

**RJ45M R1D 3.3N4Y/G TY****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com



RJ45 transmitter sockets (magnetics) for gigabit applications (1000 base-T) with integrated compensation actively counteracts inductive and capacitive couplings and saves space on the PCB.

The product range encompasses the following designs:

- 90°, lying (horizontal) and 180°, standing (vertical)
- latch up / latch down
- THT, THR or SMD soldering processes
- Wide range of different design types, also with integrated LEDs and shield contact tabs
- Transmission rates of up to 1 Gbps
- Packed either in a tray (TY) or on a roll (tape-on-reel, RL)
- Compatible with modular RJ45 connector according to ANSI / TIA-1096-A and IEC 60603
- Dielectric strength  $\geq 1500$  V AC RMS (2250 V AC peak value) according to IEEE 802.3
- Dielectric strength  $\geq 1500$  V AC (peak value) or  $\geq 1500$  V DC according to IEC 60603
- Compliance with IEEE 802.3 requirements (1000Base-T, 1 Gbps, IEEE 802.3ab or 100Base-Tx, 100 Mbps, IEEE 802.3u)

Properties and advantages:

- Extended temperature range of  $-40$  °C to  $+85$  °C for maximum performance
- Reinforced gold layer ( $30\mu$ ) for improved corrosion protection

- At least 0.3mm stand-off ensures a perfect soldering result

**General ordering data**

|            |                                                                                                                                                                                                                                                         |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Version    | PCB plug-in connector, RJ45 jacks transformer, 10/100 MBit/s , THT/THR solder connection, 90°, Latch option: bottom, Shield tabs: none, 30...80 $\mu$ " Ni / $\geq 30$ $\mu$ " Au , LED: Yes, yellow, green, Number of poles: 8, Tray (manual assembly) |
| Order No.  | <a href="#">2461060000</a>                                                                                                                                                                                                                              |
| Type       | RJ45M R1D 3.3N4Y/G TY                                                                                                                                                                                                                                   |
| GTIN (EAN) | 4050118476439                                                                                                                                                                                                                                           |
| Qty.       | 120 pc(s).                                                                                                                                                                                                                                              |
| Packaging  | Tray (manual assembly)                                                                                                                                                                                                                                  |

## RJ45M R1D 3.3N4Y/G TY

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Technical data

## Dimensions and weights

|                          |            |                 |            |
|--------------------------|------------|-----------------|------------|
| Depth                    | 21.35 mm   | Depth (inches)  | 0.841 inch |
| Height                   | 16.8 mm    | Height (inches) | 0.661 inch |
| Height of lowest version | 13.5 mm    | Width           | 15.9 mm    |
| Width (inches)           | 0.626 inch | Net weight      | 3.45 g     |

## System specifications

|                                  |                   |                                |                                                    |
|----------------------------------|-------------------|--------------------------------|----------------------------------------------------|
| Colour of left LED               | yellow            | Colour of right LED            | green                                              |
| Forward current                  | 20 mA             | Forward voltage, max.          | 2.6 V                                              |
| Forward voltage, min.            | 1.8 V             | LED                            | Yes                                                |
| Latch option                     | bottom            | Mounting onto the PCB          | THT/THR solder connection                          |
| Number of poles                  | 8                 | Number of solder pins per pole | 1                                                  |
| Outgoing elbow                   | 90°               | Performance-Category           | 10/100 MBit/s                                      |
| Pitch in inches (P)              | 0.05 "            | Pitch in mm (P)                | 1.27 mm                                            |
| Plugging cycles                  | 750               | Product family                 | OMNIMATE Data - RJ45 transformer jack              |
| Protection degree                | IP20              | Shield surface                 | nickel-plated                                      |
| Shield tabs                      | none              | Shielding                      | Yes                                                |
| Shielding material               | Brass             | Solder pin dimensions          | Octagonal                                          |
| Solder pin length (l)            | 3.3 mm            | Soldering process              | Reflow soldering, Manual soldering, Wave soldering |
| Tolerance of solder pin position | ± 0.1 mm          | Transmission rate              | 10/100 MBit/s                                      |
| Type of connection               | Solder connection |                                |                                                    |

## Electrical properties

|                                        |           |                                       |           |
|----------------------------------------|-----------|---------------------------------------|-----------|
| Dielectric strength, contact / contact | 1000 V DC | Dielectric strength, contact / shield | 1500 V DC |
| Rated current                          | 1.5 A     | Rated voltage                         | 125 V     |

## Material data

|                                  |                            |                             |                   |
|----------------------------------|----------------------------|-----------------------------|-------------------|
| Insulating material              | PA 9T                      | Colour                      | black             |
| Colour chart (similar)           | RAL 9011                   | Insulating material group   | II                |
| Comparative Tracking Index (CTI) | ≥ 500                      | Moisture Level (MSL)        | 1                 |
| UL 94 flammability rating        | V-0                        | Contact base material       | Phosphorus bronze |
| Contact material                 | Cu-alloy                   | Contact surface             | Gold over nickel  |
| Layer structure of plug contact  | 30...80 µ" Ni / ≥ 30 µ" Au | Storage temperature, min.   | -40 °C            |
| Storage temperature, max.        | 85 °C                      | Operating temperature, min. | -40 °C            |
| Operating temperature, max.      | 85 °C                      |                             |                   |

