

FC50 TN/80A S1 B BX

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image

**OMNIMATE® - Board-to-Board connectors**

Flexible engineering of compact devices

The use of future-proof contact systems, as well as the optimisation of manufacturing processes, are increasingly important in the development of efficient industrial devices, especially in the field of Industry 4.0. OMNIMATE® board-to-board connectors feature a 1.27 mm pitch and offer maximum flexibility due to different designs.

- **Flexible device design** - Industrial suitable density combined with high flexible connection combinations (Mezzanine, Mother-to-Daughter, Extender-card, Cable-to-Board)
- **Automation-Ready** - Developed for automatic assembly with high precise pin coplanarity and SMT-fixation
- **Reliable contact** - Up to 500 mating cycles due to industry suitable gold-surface (PdNi-Au)
- **Process-Ready** - High performance LCP material for reflow soldering
- **Scalability** - Different heights with high contact overlapping ensure various solutions from 12 – 80 poles.
- **Robust miniaturisation** - simple and safe connection even possible under unfavorable mating conditions – e.g. inclination or offset.

General ordering data

| | |
|--------------|--|
| Version | PCB plug-in connector, female plug, Pitch in mm (P): 1.27 mm, Number of poles: 80, Box |
| Order No. | 2827410000 |
| Type | FC50 TN/80A S1 B BX |
| GTIN (EAN) | 4064675364016 |
| Qty. | 10 pc(s). |
| Product data | IEC: / 1.9 A UL: |
| Packaging | Box |

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Technical data

Dimensions and weights

| | | | |
|------------|---------|-----------------|-----------|
| Length | 12.2 mm | Length (inches) | 0.48 inch |
| Net weight | 9.9 g | | |

System Parameters

| | | | |
|---------------------------|----------------------------------|----------------------------|--|
| Product family | OMNIMATE Signal - Board-to-Board | Type of connection | Insulation displacement connection (IDC) |
| Wire connection method | IDC terminal | Pitch in mm (P) | 1.27 mm |
| Pitch in inches (P) | 0.05 " | Conductor outlet direction | 90°/270° |
| Number of poles | 80 | Number of rows | 2 |
| Pin series quantity | 2 | Protection degree | IP20 |
| Volume resistance | <25 mΩ | Plugging cycles | 500 |
| Plugging force/pole, max. | 0.6 N | Pulling force/pole, max. | 0.6 N |

Material data

| | | | |
|-----------------------------|--------------|---------------------------------|--|
| Insulating material | LCP | Colour | grey |
| Colour chart (similar) | RAL 7035 | Insulation strength | ≥ 20 MΩ |
| Moisture Level (MSL) | 1 | UL 94 flammability rating | V-0 |
| Contact base material | Copper alloy | Contact material | Cu-alloy |
| Contact surface | Ni/Au | Layer structure of plug contact | ≥ 2 μm Ni / ≥ 0.4 μm PdNi / ≥ 0.05 μm Au |
| Storage temperature, min. | -40 °C | Storage temperature, max. | 70 °C |
| Operating temperature, min. | -40 °C | Operating temperature, max. | 125 °C |

Conductors suitable for connection

| | | | |
|---|----------|---|----------|
| Wire connection cross section AWG, min. | AWG 30/7 | Wire connection cross section AWG, max. | AWG 30/7 |
|---|----------|---|----------|

Rated data acc. to IEC

| | | | |
|---|--------|-----------------|--------|
| Rated current, min. number of poles (Tu=20°C) | 1.9 A | Clearance, min. | 0.4 mm |
| Creepage distance, min. | 0.4 mm | | |

Packing

| | | | |
|-----------|-------|------------|--------|
| Packaging | Box | VPE length | 155 mm |
| VPE width | 64 mm | VPE height | 38 mm |

Classifications

| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 6.0 | EC002599 | ETIM 7.0 | EC002599 |
| ETIM 8.0 | EC002599 | ETIM 9.0 | EC002599 |
| ECLASS 9.0 | 27-06-03-08 | ECLASS 9.1 | 27-06-03-08 |
| ECLASS 10.0 | 27-06-03-08 | ECLASS 11.0 | 27-06-03-08 |
| ECLASS 12.0 | 27-06-03-08 | ECLASS 13.0 | 27-06-03-08 |

Environmental Product Compliance

| | |
|------------|---|
| REACH SVHC | / |
|------------|---|

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www.weidmueller.com**Technical data****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.

