

MPS 5/03 D11 S F2 TN B B

Weidmüller Interface GmbH & Co. KG

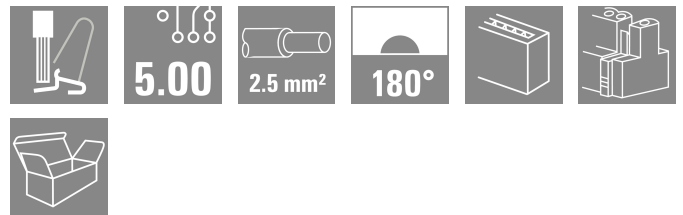
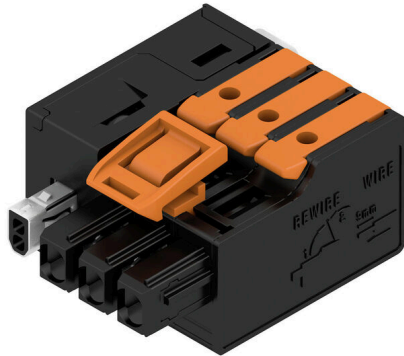
Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmuller.com

Product image

OMNIMATE® 4.0 - the next evolution step
OMNIMATE® 4.0 follows the trend of One Cable Technology (OCT). The modular concept enables the fast configuration of hybrid interfaces, which transmit data, signals and energy in a single connector. As a result, you can reduce the cabling effort in a wide variety of applications, simplify maintenance and accelerate automation processes. The unique SNAP IN connection is the backbone and speeds up the wiring process.

The fastest connection yet

- Fast, safe, and tool-free wiring due to unique SNAP IN connection
 - Ready for Robot through "wire ready" delivery with open clamping point
 - Optical and acoustic feedback indicates proper wiring
- Create your own configuration
- Flexible configuration and ordering via the Weidmüller Configurator (WMC)
 - Dispatch within three days – even for individually configured products
 - Automatic offer preparation for the configured product

Simply configuration of modular hybrid connectors

- Flexible combination options for power, signal and data transmission
- Future-proof Single-Pair Ethernet technology

General ordering data

Version	PCB plug-in connector, female plug, Pitch in mm (P): 5.00 mm, Number of poles: 3, 180°, Box
Order No.	2741890000
Type	MPS 5/03 D11 S F2 TN B B
GTIN (EAN)	4064675055341
Qty.	72 items
Product data	IEC: 400 V / 26.8 A / 0.5 - 4 mm ² UL: 300 V / 18.5 A / AWG 18 - AWG 14
Packaging	Box

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Technical data

Approvals

ROHS	Conform
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Dimensions and weights

Depth	36 mm	Depth (inches)	1.4173 inch
Height	17.53 mm	Height (inches)	0.6902 inch
Width	25.2 mm	Width (inches)	0.9921 inch
Net weight	23.85 g		

Temperatures

Ambient temperature	-50 °C...125 °C
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Environmental Product Compliance

RoHS Compliance Status	Compliant without exemption
REACH SVHC	No SVHC above 0.1 wt%

System Parameters

Product family	OMNIMATE 4.0
Type of connection	Field connection
Wire connection method	SNAP IN with lever
Pitch in mm (P)	5.00 mm
Pitch in inches (P)	0.197 "
Conductor outlet direction	180°
Number of poles	3
L1 in mm	10.00 mm
L1 in inches	0.394 "
Number of rows	1
Pin series quantity	1
Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch
Touch-safe protection acc. to DIN VDE 0470	IP 20
Protection degree	IP20
Volume resistance	≤5 mΩ
Stripping length	9 mm
Stripping length tolerance	min. 8 mm max. 10 mm
Plugging cycles	25
Plugging force/pole, max.	8.5 N
Pulling force/pole, max.	8.5 N

