

Technical
Specifications

fischer Rugged Flash Drive

New



*Rugged Solution for Safe Data Storage
in Harsh Environment*



Headquarters
Fischer Connectors SA
Ch. du Glapin 20
1162 Saint-Prex
Switzerland
Phone +41 21 800 95 95
mail@fischerconnectors.ch
www.fischerconnectors.com

Edition 1.3

fischer
CONNECTORS

Introduction to Fischer Rugged Flash Drive

Fischer Rugged Flash Drive is an extremely tough USB memory stick specially designed for safe transportation & storage of sensitive data in harsh environment.

The memory module is securely mounted within a rugged casing designed to provide full protection against extreme environmental conditions.

The unique Fischer circular connector interface, combined with durable encapsulation technique, guarantees data safety in case of loss or theft.

Fischer Rugged Flash Drive is equipped with high speed USB 2.0 flash memory, signaling & protocol certified.

Miniature and lightweight, Fischer Rugged Flash Drive is the smart portable solution for daily field use. It is ideally suited for harsh environment applications such as Defense & Security, Underwater, Oil & Gas, Industry, Medical and many others.

Its flexible modular design including a large selection of body styles, sizes, contact configurations and memory capacities, is perfectly adapted for custom solutions.

Product Features



1. Data protection in harsh environment



- Sealing IP68/69K even unmated
Down to 120 m even unmated



- Extreme temperature resistant
-40°C to +85°C operating temperature



- Shock & vibration resistant
Withstand min. 26 x 1.5 m drops

2. Safe data storage solution



- Unique circular connector interface
- High speed USB 2.0 signaling & protocol certified

3. Ultra portable



- Miniature for easy storage & transport
- Lightweight

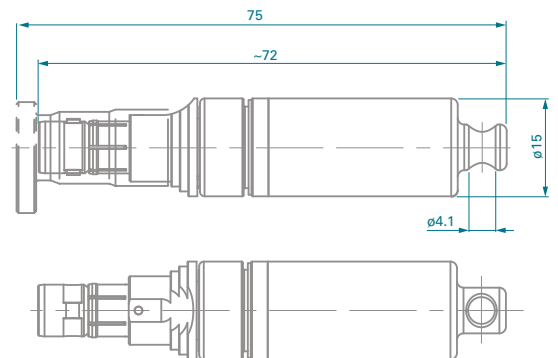
4. Flexible modular design



- Large selection of body styles, sizes, contact configurations and memory capacities
- Customizable solution

Dimensions

Fischer Rugged Flash Drive



Protection cap is included with Fischer Rugged Flash Drive

Standard Fischer Rugged Flash Drive connector interface: Fischer UltiMate™ Original Series UP01 in size 08¹⁾

Flexible modular design: Please contact us for other connector body styles and sizes

Standard Receptacle

Fischer UltiMate™ Original Series receptacle UR01 or UR02 in size 08¹⁾



UR01



UR02

Adapter solution: Please contact us

Flexible modular design: Please contact us for other connector body styles and sizes

Contact Configuration

Standard Pin Numbering

Pin	Name	Description
1	D-	Data-
2	VCC	+5V
3	GND	Ground
4	D+	Data+

Standard Fischer Rugged Flash Drive configuration:
4 contacts, standard polarity

Pin layout / PCB hole pattern¹⁾

Flexible modular design: Please contact us for other contact configurations

Part Numbering

Standard Fischer Rugged Flash Drive: FD USB2-004 UP01L08 M004 BK1

¹⁾ See Fischer UltiMate™ Original Series Technical Specifications for more details

Technical Data

USB Properties

Characteristic	Value
Capacity	Standard: 4 GB ¹⁾
Specification	Hi-Speed USB 2.0 (compatible with USB 1.1) signaling and protocol
System Requirements	Windows® 7, Vista, XP, 2000 / Linux / Mac® OS X 10.0 and higher

¹⁾ Flexible modular design: please contact us for other USB memory capacity.

