



1 **EC TYPE EXAMINATION CERTIFICATE**

2 Equipment or protective system intended for use in potentially explosive atmospheres –
Directive 94/9/EC – Annex III

3 EC Type Examination **TRAC14ATEX0040U**
Certificate No.:

4 Component: **Leadwire and Cable Seal Fittings,
FG4015 series (complete assemblies)
FG4014 series (fitting body and cap) to be assembled with AC 4015 series
grommets.**

5 Manufacturer: **Minco Products,**

6 Address: **7300 Commerce Lane, Minneapolis, Minnesota 55432,
United States of America**

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 TRaC Global Ltd, Notified Body number 0891 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment or protective system intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential report **TRA-015571-33-00A**.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in section 18 of the schedule to this certificate, has been assured by compliance with:

EN 60079-0:2012

EN 60079-1:2007

EN 60079-7:2007

10 The sign “U” placed after the certificate number indicates that this certificate describes components and must not be mistaken for a certificate intended for an equipment or protective system. This EC-Type Examination certificate may be used as the basis for certification for an equipment or protective system.

11 This EC-Type Examination certificate relates only to the design and construction of the specified equipment in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of this equipment or protective system shall include the following:

 **II 2 G Ex d e IIC Gb IP66**

This certificate and its schedules may only be reproduced in its entirety and without change. This certificate is issued in accordance with the TRaC Ex Certification Scheme.

S.P. Winsor

S P Winsor, Certification Team Leader

Issue date: 2014-11-20

Copy No.: 1e

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Form RF355 is16A

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13 SCHEDULE TO EC TYPE EXAMINATION CERTIFICATE

14 TRAC14ATEX0040U

15 General description of equipment or protective system included within the scope of this certificate

The FG4015 series of fittings are cable transit type devices which are also known as Leadwire and Cable Seal Fittings. They are designed for use in applications which require one or several conductors or cables to pass through a bulkhead within a small area. The fittings are rated for pressure applications with a maximum of 50 PSIG. The seal fittings are offered with 1/2 or 3/4 NPT thread types on the 'process thread'. The fittings are directional and the process thread must be employed for mounting the fittings in their respective housings. Additionally the fittings are offered with 1, 2, 3 or 4 hole grommets, which can accommodate a variety wire diameters ranging from 0.05 to 0.22 inches (1.27 to 5.588mm).

The sealing grommets are offered in 2 different configurations - non split and split. They are also available in 2 material types for different temperature applications. The neoprene grommets are rated for use in -40°C to +75°C applications and are only available as 'non-split' solid type grommets. The fluoroelastomer grommets are rated for use in -40°C to +90°C applications and are available as both solid and split types.

The seal fitting can be ordered as FG4015 series, which are complete assemblies, comprised of an FG4014 series fitting body and an AC4015 series grommet. Alternatively FG4014 fittings can be ordered separately with AC4015 series grommets. The FG4014 fittings **must** only be used in conjunction with AC4015 (non split) or AC4015S (split) series of grommets.













The fitting bodies are available in either Type 303 Stainless Steel or Type 316 Stainless Steel. The cap fittings, which screw into the body and compress the grommet via a compression plug, can be supplied with 1/2 or 3/4 NPT external or internal threads for external connections or with no threaded section. The approximate length of the fittings range from 100mm to 130mm. The Leadwire and Cable Seal Fittings are rated for a maximum of 30VDC @ 30mA

Product part number breakdown:

TABLE 1 CAP FITTING AND BODY				TABLE 2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
1/2		3/4		ST	P1	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200	S	FG4015	P2	SS	2V 220	S	FG4014	P2	SS	AC4015H	2V 200

CONTINUATION OF SCHEDULE TO CERTIFICATE TRAC14ATEX0040U

Table 2 Detail

	HOLE DIA	HOLE CONFIGURATION	GROMMET		SPLIT GROMMET ADDITIONS ONLY			COMPRESSION PLUG	PACKAGING
			STOCK NO.	DRAWING NO.	HOLE SPLIT PATTERN	HOLE PLUG QTY	HOLE PLUG ITEM		
N NEOPRENE	2N130 .130		056-6127	A10161N130					TUBE 068-3097 ----- CAP 068-3098 ----- 3/8" x 2.8" LABEL 031-8035 (AC4015 ONLY)
	2N160 .160		056-6138	A10161N160					
	2N190 .190		056-6128	A10161N190					
	2N220 .220		056-6129	A10161N220					
	2N257 .257		056-6130	A10161N257					
	3N130 .130		056-6133	A10375N130					
3N190 .190	056-6134	A10375N190							
	6N050 .050		056-6137 TEFLON LINE: 056-6670	A10376N					
V FLUOROELASTOMER	1V130 .130		056-6303	A11146V130		N/A	N/A	A211710	3/8" x 2.8" LABEL 031-8035 (AC4015 ONLY)
	1V160 .160		056-6304	A11146V160					
	1V220 .220		056-6306	A11146V220					
	2V130 .130		056-6123	A10161V130		1	A12145-1		
	2V160 .160		056-6136	A10161V160			A12145-2		
	2V190 .190		056-6124	A10161V190			A12145-3		
	2V220 .220		056-6125	A10161V220			A12145-4		
	2V257 .257		056-6126	A10161V257			N/A		
	3V130 .130		056-6131	A10375V130			A12145-1		
	3V160 .160		056-6300	A10375V160		2	A12145-2		
	3V190 .190		056-6132	A10375V190			A12145-3		
	4V130 .130		056-6301	A11145V130			A12145-1		
	4V160 .160		056-6302	A11145V160		3	A12145-2		

A list of controlled Manufacturer's Documents is given in Appendix A to this schedule.