Material data

Insulating material	PBT GF	Colour	black
Colour of operational elements	orange	Colour chart (similar)	RAL 9011
Insulating material group	I	Comparative Tracking Index (CTI)	≥ 600
Moisture Level (MSL)		UL 94 flammability rating	V-0
Contact material	Cu-alloy	Contact surface	tinned
Storage temperature, min.	-25 °C	Storage temperature, max.	55 °C
Operating temperature, min.	-40 °C	Operating temperature, max.	85 °C

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Technical data

Conductors suitable for connection

Clamping range, min.	0.34 mm ²
Clamping range, max.	4 mm ²
Solid, min. H05(07) V-U	0.5 mm ²
Solid, max. H05(07) V-U	2.5 mm ²
Flexible, min. H05(07) V-K	0.5 mm ²
Flexible, max. H05(07) V-K	4 mm ²
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.34 mm ²
w. plastic collar ferrule, DIN 46228 pt 4, max.	2.5 mm ²
w. wire end ferrule, DIN 46228 pt 1, min.	0.34 mm ²
w. wire end ferrule, DIN 46228 pt 1, max.	2.5 mm ²
Outer diameter of insulation, max.	4.00 mm

Clampable conductor	Cross-section for conductor connection		
	wire end ferrule	nominal	0.34 mm ²
	wire end ferrule	Stripping length	nominal 10 mm
		Recommended wire-end ferrule	H0.34/12 TK
		Stripping length	nominal 12 mm
		Recommended wire-end ferrule	H0.5/16 OR
	wire end ferrule	Stripping length	nominal 10 mm
		Recommended wire-end ferrule	H0.5/10
		Stripping length	nominal 12 mm
		Recommended wire-end ferrule	H0.75/16 W
	wire end ferrule	Stripping length	nominal 10 mm
		Recommended wire-end ferrule	H0.75/10
		Stripping length	nominal 12 mm
		Recommended wire-end ferrule	H1.0/16 GE
	wire end ferrule	Stripping length	nominal 10 mm
		Recommended wire-end ferrule	H1.0/10
		Stripping length	nominal 12 mm
		Recommended wire-end ferrule	H1.5/16 R
	wire end ferrule	Stripping length	nominal 10 mm
		Recommended wire-end ferrule	H1.5/10
		Stripping length	nominal 12 mm
		Recommended wire-end ferrule	H2.5/15D BL
	wire end ferrule	Stripping length	nominal 10 mm
		Recommended wire-end ferrule	H2.5/10

Reference text The outside diameter of the plastic collar should not be larger than the pitch (P). Length of ferrules is to be chosen depending on the product and the rated voltage.

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Technical data

Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	26.8 A
Rated current, max. number of poles (Tu=20°C)	19.7 A	Rated current, min. number of poles (Tu=40°C)	23.1 A
Rated current, max. number of poles (Tu=40°C)	16.9 A	Rated voltage for surge voltage class / pollution degree II/2	400 V
Rated voltage for surge voltage class / pollution degree III/2	320 V	Rated voltage for surge voltage class / pollution degree III/3	250 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	4 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	4 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	4 kV		

Rated data acc. to UL 1059

Rated voltage (Use group B / UL 1059)	300 V	Rated voltage (Use group D / UL 1059)	300 V
Rated current (Use group B / UL 1059)	18.5 A	Rated current (Use group D / UL 1059)	10 A
Wire cross-section, AWG, min.	AWG 18	Wire cross-section, AWG, max.	AWG 14

Technical data - hybrid (data)

