

# Non-Metallic Systems

**ATS** - Type FL / A - Yellow Elastomer



## Technical Characteristics


Conforms to BSI Kitemark KM-35161  
 CE Low voltage directive  
 Lloyd's Register of Shipping (Type Approval)  
 NF 16-10/12 I4, F2  
 CEI 11170 LR3 / LR4

Approvals and Standards     

Degree of mechanical protection High Impact Resistance

Degree of protection IP66 - As standard  
 IP67 - As standard  
 IP68 - As Standard (4 bar 30 mins)  
 IP69k - As standard

UV protection Very High

Fitting Characteristics  Straight panel mounting fitting - Integrated Seal System  
 Swivel flange with integral face seal

Application Straight Panel Mounting swivel flange

Normal operating temperature range	Application	Min Temp	Max Temp
	Static	- 50°C	+120°C
	Dynamic	- 45°C	+120 °C

For use with - Conduit Series Light, Standard and Heavyweight variants of type [PA](#), [PI](#), [PR](#), [PADL](#) & [PF](#)

Fire performance	Test Standard	Performance Rating
	BS EN 61386-1 & 23	Approved
	NFF16-101	I4 F2
	ISO 4589-2	24%
	BS EN 60695-2-11	850°C
	UL94	HB

**Self Extinguishing  
 Low Smoke & Halogen  
 Free**

Testing data Click or See pages [3](#) & [4](#)

Type of material Polyamide (Nylon) 66 body, TPE Seal.



The Company's policy is one of continuous improvement and reserves the right to change specifications at any time without prior notice.

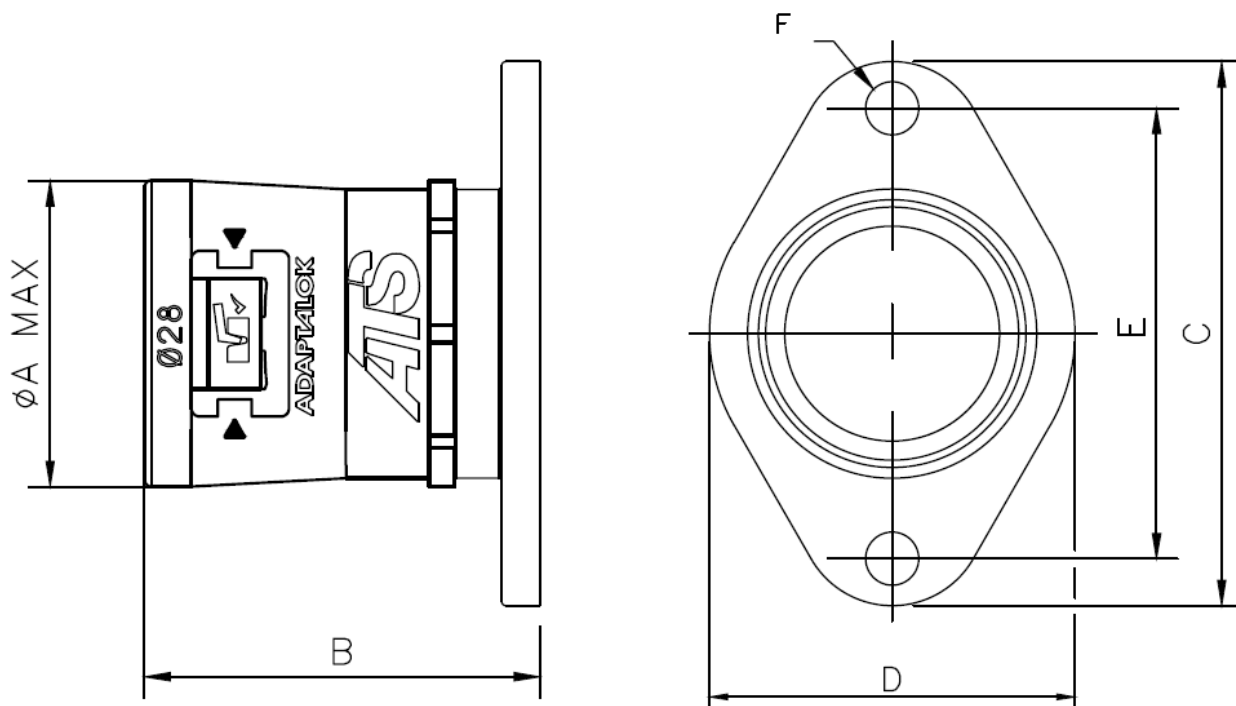
# Non-Metallic Systems

**ATS** - Type FL / A - Yellow Elastomer



## Dimensional Data

Part No Black Body	Part No Grey Body	Nominal Dimensions (mm)					
		A	B	C	D	E	F
AT16/FL/A/BLY	AT16/FL/A/GRY	23.2	43.5	44.9	31.7	36.0	5.25
AT21/FL/A/BLY	AT21/FL/A/GRY	30.2	46.8	44.9	31.7	36.0	5.25
AT28/FL/A/BLY	AT28/FL/A/GRY	37.2	48.5	63.6	42.5	53.0	6.25



The Company's policy is one of continuous improvement and reserves the right to change specifications at any time without prior notice.

