000 hours at +127°C Bus operating with MIL-STD-1553B signal
Thermal test	-65°C to +150°C, 10 cycles	-65°C to +150°C, 10 cycles of 1 hour
Good resistance to onboard fluids and to salt spray (up to 500 hours)		
MTBF available following MIL-HDBK 217 (environment and operating temperature to be specified)		
(*) the value of tensile strength depends on the cable construction (please consult us).		

Tooling used for crimping the connector on the cable

TYPE OF CRIMPING	CRIMPING TOOL	DIE
Central pin	M22520/2-01	(*)
Intermediate contact	M22520/5-01	(*)
Body	M22520/5-01	(*)

(*) Refers to the assembly instruction "CON-1553-GF-61-01"

ACC PLUG CONNECTOR WAS INITIALLY DESIGNED FOR TWINAX BUS 71 DATABUS CABLE.
PLEASE CONSULT US FOR COMPATIBILITY WITH OTHER CABLES



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