Environmental & Mechanical Data

Characteristic	Value	Standard
Sealing Performance Mated and Unmated	IP68: 120 m submersion for 24 hours IP69K ²⁾	IEC 60529
Operating Temperature Range	-40°C to +85°C	IEC 60512-6 Test 11 i+j IEC 60068-2-14-Nb
Corrosion Resistance	Salt mist, 500 hours ³⁾ , 5% salt solution, 35°C	IEC 60068-2-11 Test Ka MIL-STD-202 Method 101 Condition A EIA-364-26
Endurance	10 000 mating cycles	IEC 60512-5-9a EIA-364-09
Vibration	10 to 2 000 Hz, 1.5 mm or 15 g, 12 sweep cycles per axis, 20 minutes per 10-2000-10 Hz sweep cycle, no discontinuity > 1 µs	MIL-STD-202 Method 204 – Condition B
Shock	26 x 1.5 m drops	MIL-STD-810 Method 516 procedure IV (Transit Drop)
Mating / Unmating Force	Mating typ. 20 N Unmating typ. 15 N	IEC 60512-7-13a

²⁾ Dust tight, protected against the effects of the high-pressure liquids.

The test requirements for IP69K exist only in DIN 40050-9, the German version of IEC 60259.

³⁾ Preserved mechanical and electrical functionalities.

Electrical Data

Characteristic	Typical Values	Standard
EMI Performance	Compliant with CE 102 and RE 102 requirements	MIL-STD-461F
Voltage Dips and Interruption	V70% for 3 ms V40% for 1 ms V0% for 300 µs	IEC 61000-4-29:2000
ESD Protection	Directly conducted ±8 kV Air conducted ±15 kV	IEC 61000-4-2:2001

Material & Surface Treatments

Metal Parts	Material		Finish	
	Designation	ISO	Designation	Standard
Connector Housing	Brass CuZn39Pb3		CW614N UNS C 38500	Chrome over Nickel SAE-AMS2460
Casing Housing	Brass CuZn39Pb3		CW614N UNS C 38500	Chrome over Nickel SAE-AMS2460
Contacts	Brass CuZn39Pb3		CW614N UNS C 38500	1 µm Gold over Nickel MIL-DTL-45204D Type I ASTM B488
Insulator	International Symbol	Flammability		
Insulator	PBT	UL 94 V-0		

Cap: TPV (Santoprene™) (Flammability UL 94HB)



Our products are RoHS compliant and conform with the EC Directive 2002/95/EC

Headquarters

FISCHER CONNECTORS SA
Ch. du Glapin 20
1162 Saint-Prex
Switzerland
Phone +41 21 800 95 95
mail@fischerconnectors.ch

Subsidiaries

United-States and Canada

FISCHER CONNECTORS Inc.
Atlanta, GA
Phone +1 678 393 5400
Toll free : 800 551 0121
www.fischerconnectors.com
mail@fischerconnectors.com

France

FISCHER CONNECTORS Sarl
Paris
Phone +33 1 5578 2578
Appel gratuit : 0 800 590 444
www.fischerconnectors.fr
mail@fischerconnectors.fr

Germany and Eastern Europe

FISCHER CONNECTORS GmbH
Zorneding
Phone +49 8106 37722 0
Gebührenfrei : 0 800 233 3233
www.fischerconnectors.de
mail@fischerconnectors.de

Italy

FISCHER CONNECTORS Srl
Monza
Phone +39 039 734 072
www.fischerconnectors.it
mail@fischerconnectors.it

Sweden and Finland

FISCHER CONNECTORS AB
Billdal
Phone +46 31 910 420
www.fischerconnectors.se
mail@fischerconnectors.se

United Kingdom, Ireland and India

FISCHER CONNECTORS Ltd.
Havant/Hampshire
Phone +44 23 9245 9600
Toll free : 0 800 432 0301
www.fischerconnectors.co.uk
sales@fischerconnectors.co.uk

Asia

FISCHER CONNECTORS ASIA Ltd.
Hong Kong
Phone +852 2620 6118
www.fischerconnectors.hk
mail@fischerconnectors.hk



www.fischerconnectors.com



Visit
www.fischerconnectors.com/contacts
to find details on Fischer Connectors authorized distributors