



CSA Group Testing UK Ltd, a CSA Group company, provides the following services:

- SAFETY TESTING
- ENVIRONMENTAL TESTING
- TRAINING
- HAZARDOUS AREA CLASSIFICATION
- PRODUCT CERTIFICATION SERVICES
- FUNCTIONAL SAFETY

CSA Group Testing UK Ltd,
Unit 6, Hawarden Industrial Park,
Hawarden, Deeside,
CH5 3US

The company has UKAS (United Kingdom Accreditation Service) accredited facilities for testing. Certification and EU Notified Body activities are undertaken by Sira Certification Service.

**TESTS UNDERTAKEN AND REPORT PREPARED BY
CSA GROUP TESTING UK LIMITED**
Opinions and interpretations expressed herein
are outside the scope of UKAS Accreditation

Author:

D Boyle
Laboratory Technician

Technical Approval:

S Cork
Laboratory Manager

Date:

6th November 2015

**Tests on a range of coaxial bulkhead connectors
on behalf of GradConn Limited**

Report No: N70049433B
Commercially in Confidence

Copyright © CSA Group Testing UK Ltd
The contents of this document are subject to the terms
and conditions of CSA Group Testing UK Ltd available
free on request.

CONTENTS

Section	Title	Page
1	Introduction	3
2	Description of test sample	4
3	Tests for second characteristic numeral 8	5
4	Overpressure test using compressed air	5
5	Conclusion	5



UNIT6, HAWARDEN INDUSTRIAL PARK
HAWARDEN, CH5 3US. UNITED KINGDOM
TELEPHONE: 01244 670900

TEST REPORT

ISSUED BY CSA GROUP TESTING UK LIMITED

Carried out by CSA Group Testing UK Ltd on behalf of:

GradConn Limited
139 Wuhan Road
Longton Township
Taoyuan County
Taiwan 32549

Project No: 70049433

Commercially in confidence

This report is supplementary to report N70049433A, issued on 6th November 2015

Reason for issue: Typographical error in the type identification list and correction to customer name and address

1 INTRODUCTION

This report refers to the performance of the test samples when tested against the agreed programme. It does not imply that any other samples or products necessarily comply with the requirements of the test programme. In addition, whilst this report maybe freely reproduced as a complete document it may not be abstracted.

Manufacturer:

GradConn Limited

Type Identification:

Coaxial bulkhead connectors:

RFCT-TNC004-F78

RFCT-BNC001-F74

RFCT-SMA002-F78

RFCT-TNC002-F74

RFCT-SMA008-F78

RFCT-SMA003-F78

Serial numbers:

The customer supplied two identical boxes, each fitted with the six various coaxial bulkhead connectors listed above. The enclosures were given identifiers 70049433 #1 & #2 by CSA Group

Standard: IEC 60529:2013
Deviations from Standard: None
Aim: IPX8 (1 m for 48 hours)
IPX8 (5 m for 12 hours)
CSA Test Procedure: LOP 220
CSA Internal Test Report: 15/0459
Sample Delivery Date: 19th October 2015
Tests Conducted Between: 27th October and 3rd November 2015

In addition the customer required an enclosure to be submitted to an internal pressure of 1 bar to observe any leakage from the connectors.

2 DESCRIPTION OF TEST SAMPLE



Figure 1 – Supplied enclosure with coaxial bulkhead connectors fitted



Figure 2 – Showing coaxial bulkhead connectors

2.1 Materials of construction

The primary materials of construction were metals

2.2 Dimensions

The dimensions of the enclosure were, 155 x 155 x 85 (L x W x H)

2.3 Seals

The connectors were fitted with seals that compressed against the inside wall of the enclosure.

2.4 Fasteners

The connectors were tightened to torques specified by the customer. The SMA coupling nuts (gold) were tightened to 1.7 Nm and the *NC coupling nuts (silver) to 2.3 Nm.

3 TEST FOR SECOND CHARACTERISTIC NUMERAL: 8

The test was performed twice. The first at 5 m for 12 hour, then at 1 m for 48 hours.

3.1 Test for protection against water

Reference IEC 60529:2013 clause 14.

The test sample was completely immersed in water. The lowest point of the test sample was located at least 5 m below the surface. The test duration was 12 hours.

3.1.1 Result

On internal inspection of the test sample no water was found.

3.2 Test for protection against water

Reference IEC 60529:2013 clause 14.

The test sample was completely immersed in water. The lowest point of the test sample was located at least 1 m below the surface. The test duration was 48 hours.

3.2.1 Result

On internal inspection of the test sample no water was found.

4 OVERPRESSURE TEST USING COMPRESSED AIR

A pneumatic connection was made to one of the enclosures.

The pressure was gradually increased to a value of 1 bar and then held at that pressure for approximately 60 seconds during which time each connector was visually inspected for leakage using a soap water solution.

4.1 Result

No leakage was observed

5 CONCLUSION

The test sample described in sections 1 and 2, when tested in the manner described in sections 3 and 4, satisfied the requirements of IEC 60529:2013, IP Code X8 (5 m for 12 hours and 1 m for 48 hours).