MVK Fusion CIP Safety

MVK ME FDI6/3 FDO2/1 DIO4 IOL2 M12L 5P

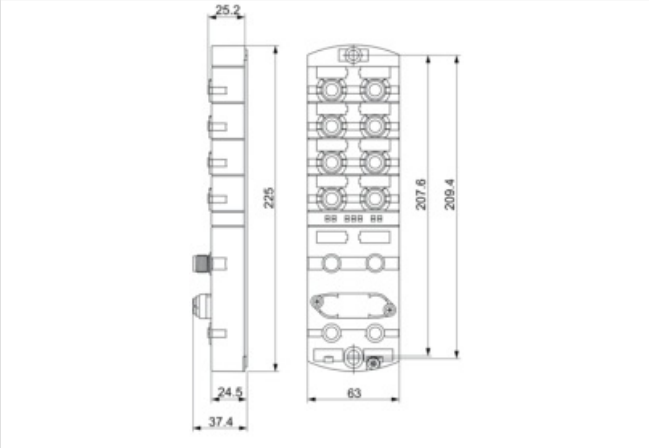
Art.No.: 55514
Weight: 0,920 kg
Country of origin: DE
Model designation: MVK ME FDI6/3 FDO2/1 DIO4 IOL2 M12L 5P

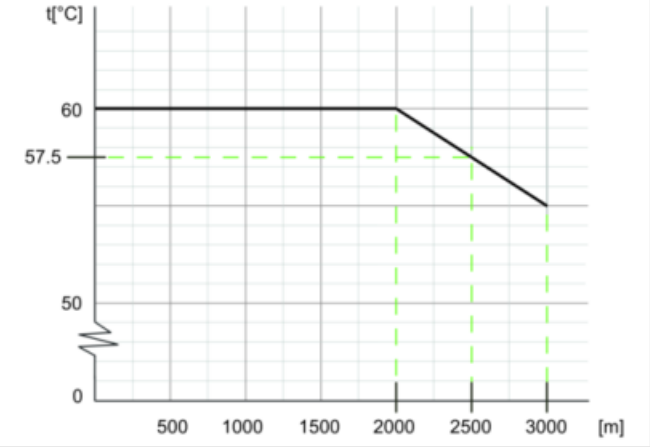
One module for maximum varietyThe special thing about MVK Fusion is its diversity. The Ethernet/IP CIP-Safety module combines three elementary functions of installation technology – digital standard sensors and actuators, digital safety-related sensors and actuators and IO-Link.With MVK Fusion, fewer fieldbus modules are required per modular unit, in the best case just one. This offers attractive opportunities for a wide range of automation applications.Further information can be found at MVK Fusion CIP Safety

Link to Product

Illustration







Product may differ from Image

The information in this Product-PDF has been compiled with the utmost care.
Liability for the correctness completeness and topicality of the information is restricted to gross negligence. Version: 2026-10-14

Commercial data	
Manufacturer name	Murrelektronik GmbH
Manufacturer address	Grabenstraße 29, 71570 Oppenweiler, GERMANY
URL Webshop	https://shop.murrelektronik.com/55514
GTIN	4065909089545
EU-Customs tariff number	85389099
US-Customs tariff number	8538908180
Intended use	For professional use only, Indoor use only
Suitable for outdoor use	No
ECLASS-6.1	27242604
ECLASS-7.0	27242604
ECLASS-8.0	27242604
ECLASS-9.0	27242604
ECLASS-10.1	27242604
ECLASS-11.1	27242604
ECLASS-12.0	27242604
ETIM-7.0	EC001599
ETIM-8.0	EC001599
ETIM-9.0	EC001599
ETIM-10.0	EC001599
customs tariff number	85389099
EAN	4065909089545
Packaging unit	1
Safety codes	
Category (EN ISO 13849-1)	4
PFHd (IEC 61508)	1.2 E-9/h
Performance level (EN ISO 13849-1)	e
SIL (EN/IEC 61508, EN IEC 62061)	3
SIL claim limit (EN IEC 62061)	3
MTTFd (EN ISO 13849-1)	360 a
Electrical data | Supply	
Operating voltage US1 DC	min. 20.4 V
Operating voltage US1 DC	max. 28.8 V
Idle current US 1 max.	230 mA
Total current in individual operation US1 max.	3.7 A
Operating voltage US2 DC	min. 20.4 V
Operating voltage US2 DC	max. 28.8 V
Total current in line operation US1 max.	16 A @ ≤35 °C
Total current in individual operation US2 max.	9.4 A @ ≤50 °C
Total current in line operation US2 max.	16 A @ ≤35 °C
Electrical data | Input	
Input voltage DC min.	0 V
Input voltage DC max.	30 V
Input current	3.3 mA

