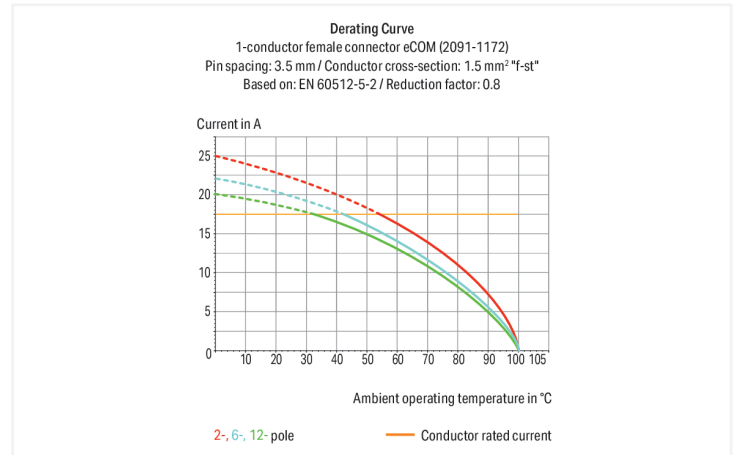


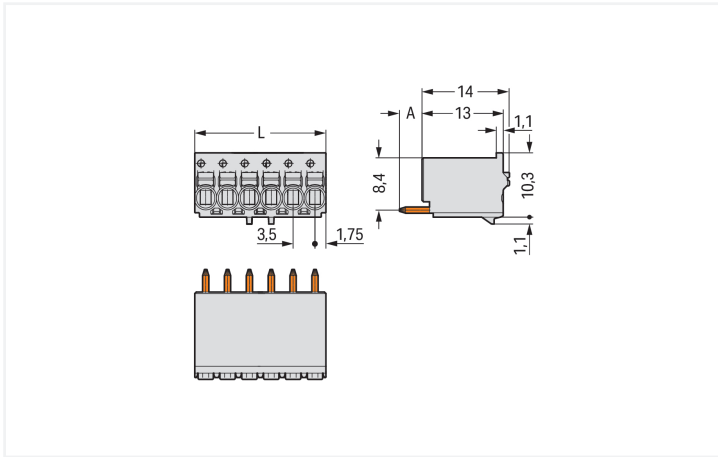
Data Sheet | Item Number: 2091-1178

1-conductor THT female connector straight; push-button; Push-in CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 8-pole; 1.0 mm Ø solder pin; 1,50 mm²; light gray

<https://www.wago.com/2091-1178>



Color: ■ light gray



Dimensions in mm

L = pole no. x pin spacing A = 3.6 mm THT solder pin A = 2.4 mm THR solder pin

Female connector, 2091 Series, 90° conductor entry to board

Error-free electrical installations are guaranteed with this female connector (item number 2091-1178). Conductors should only be connected to this female connector if their strip length is between 8 and 9 mm. This product incorporates one conductor terminal and utilizes Push-in CAGE CLAMP®. Push-in CAGE CLAMP® technology provides a universal connection solution for all conductor types. It allows both solid and fine-stranded conductors with ferrules to be inserted directly into the clamping point without the need for tools. Dimensions: (28 x 14 x 11.4) mm (width x height x depth). This female connector is suitable for conductor cross sections ranging from 0.2 mm² to 1.5 mm².

The contact surface is coated with tin. The pcb connector is designed for THT soldering.

Notes

Safety Information

The **picoMAX® Pluggable Connection System** includes connectors without breaking capacity in accordance with DIN EN 61984. When used as intended, these connectors must not be connected/disconnected when live or under load. When used as intended, these connectors must not be connected/disconnected when live or under load. The circuit design should ensure header pins, which can be touched, are not live when unmated.

Safety information 2

The use of ferrules is recommended for applications with higher requirements.

To prevent excessive force on the clamping point, effective cable strain relief must be used.

Electrical data

Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Nominal voltage	160 V	160 V	320 V
Rated impulse withstand voltage	2.5 kV	2.5 kV	2.5 kV
Rated current	10 A	10 A	10 A

Approvals per	UL 1059		
Use group	B	C	D
Rated voltage	300 V	-	300 V
Rated current	10 A	-	10 A

Connection Data

Clamping units	8
Total number of potentials	8
Number of connection types	1
Number of levels	1

Connection 1

Connection technology	Push-in CAGE CLAMP®
Actuation type	Push-button
Actuation direction 1	Operation parallel to conductor entry
Solid conductor	0.2 ... 1.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0.2 ... 1.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 0.75 mm ²
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1.5 mm ²
Strip length	8 ... 9 mm / 0.31 ... 0.35 inches
Conductor connection direction to PCB	90°
Pole number	8