## Packing

|           |                        |            |        |
|-----------|------------------------|------------|--------|
| Packaging | Tray (manual assembly) | VPE length | 315 mm |
| VPE width | 193 mm                 | VPE height | 70 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 |

## RJ45M R1D 3.3N4Y/G TY

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

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

## Technical data

## Environmental Product Compliance

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

## Approvals

Approvals



|                         |                                                                                                                                                                             |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Approvals MAMID         | <a href="https://mdcop.weidmueller.com/mediadelivery/rendition/900_319230/-T1z1mm-S800/">https://mdcop.weidmueller.com/mediadelivery/rendition/900_319230/-T1z1mm-S800/</a> |
| ROHS                    | Conform                                                                                                                                                                     |
| UL File Number Search   | UL Website                                                                                                                                                                  |
| Certificate No. (cURus) | E471884                                                                                                                                                                     |

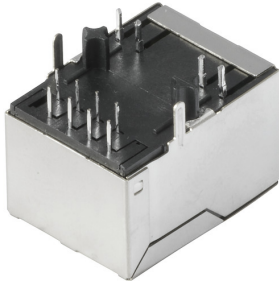
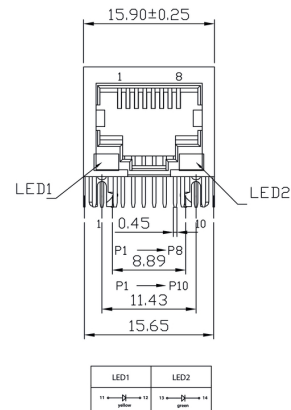
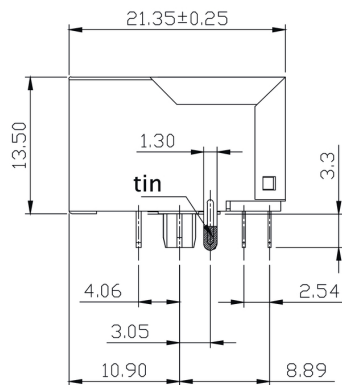
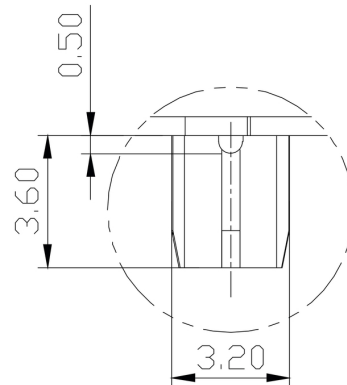
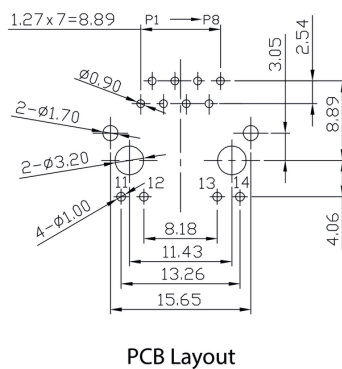
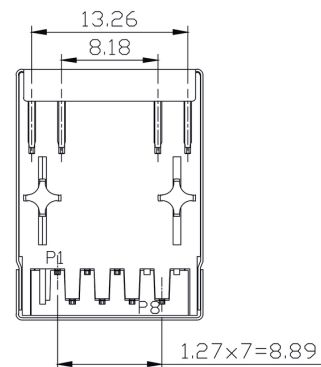
## Downloads

|                                             |                                                                    |
|---------------------------------------------|--------------------------------------------------------------------|
| Approval/Certificate/Document of Conformity | <a href="#">Certificate of Compliance</a>                          |
| Engineering Data                            | <a href="#">CAD data – STEP</a>                                    |
| Product Change Notification                 | <a href="#">PCN</a><br><a href="#">PCN</a>                         |
| User Documentation                          | <a href="#">MAN IE GUIDE DE</a><br><a href="#">MAN IE GUIDE EN</a> |
| Catalogues                                  | <a href="#">Catalogues in PDF-format</a>                           |

**RJ45M R1D 3.3N4Y/G TY**

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

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

**Drawings**
**Dimensioned drawing**

**Dimensioned drawing**

**Dimensioned drawing**

**Dimensioned drawing**

**PCB design**

**Dimensioned drawing**


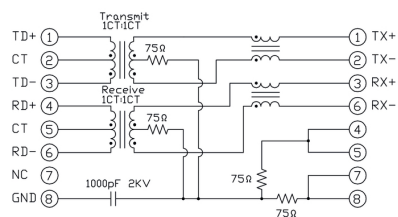
## RJ45M R1D 3.3N4Y/G TY

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

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

# Drawings

## Wiring diagram



## RJ45M R1D 3.3N4Y/G TY

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Drawings

| RJ45 | G1 | R1 | U3.2 | E4 | GY/GY | TY | RJ45G1 R1U 3.2E4GY/GY TY |
|------|----|----|------|----|-------|----|--------------------------|
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |
|      |    |    |      |    |       |    |                          |

## 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

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 16  
D-32758 Detmold  
Germany  
Fon: +49 5231 14-0  
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.