

**FW R4 R1H 3.1N1 TY****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)**IEEE 1394a - FireWire sockets and field-attachable plugs – flexible data connections**

FireWire socket connectors from Weidmüller offer fast data transfers and easy on-site adjustment - ideal for industrial applications

**Features and Benefits:**

- Robust and durable: Designed for demanding environments with stable locking
- EMC protection: Reliable protection against interference for clean data transmission
- Hot plug & play: Devices can be connected during operation and are recognized
- Fast and lossless transmission up to 400 Mbit/s
- Integrated power supply (8 to 33 V DC, 1.5 A, max. 48 W)
- Easy assembly without special tools on site, with solder cup connection on the field-assembly connector

**General ordering data**

Version	, female header, Solder flange, THT/THR solder connection, 2.00 mm, Number of poles: 6, 90°, Solder pin length (l): 3.1 mm, Gold over nickel, black, Tray (manual assembly)
Order No.	<a href="#">3116220000</a>
Type	FW R4 R1H 3.1N1 TY
GTIN (EAN)	4099987230513
Qty.	1,000 pc(s).
Packaging	Tray (manual assembly)

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## Technical data

## Dimensions and weights

Depth	18.1 mm	Depth (inches)	0.713 inch
Height	8.4 mm	Height (inches)	0.331 inch
Width	13.5 mm	Width (inches)	0.531 inch
Net weight	10 g		

## System specifications

LED	No	Mounting onto the PCB	THT/THR solder connection
Number of poles	6	Number of solder pins per pole	1
Outgoing elbow	90°	Performance-Category	10 Gbit/s
Pitch in inches (P)	0.008 "	Pitch in mm (P)	2 mm
Plugging cycles	≥ 10000	Protection degree	IP20
Shield surface	nickel-plated	Shield tabs	none
Shielding	Yes	Shielding material	Copper alloy
Side termination, characteristic	Solder flange	Solder pin length (l)	3.1 mm
Soldering process	Reflow soldering, Manual soldering, Wave soldering	Transmission rate	10 Gbit/s
Type of connection	Socket connector		

## Electrical properties

Dielectric strength, contact / contact	500 V AC	Insulation strength	≥ 100 MΩ
Rated voltage	40 V		

## Material data

Insulating material	LCP	Colour	black
Colour chart (similar)	RAL 9011	Insulation strength	≥ 100 MΩ
Moisture Level (MSL)	1	UL 94 flammability rating	V-0
Contact base material	Copper alloy	Contact material	Copper alloy
Contact surface	Gold over nickel	Storage temperature, min.	-25 °C
Storage temperature, max.	85 °C	Operating temperature, min.	-25 °C
Operating temperature, max.	85 °C		

## Packing

Packaging	Tray (manual assembly)	VPE length	0 mm
VPE width	0 mm	VPE height	0 mm

## Classifications

ETIM 6.0	EC002637	ETIM 7.0	EC002637
ETIM 8.0	EC002637	ETIM 9.0	EC002637
ETIM 10.0	EC002637	ECLASS 9.1	27-44-04-02
ECLASS 10.0	27-44-04-02	ECLASS 11.0	27-46-02-01
ECLASS 12.0	27-46-02-01	ECLASS 13.0	27-46-02-01
ECLASS 14.0	27-46-02-01	ECLASS 15.0	27-46-02-01

## Environmental Product Compliance

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

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# Technical data

## Approvals

ROHS	Conform
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## Downloads

Engineering Data	<a href="#">CAD data – STEP</a>
Technical Documentation	<a href="#">3116220000_FW R4 R1H 3.1N1 TY_20241127</a>

### FW R4 R1H 3.1N1 TY

**Weidmüller Interface GmbH & Co. KG**

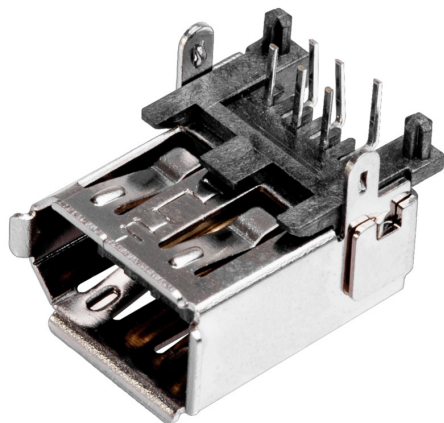
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## Drawings

