



# Letter of Attestation

QPS Evaluation Services, Inc.  
81 Kelfield St. Units 8/9  
Toronto ON M9W 5A3

QPS Refer: 857-1  
DATE: December 4, 2013

Manufacturer: Quintex GmbH  
i\_Park Tauberfranken 13, D-97922 Lauda-Königshofen, Germany

Factory: Same as above

Product Polyester Enclosure  
Model QX-P

Testing item: 1. Hosedown Sec 8.6 of UL 50E  
2. Resistance to Impact test (Normal and cold) Sec 56 of UL 746C  
3. 5 inch (127mm) Flame test Sec 52 of UL 746C

QPS Evaluation Services, Inc. attests to the results contained in report 857-1 for the above product which indicates compliance with the requirements of the described clauses of the noted standards above.

This report only relates to the item tested and does not represent the manufacturing process or any other items.

Name: Wai Quan Wu/Billy Liu  
Title: Test Engineer/Test Engineer

Name: Frank Serra  
Title: Laboratory Manager

This report shall not be reproduced except in full, without written authorization from QPS Evaluation Services.





File No.	857-1	Page	1 of 10
----------	-------	------	---------

Total Number of pages in this package 10

TEST LOCATION:			
<input checked="" type="checkbox"/> QPS	<input type="checkbox"/> WMT	<input type="checkbox"/> TMP	<input type="checkbox"/> OTHER
Company Name QPS Evaluation Services Inc.			
Address 81 Kelfield St Unit 8, Toronto Ontario, M9W 5A3			

CLIENT INFORMATION	
Company Name	Quintex GmbH
Address	i_Park Tauberfranken 13, D-97922 Lauda-Königshofen, Germany

AUDIT INFORMATION:			
<input checked="" type="checkbox"/> Description of Tests	Per Standard No.	UL50 / UL 50E CSA 94-1-07/ CSA 94.2.07 NEMA 250	Edition
<input checked="" type="checkbox"/> Tests Conducted by +	Wai Quan Wu/Billy Liu		Printed name Signature
Reviewed and accepted by Responsible Engineer	Frank Serra		Printed Name Signature

<input type="checkbox"/> TESTS TO BE CONDUCTED:			
Test No.	Done	Test Name	<input type="checkbox"/> Comments/Parameters <input type="checkbox"/> Tests Conducted by ++
1	X	Hosedown (Sec. 35) (8.6)	
2	X	Resistance to Impact test (Normal and cold)	Sec 56 of UL 746C
3	X	5 inch (127mm) Flame test	Sec 52 of UL 746C

Test Equipment- See "TEST EQUIPMENT INFORMATION"  
 Samples - See "TEST SAMPLE IDENTIFICATION"

Instructions -  
 + - When all tests are conducted by one person, printed name and signature can be inserted here instead of including printed name and signature on each page containing data. Must indicate number of pages in the data package.  
 ++ - When a test conducted by more than one person, printed name and signature of person conducting the test can be inserted next to the test name instead of including printed name and signature on each page containing data. Must indicate number of pages in the data package.

Special Instructions -



File No.	857-1	Page	2 of 10
----------	-------	------	---------

TEST EQUIPMENT INFORMATION

Inst. ID No.	Instrument Type	Test Number +, Test Title or Conditioning	Function /Range	Last Cal. Date	Next Cal. Date
QPS1533	Temp/RH recorder	All tests	°C / RH	Nov 30, 2012	Nov 30, 2013
QPS1499	Barometer	All tests	954~1073 mPa	Nov 21, 2011	Nov 21, 2013
QPS1575	timer	Hosedown Test; Resistance to Impact test (Normal and cold); 5 inch (127mm) Flame test	s	-	Apr 15, 2015
QPS1255	Measuring tape	Hosedown Test	3.5m	Mar. 18, 2013	Mar. 18, 2014
QPS1554	Caliper	Hosedown Test	0~150mm	Feb. 22, 2013	Feb. 22, 2014
QPS1055	Nozzle	Hosedown Test	1-inch inside diameter	Verified by caliper	Verified by caliper
QPS500	Flow rate meter	Hosedown Test	240L/min	For reference only	For reference only
QPS1446	Refrigerator	Resistance to Impact test (Normal and cold)	-35°C	For reference only	For reference only
QPS245	Steel sphere	Resistance to Impact test (Normal and cold)	0.535kg	May 30, 2013	May 25, 2016
QPS1346	Datalogger	Resistance to Impact test (Normal and cold)	K-Type, °C	Dec 14, 2012	Dec 14, 2013

+ - If Test Number is used, the Test Number must be identified on the data sheet pages or on the Data Sheet Package cover page.

