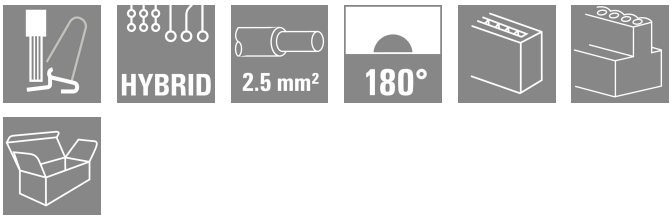
Data sheet

MPS 7S/02-5/04 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 configurated 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: 6, Box
Order No.	8000078350
Type	MPS 7S/02-5/04 S TN B B
GTIN (EAN)	4064675622482
Qty.	48 items
Product data	IEC: 1000 V / 34.6 A / 0.5 - 4 mm² 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	17.11 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	6	
L1 in mm	7.50 mm	
L1 in inches	0.295 "	
L2 in mm	15.00 mm	
L2 in inch	0.591 "	
Number of rows	1	
Pin series quantity	1	
Rated cross-section	2.5 mm²	
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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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 mm²			
Clamping range, max.	4 mm²			
Wire connection cross section AWG, min.	AWG 20			
Wire connection cross section AWG, max.	AWG 12			
Solid, min. H05(07) V-U	0.5 mm²			
Solid, max. H05(07) V-U	2.5 mm²			
Flexible, min. H05(07) V-K	0.5 mm²			
Flexible, max. H05(07) V-K	4 mm²			
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.34 mm²			
w. plastic collar ferrule, DIN 46228 pt 4, max.	2.5 mm²			
w. wire end ferrule, DIN 46228 pt 1, min.	0.34 mm²			
w. wire end ferrule, DIN 46228 pt 1, max.	2.5 mm²			
Outer diameter of insulation, max.	4.00 mm			
Clampable conductor	Cross-section for conductor connection	nominal	0.34 mm²	
	wire end ferrule	Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H0,34/12 TK	
	Cross-section for conductor connection	nominal	0.5 mm²	
	wire end ferrule	Stripping length	nominal	12 mm
		Recommended wire-end ferrule	H0,5/16 OR	
		Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H0,5/10	
	Cross-section for conductor connection	nominal	0.75 mm²	
	wire end ferrule	Stripping length	nominal	12 mm
		Recommended wire-end ferrule	H0,75/16 W	
		Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H0,75/10	
	Cross-section for conductor connection	nominal	1 mm²	
	wire end ferrule	Stripping length	nominal	12 mm
		Recommended wire-end ferrule	H1,0/16 GE	
		Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H1,0/10	
	Cross-section for conductor connection	nominal	1.5 mm²	
	wire end ferrule	Stripping length	nominal	12 mm
		Recommended wire-end ferrule	H1,5/16 R	
		Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H1,5/10	
	Cross-section for conductor connection	nominal	2.5 mm²	
	wire end ferrule	Stripping length	nominal	10 mm

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Technical data

		Recommended wire-end ferrule	H2,5/15D BL
		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)		

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)	2	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 mm²	Clamping range, max. (Power)	4 mm²
w. wire end ferrule, DIN 46228 pt 1, min. (Power)	0.5 mm²	w. wire end ferrule, DIN 46228 pt 1, max. (Power)	2.5 mm²
Wire cross-section, AWG, min. (Power)	AWG 20	Wire cross-section, AWG, max. (Power)	AWG 12
w. plastic collar ferrule, DIN 46228 pt 4, min. (Power)	2.5 mm²	w. plastic collar ferrule, DIN 46228 pt 4, max. (Power)	0.5 mm²
Flexible, min. H05(07) V-K (Power)	0.5 mm²	Flexible, max. H05(07) V-K (Power)	4 mm²
Solid, min. H05(07) V-U (Power)	0.5 mm²	Solid, max. H05(07) V-U (Power)	2.5 mm²
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)	4	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 mm²
Clamping range, max. (Signal)	4 mm²	Wire cross-section, AWG, min. (Signal)	AWG 20
Wire cross-section, AWG, max. (Signal)	AWG 12	w. plastic collar ferrule, DIN 46228 pt 4, min. (Signal)	0.5 mm²
w. plastic collar ferrule, DIN 46228 pt 4, max. (Signal)	2.5 mm²	w. wire end ferrule, DIN 46228 pt 1, min. (Signal)	0.5 mm²
w. wire end ferrule, DIN 46228 pt 1, max. (Signal)	2.5 mm²	Flexible, min. H05(07) V-K (Signal)	0.5 mm²
Flexible, max. H05(07) V-K (Signal)	4 mm²	Solid, min. H05(07) V-U (Signal)	0.5 mm²
Solid, max. H05(07) V-U (Signal)	2.5 mm²	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	• 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	27-46-03-02
ECLASS 15.0	27-46-03-02		

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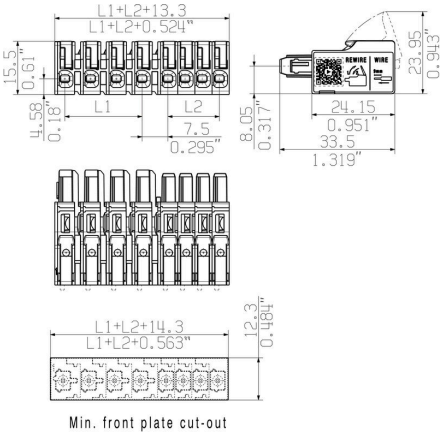
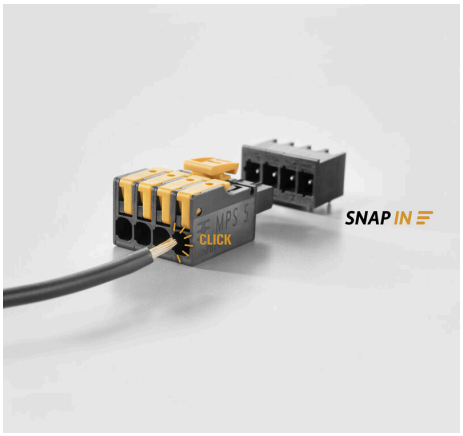
Drawings

Product image



Min. front plate cut-out

Product benefits



Fastest connection technology SNAP IN

Product benefits

Acoustic and visual feedback