

## MPS 7S/04-5/03 S TN B B

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 26  
 D-32758 Detmold  
 Germany

www.weidmueller.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): 7.50 mm, Number of poles: 7, Box
Order No.	<a href="#">8000078349</a>
Type	MPS 7S/04-5/03 S TN B B
GTIN (EAN)	4064675623120
Qty.	36 items
Product data	IEC: 1000 V / 34.6 A / 0.5 - 4 mm <sup>2</sup> UL: / 18.5 A / AWG 20 - AWG 12
Packaging	Box

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## Technical data

## Approvals

Approvals



ROHS Conform  
UL File Number Search [UL Website](#)  
Certificate No. (cURus) E60693

## Dimensions and weights

Depth	34.95 mm	Depth (inches)	1.376 inch
Height	15.5 mm	Height (inches)	0.6102 inch
Net weight	21.36 g		

## Temperatures

Ambient temperature -50 °C...125 °C

## 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)	7.50 mm	
Conductor outlet direction	180°	
Number of poles	7	
L1 in mm	22.50 mm	
L1 in inches	0.886 "	
L2 in mm	10.00 mm	
L2 in inch	0.394 "	
Number of rows	1	
Pin series quantity	1	
Rated cross-section	2.5 mm <sup>2</sup>	
Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch	
Touch-safe protection acc. to DIN VDE 0470	IP 20	
Stripping length	9 mm	
Stripping length tolerance	min.	8 mm
	max.	10 mm
Plugging cycles	≥ 25	
Plugging force/pole, max.	9 N	
Pulling force/pole, max.	8 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

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## Technical data

Contact material	Cu-alloy	Contact surface	tinned
Storage temperature, min.	-25 °C	Storage temperature, max.	55 °C
Operating temperature, min.	-50 °C	Operating temperature, max.	125 °C

### Conductors suitable for connection

Clamping range, min.	0.34 mm <sup>2</sup>
Clamping range, max.	4 mm <sup>2</sup>
Wire connection cross section AWG, min.	AWG 20
Wire connection cross section AWG, max.	AWG 12
Solid, min. H05(07) V-U	0.5 mm <sup>2</sup>
Solid, max. H05(07) V-U	2.5 mm <sup>2</sup>
Flexible, min. H05(07) V-K	0.5 mm <sup>2</sup>
Flexible, max. H05(07) V-K	4 mm <sup>2</sup>
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.34 mm <sup>2</sup>
w. plastic collar ferrule, DIN 46228 pt 4, max.	2.5 mm <sup>2</sup>
w. wire end ferrule, DIN 46228 pt 1, min.	0.34 mm <sup>2</sup>
w. wire end ferrule, DIN 46228 pt 1, max.	2.5 mm <sup>2</sup>

Outer diameter of insulation, max.	4.00 mm		
Clampable conductor	Cross-section for conductor connection	nominal	0.34 mm <sup>2</sup>
		wire end ferrule	Stripping length nominal 10 mm
		Recommended wire-end ferrule	<a href="#">H0,34/12 TK</a>
	Cross-section for conductor connection	nominal	0.5 mm <sup>2</sup>
		wire end ferrule	Stripping length nominal 12 mm
		Recommended wire-end ferrule	<a href="#">H0,5/16 OR</a>
		Stripping length nominal 10 mm	
		Recommended wire-end ferrule	<a href="#">H0,5/10</a>
	Cross-section for conductor connection	nominal	0.75 mm <sup>2</sup>
		wire end ferrule	Stripping length nominal 12 mm
		Recommended wire-end ferrule	<a href="#">H0,75/16 W</a>
		Stripping length nominal 10 mm	
		Recommended wire-end ferrule	<a href="#">H0,75/10</a>
	Cross-section for conductor connection	nominal	1 mm <sup>2</sup>
		wire end ferrule	Stripping length nominal 12 mm
		Recommended wire-end ferrule	<a href="#">H1,0/16 GE</a>
		Stripping length nominal 10 mm	
		Recommended wire-end ferrule	<a href="#">H1,0/10</a>
	Cross-section for conductor connection	nominal	1.5 mm <sup>2</sup>
		wire end ferrule	Stripping length nominal 12 mm
	Recommended wire-end ferrule	<a href="#">H1,5/16 R</a>	
	Stripping length nominal 10 mm		
	Recommended wire-end ferrule	<a href="#">H1,5/10</a>	
Cross-section for conductor connection	nominal	2.5 mm <sup>2</sup>	
	wire end ferrule	Stripping length nominal 10 mm	

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**Technical data**

Recommended wire-end ferrule	<a href="#">H2,5/15D BL</a>	
Stripping length	nominal	10 mm
Recommended wire-end ferrule	<a href="#">H2,5/10</a>	

Reference text The outside diameter of the plastic collar should not be larger than the pitch (P)

**Rated data acc. to IEC**

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	34.6 A
Rated current, max. number of poles (Tu=20°C)	29.1 A	Rated current, min. number of poles (Tu=40°C)	30.7 A
Rated current, max. number of poles (Tu=40°C)	25.9 A	Rated voltage for surge voltage class / pollution degree II/2	1000 V
Rated voltage for surge voltage class / pollution degree III/2	1000 V	Rated impulse voltage for surge voltage class/ pollution degree II/2	6 kV
Rated impulse voltage for surge voltage class/ pollution degree III/2	8 kV		

**Rated data acc. to UL 1059**

Institute (cURus)	CURUS	Certificate No. (cURus)	E60693
Rated voltage (Use group F / UL 1059)	1000 V	Rated current (Use group B / UL 1059)	18.5 A
Rated current (Use group C / UL 1059)	18.5 A	Rated current (Use group D / UL 1059)	10 A
Rated current (Use group F / UL 1059)	18.5 A	Wire cross-section, AWG, min.	AWG 20
Wire cross-section, AWG, max.	AWG 12	Reference to approval values	Specifications are maximum values, details - see approval certificate.