16 Test report No.: TRA-015571-33-00A.

17 "Schedule of Limitations" for Ex Components, if any:

1. The Model FG4014 Leadwire & Cable Seal Fitting must be used in conjunction with AC4015 or AC4015S series grommets.
2. The neoprene grommet material shall not be subjected to service temperatures of less than -40°C or in excess of +75°C.
3. The fluoroelastomer grommet material shall not be subjected to service temperatures of less than -40°C or in excess of +90°C.
4. The seal fittings are offered with 1/2 or 3/4 NPT thread types on the 'process thread'. The fittings are directional and the process thread must be employed for mounting the fittings in their respective housings.

18 Essential health and safety requirements

Covered by application of the standards listed in section 9 of this certificate and the assessment conducted in the test report listed in section 16 of this certificate.

19 Additional information

"Routine tests", if any:

None.

"Special conditions for manufacture", if any:

None.

Other information, if any:

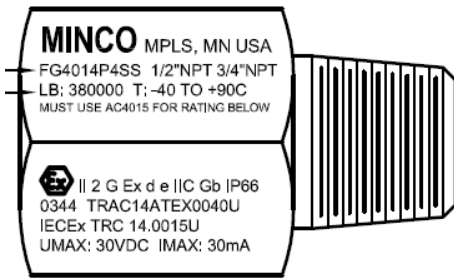
None.

Photographs

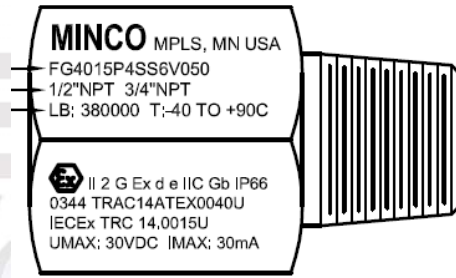


Details of markings

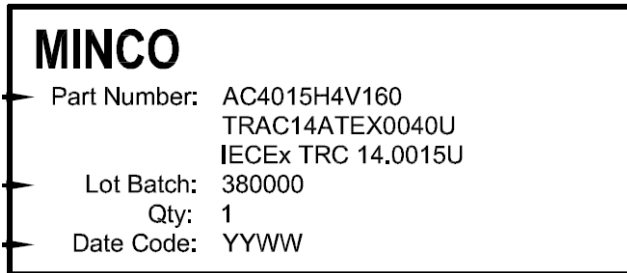
FG4014 Part Marking



FG4015 Part Marking



AC4015 Label Marking



Details of variations to this certificate

- None.

Notes to CE marking

In respect of CE Marking, TRaC Global Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

CONTINUATION OF SCHEDULE TO CERTIFICATE TRAC14ATEX0040U

Notes to this certificate

TRaC certification reference: **TRA-015571-32-00**.

Throughout this certificate, the date format yyyy-mm-dd (year-month-day) is used.



CONTINUATION OF SCHEDULE TO CERTIFICATE TRAC14ATEX0040U

APPENDIX A - LIST OF CONTROLLED MANUFACTURER'S DOCUMENTS

Title:	Drawing No.:	Rev. Level:	Date:
Pressure Seal Fitting FG4015 Series	FG4015	A	2014-07-17
Grommet Accessory Kit for Pressure Seal Fitting AC4015 Series	AC4015	A	2014-07-17
Pressure Seal Fitting FG4014 Series	FG4014	A	2014-07-17
Body Pressure Seal Fitting 1/2 – 1/4 NPT	B211711	*	2013-05-17
Pressure Seal Fitting Final Assembly Models FG4014, FG4015 and AC4015 (2 pages)	B211713	A	2014-07-17
Cap Fitting Pressure Seal No Connection Thread	B12131	A	2012-05-01
Cap Fitting Pressure Seal	B13056	B	2012-05-01
Cap Fitting Pressure Seal	B13782	B	2012-05-01
Cap Fitting Pressure Seal 1/2 -14 NPT	B10570	D	2012-07-17
Cap Fitting Pressure Seal 1/2 -14 NPT	B10159	E	2012-07-17
Body Pressure Seal Fitting 3/4 - 14 NPT	B211712	*	2013-05-17
Installation & Operation Instructions (2 pages)	SPI 00-081	A	*

*no information provided.

