



1 TYPE EXAMINATION CERTIFICATE

2 Equipment or Protective systems intended for use in Potentially
Explosive Atmospheres - Directive 2014/34/EU

3 Type Examination Certificate No: FM15ATEX0066X

4 Equipment or protective system: Minifast Process Wiring System
(Type Reference and Name)

5 Name of Applicant: Turck Inc

6 Address of Applicant: 5000 Fernbrook Ln N
Plymouth, MN 55441
United States of America

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

8 FM Approvals Europe Ltd. certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report number:

3052174 dated 04th July 2016

9 Compliance with the Essential Health and Safety Requirements, with the exception of those identified in item 15 of the schedule to this certificate, has been assessed by compliance with the following documents:

EN IEC 60079-0:2018, EN IEC 60079-7:2015 + A1:2018 and EN 60079-15:2010

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.

11 This Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

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



II 3 G Ex nA IIC T5 Gc -40°C ≤ Ta ≤ +70°C (≤ 90°C with I ≤ 600mA)

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Martin Crowe
Certification Manager, FM Approvals Europe Ltd.

Issue date: 09th December 2021

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13 Description of Equipment or Protective System:

The Turck process wiring system is comprised of male and female minifast cords, receptacles, connector guards, and junction boxes. The cords, receptacles, and junction boxes have varying pinouts or number of ports. The Lokfast connector guard prevents disconnection without the use of a tool.

Operation Temperature Ranges:

The ambient operating temperature range is -40°C to +70°C. For specific model code configurations, a maximum ambient temperature of +82°C, +85°C, or +90°C is permitted if the current is reduced as detailed in Control Drawing NI-2.422 and NI-2.425.

Electrical Data:

The Turck cords and receptacles are supplied with voltages up to 300V.

A-Size Minifast Cords

Model No.	Description
P-Xa-RKVZ bc-de-fMg	Female A-size cord with 7/8" coupling thread, standard
P-Xa-RKVBZ bc-de-fMg	Female A-size cord with 7/8" coupling thread, large diameter
P-Xa-RSVZ bc-de-fMg	Male A-size cord with 7/8" coupling thread, standard
P-Xa-RSVBZ bc-de-fMg	Male A-size cord with 7/8" coupling thread, large diameter

- a = Approval Code: 1 or blank
- b = Number of Conductors: 2, 3, 4, 5, or 6
- c = Pinout: 0-9, 00-09, 10-99
- d = Cable Type: 3- or 4-digit number
- e = Cable Option: XL or blank
- f = Lead/Cable Length
- g = Accessory Option: /S1331, /S1599, /S3400, or blank

B-Size Minifast Cords

Model No.	Description
P-Xa-RKVZ bc-de-fMg	Female B-size cord with 1" coupling thread
P-Xa-RSVZ bc-de-fMg	Male B-size cord with 1" coupling thread

- a = Approval Code: 1 or blank
- b = Number of Conductors: 7 or 8
- c = Pinout: 0-9, 00-09, 10-99
- d = Cable Type: 4-digit number
- e = Cable Option: XL or blank
- f = Lead/Cable Length
- g = Accessory Option: /S1331, /S1599, /S3400, or blank

C-Size Minifast Cords

Model No.	Description
P-Xa-RKVZ bc-de-fMg	Female C-size cord with 1 1/8" coupling thread
P-Xa-RSVZ bc-de-fMg	Male C-size cord with 1 1/8" coupling thread

- a = Approval Code: 1 or blank
- b = Number of Conductors: 9, 10, 12, or 19
- c = Pinout: 0-9, 00-09, 10-99
- d = Cable Type: 4-digit number

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e = Cable Option: XL or blank
f = Lead/Cable Length
g = Accessory Option: /S1331, /S1599, /S3400, or blank

A-Size Minifast Receptacles

Model No.	Description
P-X-RaFV bcd-e/fg	A-size receptacle with 7/8" coupling thread

a = K (female) or S (male)
b = Number of Conductors: 2, 3, 4, 5, or 6
c = Pinout: 0-9, 00-09, 10-99
d = Drain connected: D or blank
e = Lead/Cable Length
f = Entry Thread: 14.5/NPT, 14.75/NPT, M20 or M20/S3526
g = Accessory Option: /S1331, /S1599, /S3399, or blank

B-Size Minifast Receptacles

Model No.	Description
P-X-RaFV bcd-e/fg	B-size receptacle with 1" coupling thread

a = K (female) or S (male)
b = Number of Conductors: 7 or 8
c = Pinout: 0-9, 00-09, 10-99
d = Drain connected: D or blank
e = Lead/Cable Length
f = Entry Thread: 14.5/NPT, 14.75/NPT, M20 or M20/S3526
g = Accessory Option: /S1331, /S1599, /S3399, or blank

