

BI Communications Ltd.

CAT IV 600V Blocking Filter – BF1

User Guide - Revision 6



BI COMMUNICATIONS LTD.
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Contents

Contents.....	1
Revisions	2
1. General.....	3
1.1 Receiving the blocking filter.....	3
1.2 Using this manual.....	3
1.3 Symbols used in this manual.....	3
1.4 Application of Instructions.....	4
1.5 Information on the pictures and graphics used.....	4
2. Specifications	5
2.1 Intended Use.....	5
3. Using the Blocking Filter	6
3.1 For your safety	6
3.2 Instructions for the user	7
3.3 Safety inspection.....	7
3.4 Identifying the correct function of the filter.....	8
3.5 Fused leads.....	9
4. After Sales Service.....	10
4.1 Repair/Warranty	10
4.2 Contacting us	10
4.3 After Sales Service.....	10

Revisions

REVISION	DATE	COMMENTS
Revision 1	17/05/2015	Initial Release.
Revision 2	17/06/2015	Added Safety Inspections. Added Specification. Guidance on fault identification.
Revision 3	09/07/2015	Added: Testing the blocking filter Added: Fused leads
Revision 4	28/07/2015	Format change Heading Change
Revision 5	29/07/2015	Specification Update
Revision 6	18/08/2015	Corrections

1. General

1.1 Receiving the blocking filter

Upon delivery, please ensure the contents are consistent with the packing list (Page 7); notify your supplier of any missing items.

If the equipment appears damaged, notify your carrier and supplier immediately, giving a detailed description of any damage, save the damaged packaging to substantiate your claim.

1.2 Using this manual

- Read the user manual before operating the product for the first time.
- Consider this user manual as part of the product and keep it in an easily accessible location.
- The user manual contains all the necessary information that is required for using the Blocking Filter.
- If the user manual is lost, a further copy may be downloaded from our web site.

1.3 Symbols used in this manual

International Electrical Symbols



This symbol signifies that the instrument is protected by double or reinforced insulation. Use only specified replacement parts when serving the instrument.



This symbol on the instrument indicates a WARNING, and that the operator must refer to the user manual instructions before operating the instrument. In this manual, the symbol preceding instructions indicates that if the instructions are not followed, bodily injury, installations/sample and product damage may result.



Risk of electric shock. The voltage of the parts marked with this symbol may be dangerous.



Directive 2002/96/EC

(This directive is only valid in the EU.)

This marking indicates that you must not discard this

electrical/electronic product in domestic household waste.

Product Category

With reference to the equipment types in the WEEE directive Annex 1, this product is classified as a “Monitoring and Control instrumentation” product.

Do not dispose in domestic household waste. When disposing products in the EU, contact distributor or BI Communications.

Warning

- This instrument meets the safety requirements EN61010-1-2010.
- Connections to line voltages exceeding those specified on the product will damage the product may be injurious to the operator.
- Safety is the responsibility of the operator.

1.4 Application of Instructions

This manual applies to the CAT IV 600V Blocking Filter – BF1 only.

1.5 Information on the pictures and graphics used

The graphics and pictures used are intended to illustrate the procedures and may therefore differ from the actual.

2. Specifications

Rated Voltage	Up to 600V CAT IV
Rated Frequency	50/60 Hz
Operating Temperature	-10°C (min) to 50°C (max)
Storage Temperature	-20°C (min) to 70°C (max)
Dimensions	28.5 x 85 x 50 (mm)
Weight	200g
Cable Length	0.5m
Safety	EN 61010-1-2010
Water/Dustproof	IP54
Fuse Rating	1000V, 500mA Quick Blow (6.3x32 mm)

2.1 Intended Use

This blocking filter has been designed for use with the BI Communications TX Range of Time-Domain Reflectometers. When used with the TDR, it will allow the testing of powered cables up to a maximum of 600V CAT IV.

This device meets the requirements of EN61010-1-2010.

Safe operation cannot be guaranteed if the device is used without observing all safety conditions. The operator or user will be liable to damage to persons or property resulting from incorrect use.

