Ethernet couplers

# **BXF & BAF SERIES**



Solexy's patented (7,507,105) Explosion-Proof/ intrinsically Safe Ethernet Coupler allows for transmissions of Ethernet into hazardous areas with a standard RJ45 connector.

With the Solexy Ethernet coupler it's possible to connect any standard ethernet device located in a hazardous or safe area.

The BXF explosion proof and intrinsically safe barrier is certified for installation in hazardous areas and BAF intrinsically safe barrier is suitable for installation in safe areas and purged systems.

The BXF is designed to be used with any UL, CSA, MSHA, ATEX or IECEx listed explosion proof housing without the need of a seal fitting, taking up no internal space.

The BAF is designed to be used in safe area directly with any CAT5 or CAT5e cable system. The BAF can also be remote mounted up to 70 meters away with minimal loss of signal. The BAF is also designed to be used with air purge panel systems.

A BXF and/or BAF coupler is required on each end of a cable installation for full protection of both the RX and TX lines.

## **FEATURES**

### NO SEALING FITTING REQUIRED

Fitting is pre-approved for hazardous locations and can be installed with no potting compounds and a simple wrench. Eliminates the need for costly seal fittings, and reduces the chance of error associated with field installed sealing practices.

### O CORROSION RESISTANT

300 series stainless steel of BXF series protects the fitting from corrosive environments, sealing fittings are typically constructed of aluminium or galvanized steel, neither being well suited for the process industry.

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All required circuitry is recessed into fitting and encapsulated against harsh environments; this is impossible with conventional sealing methods.

#### INTERCHANGEABILITY

Ethernet cables can be connected/disconnected without powering down the system, and can be run in traditional cable trays.

### INDUSTRIAL M12 "D" CONNECTION

With this secure weather proof industrial connection, cable installation and removal can be accomplished without removing power.



# **SPECIFICATIONS**

IECEx / ATEX Certification	BAF  (Ex) I (M1) Ex ia Ma] II (1) G [Ex ia Ga] IIC II (1) D [Ex ia Da] IIIC	BXF3S & BXFMS  (Ex) I M2 (M1) Ex d mb [ia Ma] I Mb  II 2 (1) G Ex d mb [ia Ga] IIC T5 Gb  II 2 (1) D Ex mb [ia Da] IIIC T100°C Db				
ATEX certificate nr	DNV 14 ATEX 4192X					
IECEx certificate nr	IECEx DNV 14.0024X					
cULus Certification	BAF3 and BXF3 Class I, Group A, B, C, D and Class II, Group F, G (UL File E305231)					
Maximum Fault Voltage	RMS 250 V					
<b>Current Protection</b>	50 mA					
Frequency Range	up to 100 MHz					
Insertion loss	-5.5 dB					
Total impedance	< 100 Ohm					
Protection	3.6 V					
Ambient Temperature Range	-20°C (-4°F) +85°C (+140°F)					
Ethernet connection	IEEE 802.3 - 100BaseTX - 100 Mbps (not suitable for POE connection)					
Data connector (hazardous side)	M12 Industrial "D" coded connector					
Housing Material	BXF = 300 SST (approximate weight 0.38 kg (83.8 lb)) BAF = T6 Aluminum nickel plated (approximate weight 0.2 kg (4.4 lb))					

# NOMENCLATURE

aaa Barrier Type

BXF Explosion Proof / Intrinsically Safe suitable for hazardous area

BAF Intrinsically Safe suitable

for safe area and UL purge panels

b Thread Connection

3 3/4" NPT

M M25x1.5 (IECEx and Atex only) S 1 1/8"-12 UNF (MSHA only)

c Housing Material

A Aluminum T6 Nickel Plated (BAF only) S 300 series stainless steel (BXF only)

dd Housing Connector

01 Shielded M12 Female "D" coded

BXF	3	S	01	01	N	018
aaa	b	C	dd	ее	f	ggg

ee Cable Connector

01 RJ45 Plug Male

O2 Shielded M12 Male "D" coded O3 Shielded M12 Female "D" coded

f Approval

N cULus

X IECEx and ATEX

M MSHA

ggg Cable Length

018 18" (457 mm) CAT5e

(included in the 70 meters max)