Connection technology (Data)	Insulation displacement connection (IDC)	Connector Standard (Data)	IEC 63171-2
Contact material (Data)	Bronze tin-plated	Housing main material (Data)	zinc diecast nickel-plated
Material locking lever (Data)	Stainless steel	Shielding material (Data)	bronze tin-plated
Material insulator (Data)	PC UL94 V0	Sheath diameter, min. (Data)	3.6 mm
Sheath diameter, max. (Data)	5.7 mm	Insulation cross-section, min. (Data)	0.85
Insulation cross-section, max. (Data)	1.6	Dielectric strength, contact / contact (Data)	≥ 1000 V DC
Dielectric strength, contact / shield (Data)	≤ 1500 V DC	Current-carrying capacity (Data)	1.4 A
Contact resistance (Data)	≤ 20 mΩ	Insulation strength (Data)	≥ 500 MΩ
Network standard (Data)	IEEE 802.3bw (100 BaseT1), IEEE 802.3cg (10BaseT1), IEEE 802.3bp (1000 BaseT1)	PoE / PoE+ (Data)	PoDL acc. to IEEE 802.3bu / cg
Application-specific communication cable facilities (Data)	ISO/IEC 11801-1 Amd.1, ISO/IEC 11801-3 Amd.1, ISO/IEC 11801-6 Amd.1	Ability to reconnect (Data)	≤ 4 cycles (with the same cross-section)

Technical data - hybrid (signal)

Number of poles (Signal)	3	Pitch in mm (Signal)	5 mm
Pitch in inches (Signal)	0.197 "	Contact material (Signal)	CuSn
Contact surface (Signal)	tinned	Clamping range, min. (Signal)	0.5 mm ²
Clamping range, max. (Signal)	4 mm ²	Wire cross-section, AWG, min. (Signal)	AWG 20
Wire cross-section, AWG, max. (Signal)	AWG 12	w. plastic collar ferrule, DIN 46228 pt 4, 0.5 mm ² min. (Signal)	
w. plastic collar ferrule, DIN 46228 pt 4, 2.5 mm ² max. (Signal)		w. wire end ferrule, DIN 46228 pt 1, 0.5 mm ² min. (Signal)	
w. wire end ferrule, DIN 46228 pt 1, 2.5 mm ² max. (Signal)		Flexible, min. H05(07) V-K (Signal)	0.5 mm ²
Flexible, max. H05(07) V-K (Signal)	4 mm ²	Solid, min. H05(07) V-U (Signal)	0.5 mm ²
Solid, max. H05(07) V-U (Signal)	2.5 mm ²	Outside diameter of the insulation, max. (Signal)	4 mm
Stripping length (Signal)	9 mm	Rated current (Use group B / UL 1059) (Signal)	18.5 A

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Technical data

Rated current (Use group C / UL 1059) (Signal)	18.5 A	Rated current (Use group D / UL 1059) (Signal)	10 A
Rated current, min. number of poles (Tu=20°C) (Signal)	26.8 A	Rated current, max. number of poles (Tu=20°C) (Signal)	19.7 A
Rated current, min. number of poles (Tu=40°C) (Signal)	23.1 A	Rated current, max. number of poles (Tu=40°C) (Signal)	16.9 A
Rated impulse voltage for surge voltage class/ pollution degree II/2 (Signal)	4 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2 (Signal)	4 kV
Rated impulse voltage for surge voltage class/ pollution degree III/3 (Signal)	4 kV	Rated voltage (Use group B / UL 1059) (Signal)	300 V
Rated voltage (Use group C / UL 1059) (Signal)	150 V	Rated voltage (Use group D / UL 1059) (Signal)	300 V
Rated voltage for surge voltage class / pollution degree II/2 (Signal)	400 V	Rated voltage for surge voltage class / pollution degree III/2 (Signal)	320 V
Rated voltage for surge voltage class / pollution degree III/3 (Signal)	250 V	Clearance distance, min. (Signal)	7.5 mm
Creepage distance, min. (Signal)	7.5 mm		

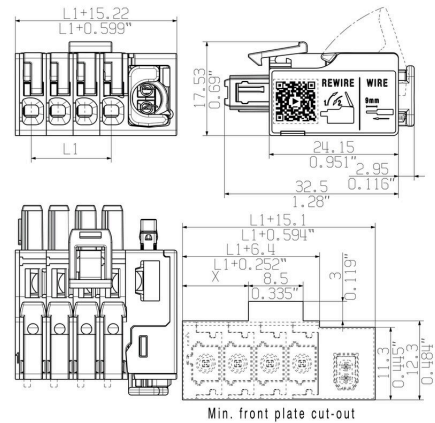
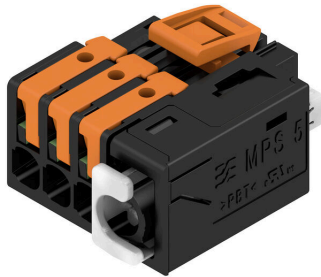
Important note