**Technical data - hybrid (power)**

Number of poles (Power)	4	Number of rows (Power)	1
Pitch in mm (Power)	7.5 mm	Pitch in inches (Power)	0.295 "
Contact material (Power)	CuSn	Contact surface (Power)	tinned
Clamping range, min. (Power)	0.5 mm <sup>2</sup>	Clamping range, max. (Power)	4 mm <sup>2</sup>
w. wire end ferrule, DIN 46228 pt 1, min. (Power)	0.5 mm <sup>2</sup>	w. wire end ferrule, DIN 46228 pt 1, max. (Power)	2.5 mm <sup>2</sup>
Wire cross-section, AWG, min. (Power)	AWG 20	Wire cross-section, AWG, max. (Power)	AWG 12
w. plastic collar ferrule, DIN 46228 pt 4, 2.5 mm <sup>2</sup> min. (Power)		w. plastic collar ferrule, DIN 46228 pt 4, 0.5 mm <sup>2</sup> max. (Power)	
Flexible, min. H05(07) V-K (Power)	0.5 mm <sup>2</sup>	Flexible, max. H05(07) V-K (Power)	4 mm <sup>2</sup>
Solid, min. H05(07) V-U (Power)	0.5 mm <sup>2</sup>	Solid, max. H05(07) V-U (Power)	2.5 mm <sup>2</sup>
Outside diameter of the insulation, max. (Power)	4 mm	Stripping length (Power)	9 mm
Rated current (Use group B / UL 1059) (Power)	18.5 A	Rated current (Use group C / UL 1059) (Power)	18.5 A
Rated current (Use group D / UL 1059) (Power)	10 A	Rated current, min. number of poles (Tu=20°C) (Power)	34.6 A
Rated current, max. number of poles (Tu=20°C) (Power)	29.1 A	Rated current, min. number of poles (Tu=40°C) (Power)	30.7 A
Rated current, max. number of poles (Tu=40°C) (Power)	25.9 A	Rated impulse voltage for surge voltage class/ pollution degree II/2 (Power)	4 kV
Rated impulse voltage for surge voltage class/ pollution degree III/2 (Power)	4 kV	Rated voltage (Use group B / UL 1059) (Power)	600 V
Rated voltage (Use group C / UL 1059) (Power)	600 V	Rated voltage (Use group D / UL 1059) (Power)	600 V
Rated voltage for surge voltage class / pollution degree II/2 (Power)	1000 V	Rated voltage for surge voltage class / pollution degree III/2 (Power)	1000 V
Rated voltage for surge voltage class / pollution degree III/3 (Power)	630 V	Clearance distance, min. (Power)	9.96 mm

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## Technical data

## 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 <sup>2</sup>
Clamping range, max. (Signal)	4 mm <sup>2</sup>	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 <sup>2</sup> min. (Signal)	
w. plastic collar ferrule, DIN 46228 pt 4, 2.5 mm <sup>2</sup> max. (Signal)		w. wire end ferrule, DIN 46228 pt 1, 0.5 mm <sup>2</sup> min. (Signal)	
w. wire end ferrule, DIN 46228 pt 1, 2.5 mm <sup>2</sup> max. (Signal)		Flexible, min. H05(07) V-K (Signal)	0.5 mm <sup>2</sup>
Flexible, max. H05(07) V-K (Signal)	4 mm <sup>2</sup>	Solid, min. H05(07) V-U (Signal)	0.5 mm <sup>2</sup>
Solid, max. H05(07) V-U (Signal)	2.5 mm <sup>2</sup>	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
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)	400 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"> <li>Rated current related to rated cross-section &amp; min. No. of poles.</li> <li>P on drawing = pitch</li> <li>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.</li> <li>Wire end ferrule without plastic collar to DIN 46228/1</li> <li>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</li> <li>Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months</li> </ul>

## Classifications

ETIM 8.0	EC002638	ETIM 9.0	EC002638
ETIM 10.0	EC002638	ECLASS 14.0	27-46-03-02
ECLASS 15.0	27-46-03-02		

Product image



Min. front plate cut-out

Product benefits



Fastest connection technology SNAP IN

Product benefits



Acoustic and visual feedback



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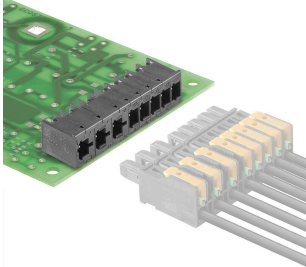
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## Counterpart

## Board connection



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- 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

Type	MHS 7S/04-5/03 H T3 B T	Version
Order No.	<a href="#">8000078340</a>	PCB plug-in connector, male header, THT/THR solder connection,
GTIN (EAN)	4064675622024	Pitch in mm (P): 7.50 mm, Number of poles: 7, 90°, Tube
Qty.	11 ST	