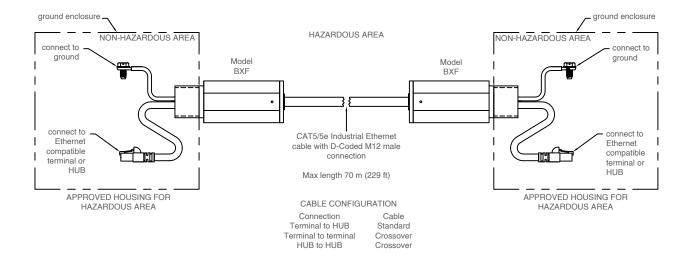
\*\* to be defined



### INSTALLATION SCHEMES

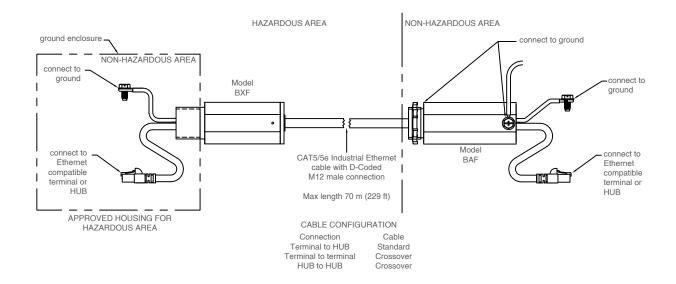
### **DEVICES INSTALLED IN A HAZARDOUS AREA**

A BXF Coupler must be used at either end of the Ethernet cable to ensure the safety of this system. The BXF must be securely mounted and grounded within a UL/CSA, MSHA or ATEX/IECEx approved explosion proof enclosure.



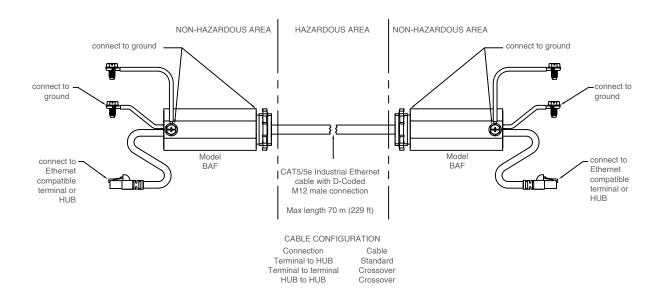
#### **DEVICES INSTALLED IN BOTH AN HAZARDOUS AND A SAFE AREA**

One BAF and one BXF Coupler must be used at opposite ends of the Ethernet cable to ensure the safety of this system. The BXF must be securely mounted and grounded within a UL/CSA, MSHA or ATEX/IECEx approved explosion proof enclosure.

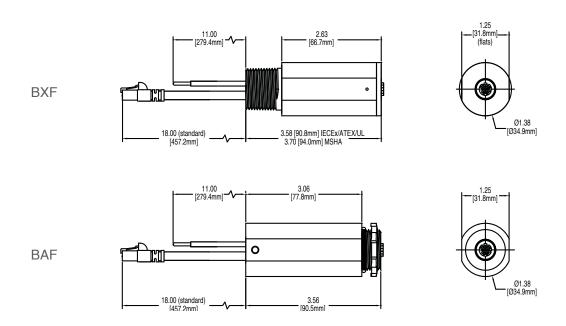


### **DEVICES INSTALLED IN A SAFE AREA (CABLE IN A HAZARDOUS AREA)**

A BAF Coupler must be used at either end of the Ethernet cable to ensure the safety of this system.



### **DIMENSIONAL DRAWINGS**



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