Completion of meter identification on the following pages is optional. Recording of meter information on this page is still required.



File No.	857-1	Page	3 of 10
----------	-------	------	---------

The following additional information is required when using client's or rented equipment, or when a QPS ID Number for an instrument number is not used. The Inst. ID No. below corresponds to the Inst. ID No. above.

Inst. ID No.	Make/Model/Serial Number/Asset No.



File No.	857-1	Page	4 of 10
----------	-------	------	---------

TEST SAMPLE IDENTIFICATION:

The table below is provided to provide correlation of sample numbers to specific product related information. Refer to this table when a test identifies a test sample by "Sample No." only.

Sample Card No.	Date Received	[ ] Test No.	Sample No.	Manufacturer, Product Identification and Ratings
04960	Oct. 22, 2013	1, 2, 3	1/2	Quintex GmbH, Polymeric Enclosure, Model No. QX-P
04960	Oct. 22, 2013	1	2/2	Quintex GmbH, Metal Enclosure, Model No. TPG

+ - If Test Number is used, the Test Number or Numbers the sample was used in must be identified on the data sheet pages or on the Data Sheet Package cover page.



Report No.	857-1	Page No.	5 of 10
Tested by	Wai Quan Wu/ Billy Liu	Signature	

Date	Oct. 25, 2013	Ambient: (°C)	23.2	Atmosphere Pressure (hPa):	1011
Sample tag No	04960		1/2, 2/2	Humidity (% r.h.)	46.7

HOSEDOWN TEST

(SEC. 35) :

METHOD

A sample of the test enclosure and its external mechanisms was sprayed by water from a hose having a 1 in. (25.4 mm) inside diameter nozzle delivering at least 65 gal (246 l) of water per minute. The water stream was directed at the joints of the enclosure from a distance of 10 to 12 ft (3.0 to 3.7 m) and was moved along the joints or surface at a minimum rate of 4 s per linear inch (1.6 s per centimeter). For enclosures having a test length (height plus width plus depth) of 75 in. (1.91 m) or less, the duration of the water stream contact with the enclosure is to be 5 min. For enclosures having a test length exceeding 75 in. (1.91 m), the duration of water stream contact in minutes is to be the test length measured in inches divided by 15 (2.62 times the test length measured in meters).

RESULTS

Model: Polymeric enclosure

Enclosure Size Height x Width x Depth	Test Duration Min:Sec	Results
60cm x 25cm x 12.5cm	5 min	The Type <del>[ 4 ]</del> [ 4X ] <del>[ 6 ]</del> <del>[ 6P ]</del> enclosure <del>[ had ]</del> had no water inside.

Model: Metal enclosure

Enclosure Size Height x Width x Depth	Test Duration Min:Sec	Results
60cm x 20cm x 12.5cm	5 min	<b>The Type <del>[ 4 ]</del> [ 4X ] <del>[ 6 ]</del> <del>[ 6P ]</del> enclosure had water inside.</b>

- Note: 1. Metal enclosure, model: TPG, had water inside as the test results shown above.
2. Per UL 50, an enclosure designated as Type 4 or 4X shall be provided with external mounting means. There shall be no holes through the total thickness of the enclosure walls, except those for supply connections.  
Observation: For metal enclosure, model no. TPG, the screws penetrates into inside enclosure for mounting means.
3. Rubber gasket shall be approved.



QPS Evaluation Services.

Report No.	857-1	Page No.	6 of 10
Tested by	Wai Quan Wu/ Billy Liu	Signature	

Date	Oct. 30, 2013	Ambient: (°C)	23.3	Atmosphere Pressure (hPa):	1012
Sample tag No	04960		1/2	Humidity (% r.h.)	51.7

Resistance to Impact test (Normal and Cold)

Sec. 56 of UL 746C

Each of three samples of the appliance shall be subjected to a single impact of the value ~~[1]~~ [6.8] Joules for the applicable equipment type, on any surface that can be exposed to a blow during intended use. This impact is to be produced by dropping a steel sphere, 50.8 mm (2 inches) in diameter, and weighing 0.535 kg (1.18 lb) mass. The steel sphere shall strike the surface in a location different from those in the other two impacts. For surfaces other than the top on an enclosure, either the sample could be supported on the side and subjected to the ball impact mentioned above, or the steel sphere is to be suspended by a cord and swung as a pendulum, dropping through the vertical distance necessary to cause it to strike the surface. ~~[One][three]~~ sample is employed for the tests in the equipment restrained mode.