3. Using the Blocking Filter

3.1 For your safety

⚡ Risk of Electric Shock ⚡

	➤ Stop use if you suspect damage to the product. Continually check the terminations leads and crocodile clips for damage. Consult your distributor or BI Communications. ➤ Observe the maximum input voltage. Do not apply a voltage exceeding 600V CAT IV. ➤ Do not use in damp places. To prevent electric shock, do not use the probe in damp places or in wet conditions. ➤ Do not touch exposed circuitry. ➤ Do not touch exposed live connections or components. ➤ Do not disassemble or modify the blocking filter. ➤ Always use replacement fused crocodile clips which are above CAT IV 600V rated or above.
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Fit blocking filter into TX TDR as shown in Figure 1.



Figure 1 - Connecting Blocking Filter to TDR

3.2 Instructions for the user

Before operating the device for the first time, please read and understand the user manual and the user manual for the TX Series TDR for which this blocking filter has been designed.

This product may only be operated by authorised & trained personnel. In addition, the user must have knowledge of plant and engineering cable types, switchgear and voltages that the equipment is being operated.

3.3 Safety inspection

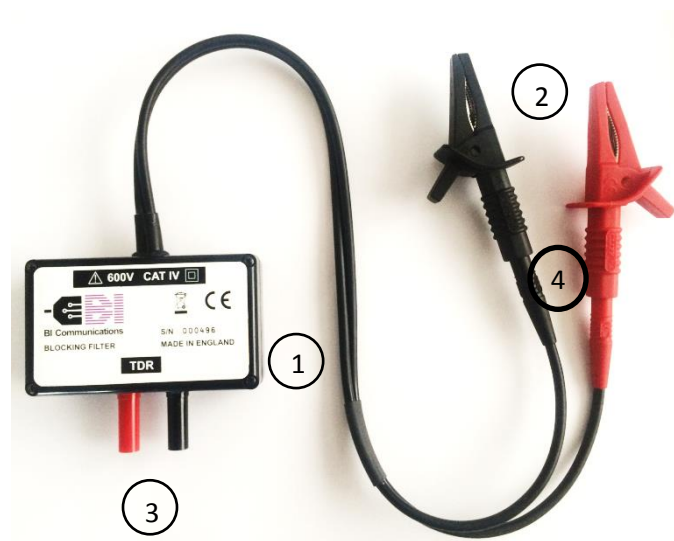


Figure 2 Main Components of the Filter

In Figure 2 Main Components of the Filter,

- 1 – Blocking Filter Body
- 2 – Connector Leads
- 3 – Connector Plugs
- 4 – Fused Housings

Prior to use, the filter should be inspected for damage, Refer to Figure 2.

Item 1: Blocking Filter Body – Inspect for signs of impact, cracking on the casing or damage to connectors (Item 3).

Item 2: Connecting Leads – Inspect for damage to the insulation of the cable particularly where the cable exits the filter body and the plug terminations.

If there are signs of damage, the unit should not be used but returned to the distributor or manufacturer for investigation.

3.4 Identifying the correct function of the filter

Upon connection of the filter to the TDR, the display in Figure 3 will be seen. The rising pulse at a distance of 1.1 meters shows the filter has been detected by the TDR. To ensure the correct workings of the filter, connect the output leads together, set the TDR to scan. As the leads are connected and disconnected, the display should alternate between the screens shown in Figure 3 and Figure 4, i.e. between open and short.