The information in this Product-PDF has been compiled with the utmost care.
Liability for the correctness completeness and topicality of the information is restricted to gross negligence. Version: 2026-10-14

Input characteristic (IEC 61131-2)	Type 3
Sensor supply per port max.	max. 700 mA @ PIN 1
Polarity	PNP
Input delay	min. 1 ms
Input delay	max. 15 ms
Input delay adjustable	Yes
Electrical data | Output	
Output current per pin max.	2 A
Total current outputs max.	4 A
Switch on delay max.	0.5 ms
Switch off delay max.	0.5 ms
Switching frequency ohmic	50 Hz
Automatic restart	No
Inductive load max.	25 H @ ≤0.5 A, <1 Hz, 24 V, 2 H @ ≤1 A, <1 Hz, 24 V, 0.32 H @ ≤2 A, <1 Hz, 24 V, 2 H @ ≤0.5 A, >1 Hz, 24 V, 0.25 H @ ≤1 A, >1 Hz, 24 V, 0.2 H @ ≤2 A, > 1 Hz, 24 V
Capacitive load max.	2 mF
Electrical data | F-Input	
Sensor supply per port max.	700 mA
Input voltage DC min.	0 V
Input voltage DC max.	30 V
Input characteristic (IEC 61131-2)	Type 3
Input current	3.8 mA
Polarity	PNP
Input delay	3 ms
Input delay	15 ms
Input delay adjustable	Yes
Length test pulse	850 µs
Electrical data | F-Output	
Output current per pin max.	2 A
Short-term output current per pin min.	max. 4 A @ max. 1 ms
Total current max.	max. 2 A @ PIN 2 & 4 (X3)
Automatic restart	No
Switching frequency ohmic	max. 10 Hz
Inductive load max.	25 H @ ≤0.5 A, <1 Hz, 24 V, 2 H @ ≤1 A, <1 Hz, 24 V, 0.32 H @ ≤2 A, <1 Hz, 24 V, 2 H @ ≤0.5 A, >1 Hz, 24 V, 0.25 H @ ≤1 A, >1 Hz, 24 V, 0.2 H @ ≤2 A, > 1 Hz, 24 V
Capacitive load max.	2 mF
Switch on delay max.	0.5 ms
Switch off delay max.	0.5 ms
Switching behavior	PP, PPM, PM @ Pin 2 & 4 (X3)
Switching behavior safe actuator switch-off	PP @ Pin 2 (X7)
Read-back time min.	0.5 ms
Read-back time max.	500 ms
Read-back time adjustable	Yes
Electrical data | IO-Link SI-Mode	
Sensor supply per port max.	max. 700 mA @ PIN 1
Input voltage DC min.	0 V
Input voltage DC max.	30 V
Input characteristic (IEC 61131-2)	Type 1
Input current	6.3 mA
Polarity	PNP
Input delay time	3.5 ms
Input delay adjustable	No
Industrial communication | Bus data	

The information in this Product-PDF has been compiled with the utmost care.
Liability for the correctness completeness and topicality of the information is restricted to gross negligence. Version: 2026-10-14