# Non-Metallic Systems

**ATS** - Type FL / A - Yellow Elastomer



## BS EN 61386 Classification

Fitting	Compression	Impact	Min temp	Max temp	bending	electrical	IP solids	IP water	Corrosion	Tensile	Non-flame Propogating	Suspended load
ATS	N/A	4	2	4	N/A	0	6	7	0	1	1	0

## Mechanical Properties

Test Type	Methods / Standards	Requirements	Value
Tensile Strength	IEC61386-1	2 mins at Specified Value ( <i>PAFS21 Conduit</i> )	Class 1
Tensile Strength		Ultimate Pullout ( <i>PAFS21 Conduit</i> )	240N
Impact Strength @ -45°C	IEC61386-1	No visible damage	Class 1
Impact Strength @ -5°C	IEC61386-1	No visible damage	Class 3
Impact Strength @ 23°C	IEC61386-1	No visible damage	Class 5

Tensile Tests to IEC 61386 gives the minimum classification value only. Actual values will depend on the type and size of the fittings used and will always be greater than the minimum – Impact strength is the minimum classification value at the minimum temperature – actual values will depend on size and temperature. Specific values available on request.

## Thermal Properties

Test Type	Methods / Standards	Requirements	Value
Dynamic Applications	IEC 61386-23	5000 Operations at MBR 2hrs	-45°C to +120°C
Static Short Term Temp		Temporary Use (3000hrs)	-50°C to +120°C
Static Long Term Temp		Permanent Use (30,000) Hours	-40°C to +105°C

The Company's policy is one of continuous improvement and reserves the right to change specifications at any time without prior notice.

**Cable Management Products Ltd.**

CMG House - Station Road - Coleshill - B46 1HT - United Kingdom  
 Tel: +44(0)1675 468 222 - Fax: +44(0)1675 464 930  
 Technical Support e-mail: [cmg.conduitsystems@tnb.com](mailto:cmg.conduitsystems@tnb.com) - [www.adaptaflex.co.uk](http://www.adaptaflex.co.uk)



# Non-Metallic Systems

**ATS** - Type FL / A - Yellow Elastomer



## Flammability

Test Type	Method / Standard	Requirement	Result	Unit
Glow Wire	BS EN 60695-2-11	Extinguish within 30s	850°C	°C
Flammability	IEC 61386-1-12	1Kw Burner Flame to Self Extinguish	Pass	Pass/Fail
Oxygen Index - Nylon Body	ISO 4589-2		24.1	%
Ignition Rating - Nylon Body	NF F16-101	I Rating	I4	-
Oxygen Index - Elastomer Seal	ISO 4589-2		20.2	%
Ignition Rating - Elastomer Seal	ISO 4589-2	I Rating	I4	-

## Smoke

Test Type	Method / Standard	Requirement	Result	Unit
Fume Rating - Nylon Body	NF F16-101	F Rating	F2	-
Fume Rating - Elastomer Seal	NF F16-101	F Rating	F2	-

## Toxicity

Test Type	Method / Standard	Requirement	Result	Unit
Halogen Free	NFX 70-100	< 0.5%	Pass	Pass/Fail

## Pre Test Conditions

Duration	Standard	Temperature	Relative Humidity
168 (Hours)	IEC61386	23 (°C)	50 (%)

## Chemical Resistance Chart

Key:	●	●	●	●
Suitable :	●	●	●	●
Limited Suitability :	●	●	●	●
Unsuitable :	●	●	●	●
Not Tested :	●	●	●	●

● Astm No.1	● Diesel oil	● Methyl Bromide	● Sulphur Dioxide (Gas)
● Astm No.2	● Diethylamine	● MEK	● Sulphuric Acid (10%)
● Astm No.3	● Ethanol	● Nitric Acid (10%)	● Sulphuric Acid (70%)
● Acetic Acid (10%)	● Ether	● Nitric Acid (70%)	● Toluene
● Acetone	● Ethylamine	● Oxalic Acid	● Transformer Oil
● Aluminium Chloride	● Ethylene Glycol	● Ozone (Gas)	● 1,1,1-Trichloroethane
● Aniline	● Ethyl Ethanoate	● Paraffin oil	● Trichloroethylene
● Benzaldehyde	● Freon 32	● Petrol	● Turpentine
● Benzene	● Hydrochloric Acid (10%)	● Phenol	● Vegetable Oil
● Carbon tetrachloride	● Hydrochloric Acid (36%)	● Sea Water	● Vinyl Acetate
● Chlorine water	● Hydrogen Peroxide (35%)	● Silver Nitrate	● Water
● Chloroform	● Hydrogen Peroxide (87%)	● Skydrol	● White Spirit
● Citric Acid	● Lactic Acid	● Sodium Chloride	● Zinc Chloride
● Copper Sulphate	● Lubricating oil	● Sodium Hydroxide (10%)	
● Cresol	● Methanol	● Sodium Hydroxide (60%)	

**All Values Based on Size 21 Fittings and PAFS Conduit, For Other Sizes and Conduit Systems Please Consult**

The information above is given as a guide only and is based on published technical data and experience. The chemical resistance of the above products is dependant on factors such as chemical exposure, concentration of the chemical and temperature. The above chemicals are valid for a temperature of 23°C. Use of the above table is at the users own discretion and risk. Those using it must satisfy themselves that their application presents no health and safety risks. The end user should assess compatibility with their application and contact Thomas & Betts for further information.

ADHERENCE TO THE CURRENT WIRING REGULATIONS BS7671 OR NEC WIRING REGULATIONS (FOR USA) IS STRONGLY ADVISED.

MINIMUM BEND RADIUS FOR FLEXING IS DEPENDANT UPON MINIMUM TEMPERATURE, BENDING FREQUENCY AND CHEMICAL ENVIRONMENT.

The Company's policy is one of continuous improvement and reserves the right to change specifications at any time without prior notice.

**Cable Management Products Ltd.**

CMG House - Station Road - Coleshill - B46 1HT - United Kingdom  
 Tel: +44(0)1675 468 222 - Fax: +44(0)1675 464 930

Technical Support e-mail: [cmg.conduitsystems@tnb.com](mailto:cmg.conduitsystems@tnb.com) - [www.adaptaflex.co.uk](http://www.adaptaflex.co.uk)



A Member of the ABB Group