In lieu of conducting the room temperature test described, ~~[one][three]~~ specimen of the equipment is cooled to a temperature of ~~+0~~[-35] ±2.0°C for 3 hours. While the unit is still cold, the specimens shall be subjected to the impact.

Results:

Results are acceptable without occurrence of any of the following:

1. Making un-insulated live parts accessible to contact (use the accessibility probe of the product standard for this evaluation);
2. Producing a condition that might affect the mechanical performance of the equipment.
3. Producing a condition that would increase the likelihood of an electric shock.



QPS Evaluation Services.

Report No.	857-1	Page No.	7 of 10
Tested by	Wai Quan Wu/ Billy Liu	Signature	

Date	Oct. 31, 2013	Ambient: (°C)	23.0	Atmosphere Pressure (hPa):	995
Sample tag No	04960		1/2	Humidity (% r.h.)	51.2

5 inch (127mm) Flame test

Sec. 52 of UL 746C

MODEL TESTED	MANUFACTURER	TYPE	THICKNESS	COLOR
QX-P	Quintex GmbH	Polymeric Enclosure	6mm	Black

METHOD

Apparatus - The test flame was obtained by means of a Bunsen burner having a barrel with a length of 89 to 101 mm and an inside diameter of 9.5 to 11.1 mm. The barrel was not equipped with an end attachment.

**Note to lab - Please check box**

The gas supply was  
 technical grade methane  
 natural gas having an energy density of approximately 37 MJ/m<sup>3</sup>.

~~Three samples were tested. After conditioning for 40 hours at 23 ±2°C and 50 ±5 percent relative humidity, the test samples were placed in a full draft air circulating oven for 7 days at a temperature of \_\_\_\_\_°C. This conditioning temperature was 10°C greater than the temperatures measured during the normal temperature test, but not less than 70°C.~~

The samples were then positioned to simulate intended usage.

A layer of surgical cotton was placed approximately 300 mm below the point of the test flame application on the test specimen.

The burner was set in a vertical position, ignited and the flame adjusted so that the overall height was 125 mm and the inner blue cone was 38 mm. With the burner set at an angle 20° from vertical, the tip of the blue cone was applied to three different locations on each of the three samples, in the following areas:

- any interior portion of the enclosure judged as likely to be ignited (by proximity to live arcing parts, oils, and conductors)
- outside enclosure of encapsulated portions
- the outside enclosure, if the flame cannot be applied to the interior.

A series of five flame applications (with each series consisting of five seconds on and five seconds off) were subjected to the samples.





Report No.	857-1	Page No.	8 of 10
Tested by	Wai Quan Wu/ Billy Liu	Signature	

5 inch (127mm) Flame test

Sec. 52 of UL 746C

DATA


	Yes	No
Material continued to burn for more than one minute after fifth 5-second application?		x
Flaming drops or glowing particles that ignited the surgical cotton below the sample?		x
Material destroyed in area of test?		x
Integrity of enclosure affected?		x
Accessibility to live parts afforded?		x

RESULTS

[x] The results were acceptable since all of the following conditions were met:

1. The material did not continue to burn for more than one minute after the fifth 5-second application of the test flame.
2. There were no flaming drops or glowing particles that ignited the surgical cotton below the sample.
3. The material was not destroyed in the area of the test flame to such an extent that the integrity of the enclosure was affected or accessibility to live parts was afforded.



Report No.	857-1	Page No.	9 of 10
Tested by	Wai Quan Wu/ Billy Liu	Signature	

Picture 1: Metal enclosure, Model No. TPG




Picture 2: Metal enclosure, Model No. TPG, bottom side view



Picture 3: Metal enclosure, Model No. TPG, internal view



Report No.	857-1	Page No.	10 of 10
Tested by	Wai Quan Wu/ Billy Liu	Signature	

Picture 4: Polymeric enclosure, Model No. QX-P



Picture 5: Polymeric enclosure, Model No. QX-P, bottom view



Picture 6: Polymeric enclosure, Model No. QX-P, Internal view