Supported protocol	Ethernet/IP
Data transmission rate Ethernet max.	100 Mbit/s
Industrial communication | Ethernet/IP	
Addressing	DHCP, Rotary switch, Webserver
Connection types	Exclusive Owner, Listen Only, Safety Input, Safety Output
Device Level Ring (DLR)	Beacon-based
Industrial communication | IO-Link	
transmission rate	COM1, COM2, COM3
Automatic baudrate detection	automatic
Device protection | Electrical	
Installation height max. ASL	3000 m
Degree of protection (EN IEC 60529)	IP67
Protection class (EN IEC 61140)	III
Invers-polarity protection	Yes
Pollution Degree	2
Over voltage protection	Yes
Overload protection	Yes
Short-circuit protection	Yes
Short-circuit current	17 A
Duration electronic switch-off	150 µs
Device protection | Mechanical	
Free fall (EN 61131-2)	0.3 m
Shock resistance (EN IEC 60068-2-27)	50 g 11 ms
Vibration resistance (EN IEC 60068-2-6)	3 mm (10 ... 58 Hz), 20 g (58 ... 150 Hz)
Mechanical data | Material data	
housing	Zinc die-casting
Mechanical data | Mounting data	
Net weight	920 g
Height	225 mm
Width	63 mm
Depth	37.4 mm
Mounting method	screwed
Environmental characteristics | Electromagnetic compatibility	
Interference emission	EN IEC 61000-6-4
Immunity to interference	IEC 61326-1, IEC 61326-3-1, EN 61000-6-7, IEC/EN 61131-2
Environmental characteristics | Climatic	
Ambient temperature (operation)	-30 °C … 60 °C
Ambient temperature (storage, transport)	-40 °C … 85 °C
Relative humidity (operation)	10 % … 95 %
Assembly location	Interior
Technical Data | Reliability	
MTTF (EN/IEC 61709, EN ISO 13849-1, SN 29500)	40 a @ 40 °C
Environmental product conformity	
REACH ((EC) 1907/2006)	compliant
REACH SVHC ((EC) 1907/2006)	Lead (Pb) CAS 7439-92-1
RoHS (2011/65/EU, (EU) 2015/863)	compliant
RoHS-Exemption (2011/65/EU)	keine RoHS-Ausnahme, 7(a), 7(c)-I
China RoHS (SJ/T 11364, GB/T 26572)	EFUP-25
California Proposition 65	Nickel (Ni) CAS 7440-02-0

The information in this Product-PDF has been compiled with the utmost care.
Liability for the correctness completeness and topicality of the information is restricted to gross negligence. Version: 2026-10-14

WEEE (2012/19/EU)	Category 5
Halogen content	not halogen-free
Lead-free	No
Conformity	
CE	2014/30/EU, 2011/65/EU, (EU) 2015/863, 2006/42/EC
UKCA	The Electromagnetic Compatibility Regulations 2016, The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012, The Supply of Machinery (Safety) Regulations 2008
Approvals	
UL Listed (US, CA)	E201820
Connection type 8-8	
Connection type 1	X0, X1, X2
Connection type 2	X3
Connection type 3	X4, X5
Connection type 4	X6
Connection type 5	X7
Connection type 6	XD1
Connection type 7	XD2
Connection type 8	XF1, XF2
Family construction form	M12
No. of poles	5
Coding	A
Gender	female
PIN 1	24 V DC (US 1) Test Pulse P 4
PIN 2	FDI
PIN 3	0 V (US 1)
PIN 4	FDI
PIN 5	24 V DC (US 1) Test Pulse P 2
Family construction form	M12
No. of poles	5
Coding	A
Gender	female
PIN 1	n.c.
PIN 2	FDO
PIN 3	0 V (US 2)
PIN 4	FDO
PIN 5	n.c.
Family construction form	M12
No. of poles	5
Coding	A
Gender	female
PIN 1	24 V DC (US 2)
PIN 2	DI / DO
PIN 3	0 V (US 2)
PIN 4	DI / DO
PIN 5	FE
Family construction form	M12
No. of poles	5
Coding	A
Gender	female
PIN 1	24 V DC (US 1)
PIN 2	DI
PIN 3	0 V (US 1)
PIN 4	DI / IO-Link Class A

The information in this Product-PDF has been compiled with the utmost care.
Liability for the correctness completeness and topicality of the information is restricted to gross negligence. Version: 2026-10-14

PIN 5	n.c.
Family construction form	M12
No. of poles	5
Coding	A
Gender	female
PIN 1	24 V DC (US 1)
PIN 2	FDO
PIN 3	0 V (US 1)
PIN 4	DI / IO-Link Class B
PIN 5	0 V (US 2)
Family construction form	M12
No. of poles	5
Coding	L
Gender	male
PIN 1	24 V DC (US 1)
PIN 2	0 V (US 2)
PIN 3	0 V (US 1)
PIN 4	24 V DC (US 2)
PIN 5	FE
Family construction form	M12
No. of poles	5
Coding	L
Gender	female
Mounting method	inserted, screwed
PIN 1	24 V DC (US 1)
PIN 2	0 V (US 2)
PIN 3	0 V (US 1)
PIN 4	24 V DC (US 2)
PIN 5	FE
Family construction form	M12
No. of poles	4
Coding	D
Gender	female
PIN 1	TD +
PIN 2	RD +
PIN 3	TD -
PIN 4	RD -
PIN 5	n.c.

The information in this Product-PDF has been compiled with the utmost care.
Liability for the correctness completeness and topicality of the information is restricted to gross negligence. Version: 2026-10-14