C-Size Minifast Receptacles

Model No.	Description
P-X-RaFV bcd-e/fg	C-size receptacle with 1 1/8" coupling thread

a = K (female) or S (male)
b = Number of Conductors: 9, 10, 12 or 19
c = Pinout: 0-9, 00-09, 10-99
d = Drain connected: D or blank
e = Lead/Cable Length
f = Entry Thread: 14.5/NPT, 14.75/NPT, M20 or M20/S3526
g = Accessory Option: /S1331, /S1599, /S3399, or blank

Minifast Junction Box

Model No.	Description
P-X-a-b-c RdFVef [c RdFVef]* [c RdFVef]* - RdFVgfh	Minifast ports, A-, B-, or C-size home-run connector

a = Enclosure material: SS or blank
b = Total number of ports 3, 4, 5, 6, 7 or 8
c = Number of ports of a given type if all ports are not identical: -1, -2, -3, -4, -5, -6, -7 or blank
d = Port connector gender: K or S
e = Number of port connector conductors: 2, 3, 4, 5, 6, 7, or 8
f = Wiring option: 0, 1, 2, 3, . . . 9, 01, 02, 03, . . . 99
g = Home-run connector conduit count: 4, 5, 6, 7, 8, 9, 10, 12 or 19.

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h = Accessory Option: /S1331, /S1599, or blank

Field Wireable Front Panel Mount Receptacles

Model No.	Description
081-004-293 or P-X-RSFV 126/Flange	Field Wireable Front Panel Mount Receptacle

14 **Specific Conditions of Use:**

1. The Lokfast guards present a potential electrostatic charging hazard. Clean only with a damp cloth.
2. Elevated ambient temperatures are permitted for specific configurations per control drawing NI-2.422 and NI-2.425.

15 **Essential Health and Safety Requirements:**

The relevant EHSRs that have not been addressed by the standards listed in this certificate have been identified and assessed in the confidential report identified in item 8.

16 **Test and Assessment Procedure and Conditions:**

This Type Examination Certificate is the result of testing of a sample of the product submitted, in accordance with the provisions of the relevant specific standard(s), and assessment of supporting documentation. It does not imply an assessment of the whole production.

Whilst this certificate may be used in support of a manufacturer's claim for CE Marking, FM Approvals Europe Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

This Certificate has been issued in accordance with FM Approvals Europe Ltd's ATEX Certification Scheme.

17 **Schedule Drawings**

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by FM Approvals Europe Ltd.

18 **Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
05 th July 2016	Original Issue.
23 rd November 2016	<u>Supplement 1:</u> Report Reference: 3059890 dated 21 st November 2016. Description of the Change: Documentation updated. Label changed to add IECEx marking.
21 st August 2017	<u>Supplement 2:</u> Report Reference: 3060887 dated 18 th August 2017. Description of the Change: Adding level of protection "ec" Additional model options.
14 th December 2018	<u>Supplement 3:</u> Report Reference: RR216656 dated 13th December 2018.

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	Add shortened M20 thread option. Added option M20/S3526, previous M20 is now short version new M20/3526 is now long version.
05 th April 2019	<u>Supplement 4:</u> Description of the Change: Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809.
10 th April 2020	<u>Supplement 5:</u> Report Reference: PR452231 dated 07 th April 2020. Description of the Change: Added the Field Wireable Front Panel Mount Receptacles to the Minifast process wiring system
10 th November 2021	<u>Supplement 6:</u> Report Reference: PR458717 dated 21 st October 2021. Description of the Change: Update standards to EN IEC 60079-0 2018 edition, update EN 60079-7 to add A1:2018 and update documents
09 th December 2021	<u>Supplement 7:</u> Report Reference: RR230806 dated 9 th December 2021. Description of the Change: Documentation updates for the addition of an alternate encapsulant.

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Blueprint Report

Turck Inc (1000001033)

Class No 3611

Original Project I.D. 3052174

Certificate I.D. FM15ATEX0066X

<u>Drawing No.</u>	<u>Revision Level</u>	<u>Drawing Title</u>	<u>Last Report</u>
10240585	E	Instruction Manual, Minifast	PR458717
NI-2.420	F	ATEX Ex eb and US AEx eb Cordsets, Receptacles, and Junctions	RR230806
NI-2.422	E	FM Control Drawing for ATEX Ex eb and US AEx eb Cords, Receptacles and Junctions	PR458717
NI-2.425	A	Installation of Turck Field Wireable Front Panel Mount Receptacles	PR452231
NI-2.512	B	FM Approved Field Wireable Front Panel Mount Receptacles	RR230806