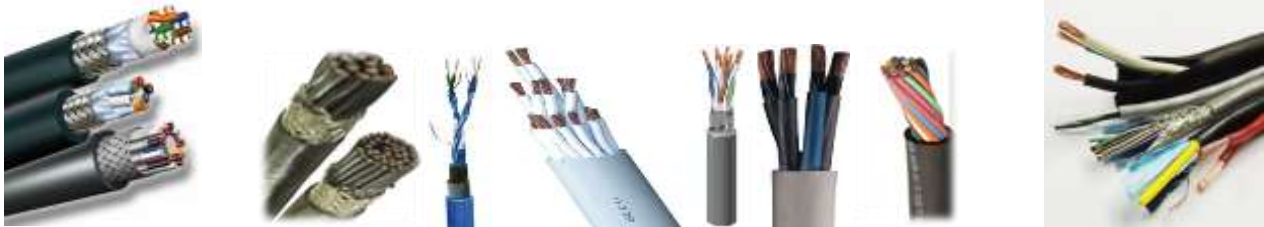








Automatic measuring systems for industrial cables

## Qualify your cables



AESA Equipment	Puma	Gaia	Semacare	Helios
<b>Parameters required</b>				
Wire Ø max 1.5mm	✓ <sup>1)</sup>	✓	✓	✓ <sup>1)</sup>
Wire Ø max 2.5mm	✓ <sup>1)</sup>	✓	✓	
Pairs, Triads, Quads	✓	✓	✓	✓
DC Resistance	✓	✓	✓	✓
Mutual Capacitance	✓	✓	✓	✓
Unbalance Capacitance	✓	✓	✓	✓
Inductance / L/R Ratio	✓	✓	✓	✓
Attenuation → 30kHz → 4MHz → 10MHz	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ ✓ ✓	✓ ✓ ✓
Impedance → 30kHz → 4MHz → 10MHz	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ ✓ ✓	✓ ✓ ✓
Crosstalk → 30kHz → 4MHz → 10MHz	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ ✓ ✓	✓ ✓ ✓
Dielectric strength		✓		
Insulation resistance		✓		
AC High Voltage (5kV/1A)		✓		
<b>Typical cables</b>	Instrumentation Building Signaling Control, Telecom	Instrumentation Building, Telecom	Instrumentation Railway Fieldbus / Bus Pilot cable	Telecom

1) With special XL knives (standard, Ø max 0.9mm)

2) Calculated

The industrial cables (instrumentation, control, signalling, automation...) have their own specifications. Different AESA measuring devices have been developed accordingly. The connecting frames are studied to easily connect the coil extremities (rigid or short ends for example). Different trolleys or supports can be proposed to adjust the specific needs.

**Technical specifications**

Accuracy		Pairs	Triads	Quads	Accuracy
Resistance	Conductor	Ra, Rb	Ra, Rb, Rc	Ra, Rb, Rc, Rd	± 0,1% + 10 mΩ
	Loop	R	R1	R1, R2	
	Unbalance	DR	DR1	DR1, DR2, DR3	Computed (in % or Ω)
Capacitance	Mutual	C	C1	C1, C2, C3	± 0,25% ± 10pF at 800/1000 Hz ± 0,25% ± 10pF at 125 Hz ± 0,25% ± 50pF at 12,5Hz
	Unbalance	K	K1	K1 – K12	± 1% ± 6pF at 800 / 1000 Hz ± 1% ± 3pF at 125 Hz ± 1% ± 30pF at 12,5 Hz
	Unbalance to ground	Ei Ea E	Ei1 Ea1 E1	Ei1-Ei3 Ea1-Ea3 E1-E3	
Inductance	Inductance	L	L1	L1, L2	Computed, in mH
	Inductance/Resistance	L/R	L1/R1	L1/R1, L2/R2	Computed, in mH/Ω

High Frequency, Insulation Resistance and High Voltage specifications depend on every system (see specific system leaflet)

**Components**

- Connecting frame from 4 until 224 conductors,
- Computer
- OptiTest software

**Alternatives**



2715 (15kV AC Generator)



4735 (10kV DC Generator)



3921 (Converting megohmmeter)

Specifications subject to change without notice / Indicative pictures



AESA S.A.  
 CH-2022 Bevaix / SWITZERLAND  
 RUE DE NEUCHÂTEL 24  
 PHONE ++41 32 8415177  
 INTERNET <http://www.aesa-cortailod.com>  
 E-MAIL [aesa@aesacortailod.com](mailto:aesa@aesacortailod.com)