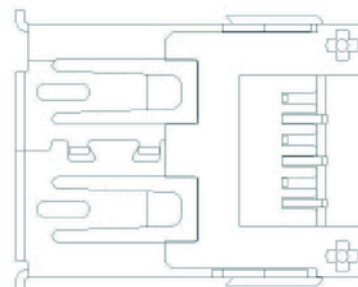
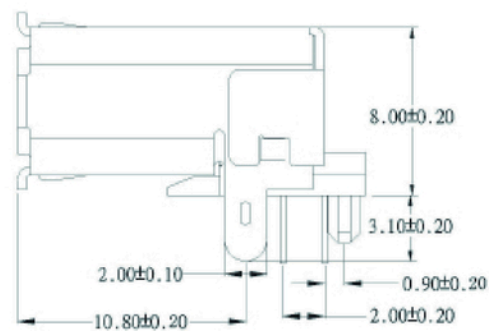
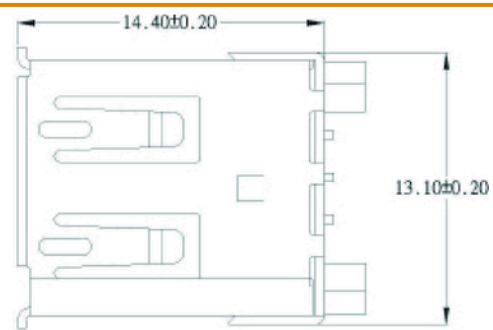
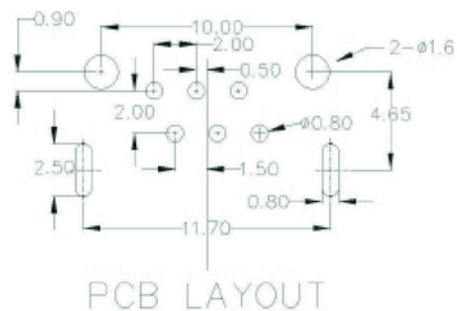
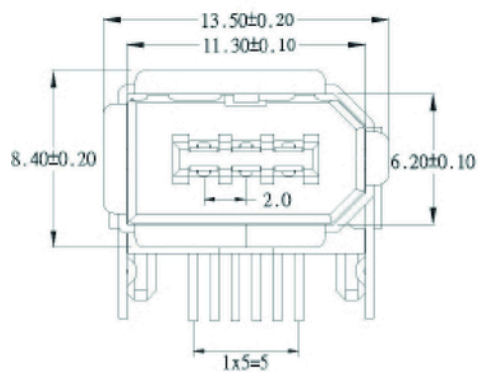


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[www.weidmueller.com](http://www.weidmueller.com)**Drawings**

## Recommended wave soldering profiles

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 16  
D-32758 Detmold  
Germany  
Fon: +49 5231 14-0  
Fax: +49 5231 14-292083  
[www.weidmueller.com](http://www.weidmueller.com)

### Single Wave:



### Double Wave:



### Wave soldering profiles

Wired connection elements should be processed in accordance with the DIN EN 61760-1 standard. We have included two recommendations for practical wave soldering profiles, with which Weidmüller PCB terminals and connectors are qualified.

When choosing a suitable profile for your application, the following factors also need to be considered:

- PCB thickness
- Proportion of Cu in the layers
- Single/double-sided assembly
- Product range
- Heating and cooling rates

The single and double wave profiles each indicate the recommended operating range, including the maximum soldering temperature of 260°C. In practice, the maximum soldering temperature is quite often well below the above maximum profile.

We reserve the right to make technical changes.

## Recommended reflow soldering profile

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Fax: +49 5231 14-292083

www.weidmueller.com



## Reflow soldering profile

The perfect soldering profile for SMT Surface Mount Technology is one the most exiting question in SMT production. But there are more than one correct answer: The diagram of temperature-on-time is related to processing features of solder paste and to maximum load of components.

We have to consider the following parameters:

- Time for pre heating
- Maximum temperature
- Time above melting point
- Time for cooling
- Maximum heating rate
- Maximum cooling rate

We recommend a typical solder profile with associated process limits. With preheating components and board are prepared smoothly for the solder phase. Heating rate is typically  $\leq +3\text{K/s}$ . In parallel the solder paste is 'activated'. The time above melting point of 217°C the paste gets liquid and components and boards begin to connect. The maximum temperature of 245°C to 254°C should stay between 10 and 40 seconds. In the cooling phase at  $\geq -6\text{K/s}$  solder is cured. Board and components cool down while avoiding cold cracks.