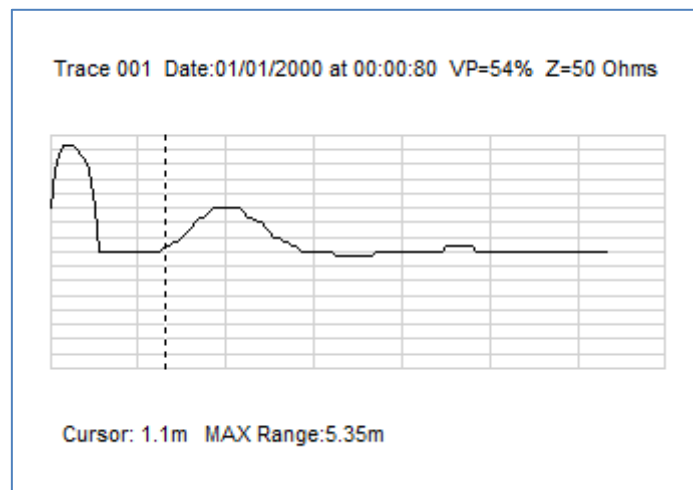


Figure 3

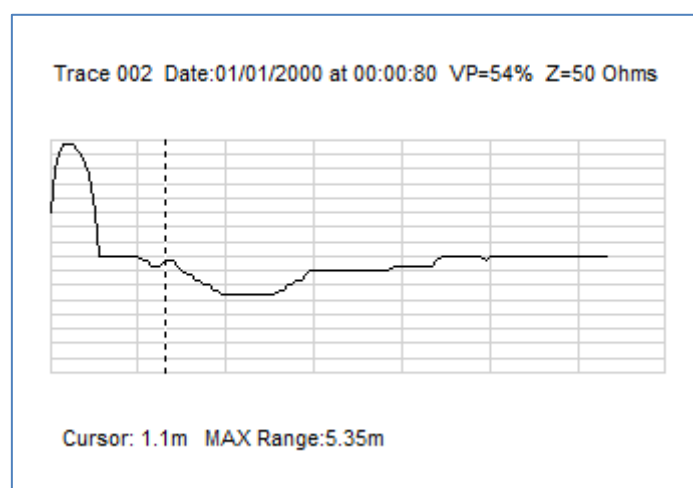


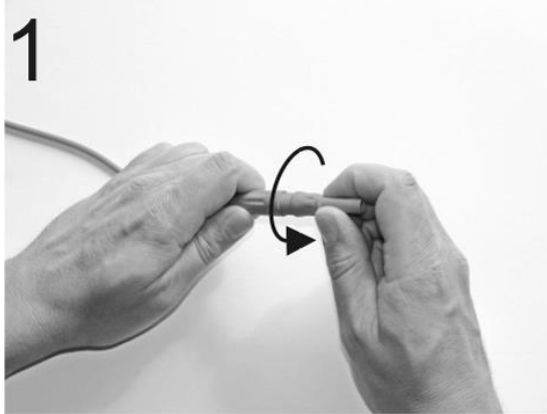
Figure 4

If the traces do not alternate as in above figures, the fuses should be inspected. And if defective, refer to the distributor for replacements.

3.5 Fused leads

During fuse replacement, be sure that the test lead is not connected to any voltage source.
Before and after each measurement: Check the fuse!
Before use: Check fuse rating!

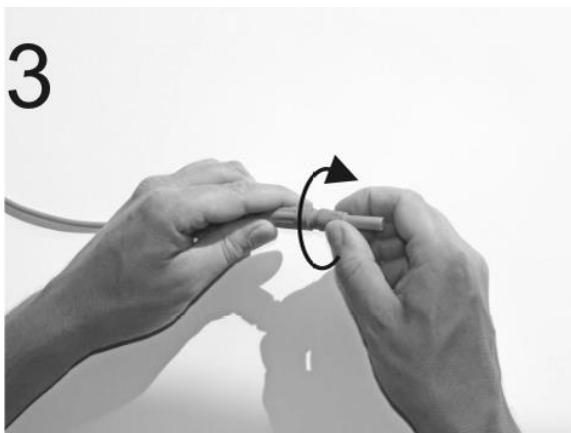
Fuse replacement



Unscrew the fuse holder.



Take out the fuse and replace it with a checked fuse.



Screw the fuse holder together.

4. After Sales Service

4.1 Repair/Warranty

The instrument is not user serviceable. If the instrument fails, or its protection has been impaired, it should not be used but sent back for repair by suitably trained and qualified personnel.

New instruments are guaranteed against breakdown due to manufacturing or component defects for 12 months after the purchase date, with proof of purchase or if not we will refer to manufacturer date.

Note: Any unauthorised prior repair or adjustment to the instrument will automatically invalidate the warranty.

The quality management system of BI Communications fulfils the stringent requirements of the international quality standard BS EN ISO9001. Quality system certificate No 12500.

4.2 Contacting us

BI Communications Ltd.,
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Burnt Mills Industrial Estate,
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Email: sales@bicomcommunications.co.uk

Web: www.bicomcommunications.co.uk

4.3 After Sales Service

Any Questions which may arise, please contact your distributor or BI Communications at the address shown above.