IPC conformity	Conformity: The products are developed, manufactured and delivered according international recognized standards and norms and comply with the assured properties in the data sheet resp. fulfill decorative properties in accordance with IPC-A-610 "Class 2". Further claims on the products can be evaluated on request.
Notes	<ul style="list-style-type: none"> Rated current related to rated cross-section & min. No. of poles. P on drawing = pitch Rated data refer only to the component itself. Clearance and creepage distances to other components are to be designed in accordance with the relevant application standards. Wire end ferrule without plastic collar to DIN 46228/1 In accordance with IEC 61984, OMNIMATE-connectors are connectors without breaking capacity (COC). During designated use, connectors are not allowed to be engaged or disengaged when live or under load Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months

Classifications

ETIM 8.0	EC002638	ETIM 9.0	EC002638
ETIM 10.0	EC002638	ECLASS 14.0	27-46-02-02
ECLASS 15.0	27-46-02-02		

Dimensional drawing



Product benefits

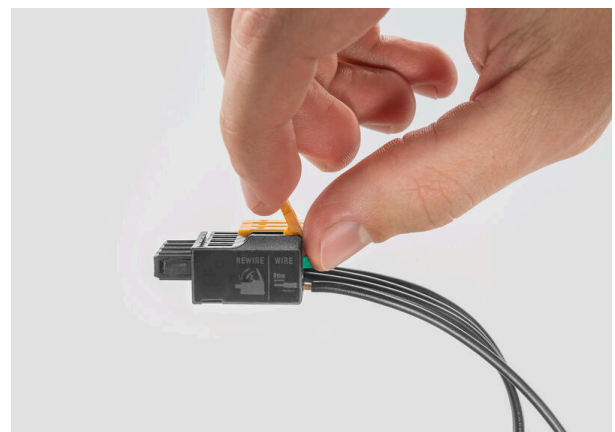


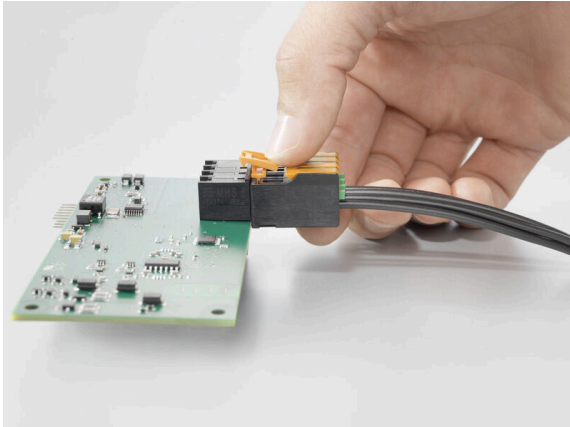
Fastest connection technology SNAP IN

Product benefits



Acoustic and visual feedback





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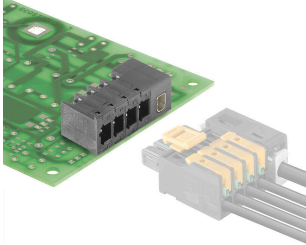
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Counterpart

Board connection



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 - Future-proof Single-Pair Ethernet technology

General ordering data

Type	MHS 5/03 D11 H T3 B T	Version
Order No.	2741520000	PCB plug-in connector, male header, THT/THR solder connection,
GTIN (EAN)	4064675055495	Pitch in mm (P): 5.00 mm, Number of poles: 3, 90°, Tube
Qty.	22 ST	