Physical data

Pin spacing	3.5 mm / 0.138 inches
Width	28 mm / 1.102 inches
Height	14 mm / 0.551 inches
Depth	11.4 mm / 0.449 inches
Solder pin length	3.6 mm
Solder pin diameter	1 mm
Drilled hole diameter	1.2 (+0.1) mm

Mechanical data

Variable coding	No
Anti-rotation protection	Yes

Plug-in connection

Contact type (pluggable connector)	Female connector/socket
Connector (connection type)	for PCB
Mismating protection	No
Plugging without loss of pin spacing	Yes
Mating direction to the PCB	90 °

PCB contact

PCB contact	THT
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Material data

Note (material data)	Information on material specifications can be found here
Color	light gray
Material group	I
Insulation material (main housing)	Polyphthalamide (PPA GF)
Flammability class per UL94	V0
Clamping spring material	Chrome-nickel spring steel (CrNi)
Contact material	Electrolytic copper (E _{Cu})
Contact Plating	Tin
Fire load	0.043 MJ
Weight	4.4 g

Environmental requirements

Limit temperature range	-60 ... +100 °C
Processing temperature	-35 ... +60 °C

Commercial data

Product Group	26 (picoMAX Connectors)
PU (SPU)	100 pcs
Packaging type	Box
Country of origin	DE
GTIN	4050821162452
Customs tariff number	85366990990

Product Classification

UNSPSC	39121409
eCl@ss 10.0	27-44-04-02
eCl@ss 9.0	27-44-04-02
ETIM 9.0	EC002637
ETIM 10.0	EC002637
ECCN	NO US CLASSIFICATION

Environmental Product Compliance

RoHS Compliance Status Compliant, No Exemption

Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
CB DEKRA Certification B.V.	IEC 61984	NL-89884
CSA CSA Group	C22.2	2362521
CSA DEKRA Certification B.V.	C22.2 No. 158	2362521
KEMA/KEUR DEKRA Certification B.V.	EN 61984	71-129873
UR Underwriters Laboratories Inc.	UL 1059	E45172

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 2091-1178 [↓](#)

Documentation

Additional Information

Technical Section 03.04.2019 pdf 2027.26 KB [↓](#)

CAD/CAE-Data

CAD data

2D/3D Models 2091-1178 [↓](#)

CAE data

ZUKEN Portal 2091-1178 [↓](#)

PCB Design

Symbol and Footprint via SamacSys 2091-1178 [↓](#)

Symbol and Footprint via Ultra Librarian 2091-1178 [↓](#)

1 Compatible Products

1.1 Optional Accessories

1.1.1 Ferrule

1.1.1.1 Ferrule



Item No.: 216-301

Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow



Item No.: 216-131

Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated; silver-colored



Item No.: 216-302

Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise



Item No.: 216-132

Ferrule; Sleeve for 0.34 mm² / 22 AWG; uninsulated; electro-tin plated



Item No.: 216-101

Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored



Item No.: 216-202

Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray



Item No.: 216-102

Ferrule; Sleeve for 0.75 mm² / 18 AWG; uninsulated; electro-tin plated; silver-colored



Item No.: 216-122

Ferrule; Sleeve for 0.75 mm² / 18 AWG; uninsulated; electro-tin plated; silver-colored



Item No.: 216-203

Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red



Item No.: 216-103

Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated



Item No.: 216-204

Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black



Item No.: 216-104

Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated; silver-colored

1.1.2 Test and measurement

1.1.2.1 Testing accessories



Item No.: 735-500

WAGO Test pin; 1 mm Ø; 30 V AC / 60 V DC; CAT0; 1 A; 6 mm uninsulated; Test lead for soldering up to 0,5mm²

1.1.3 Tool

1.1.3.1 Operating tool

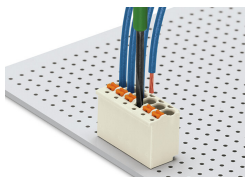


Item No.: 210-719

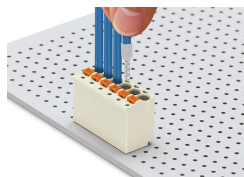
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft

Installation Notes

Conductor termination



Terminating fine-stranded conductors and removing all conductor types via push-buttons.



Solid and ferruled conductors are terminated by simply pushing them into unit.

Marking



Pole marking via direct marking perpendicular to conductor entry.

Pole marking via factory direct marking.

Testing



Testing via 1 mm Ø test pin – touch contact.