Approvals

ROHS

Conform

Downloads

Engineering Data

[CAD data – STEP](#)

Catalogues

[Catalogues in PDF-format](#)

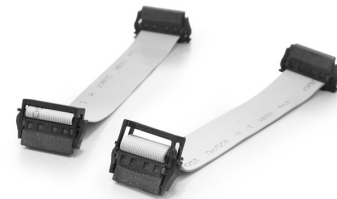
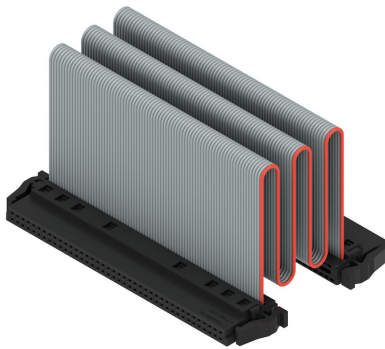
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Drawings

Product image



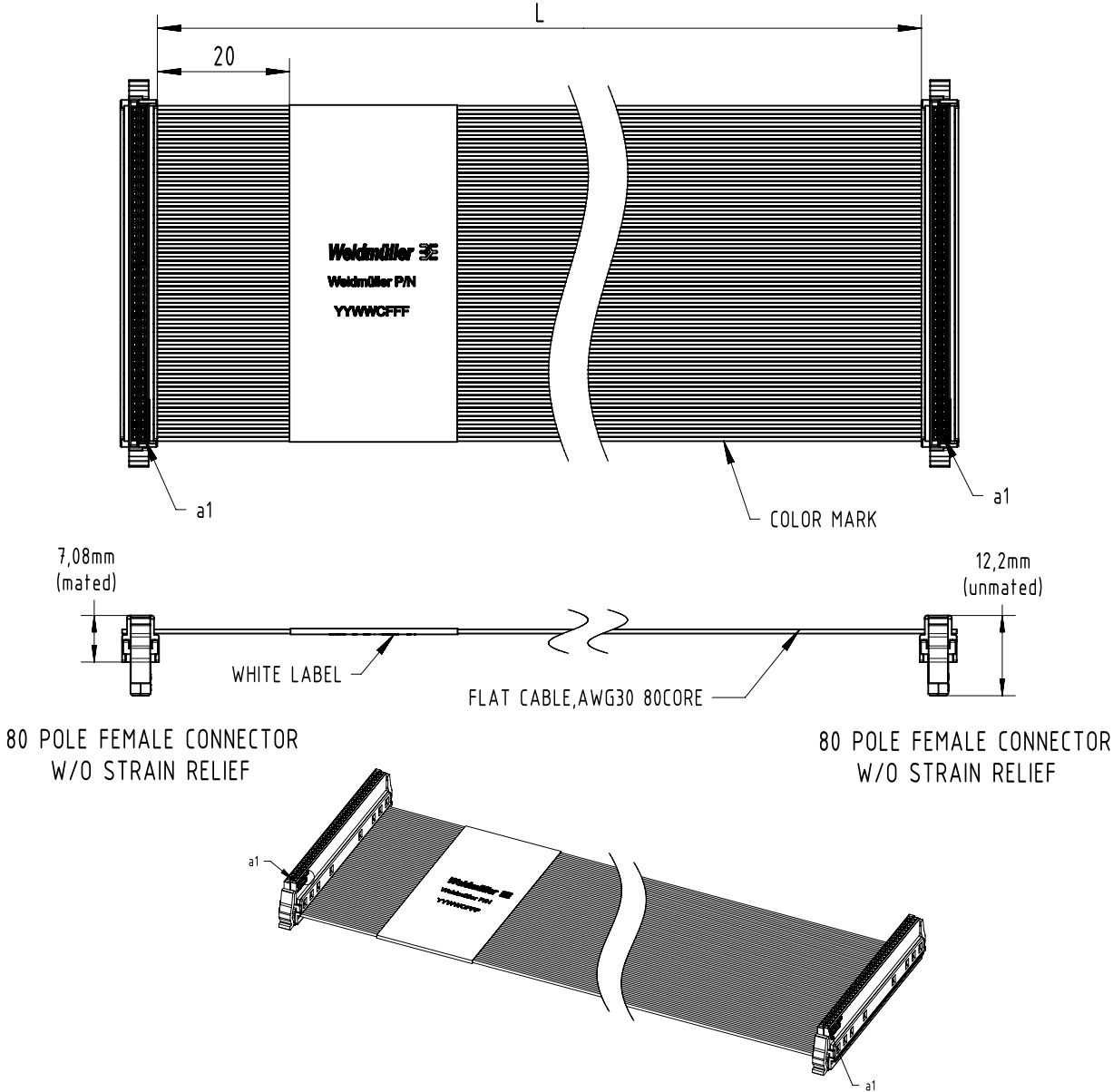
With optional strain relief



Three standard lengths (0.1 m, 0.2 m, and 0.5 m)

FC...../80A S1 B BX

1:1 wiring, 80 pole, different lengths and cable types



| Order no. | Type | No. of poles | Cable Type | Cable Length |
|------------|---------------------|--------------|------------|--------------|
| 2827360000 | FC10 PN/80A S1 B BX | 80 | PVC | 100±5mm |
| 2827370000 | FC20 PN/80A S1 B BX | 80 | PVC | 200±10mm |
| 2827380000 | FC50 PN/80A S1 B BX | 80 | PVC | 500±10mm |
| 2827390000 | FC10 TN/80A S1 B BX | 80 | TPE | 100±5mm |
| 2827400000 | FC20 TN/80A S1 B BX | 80 | TPE | 200±10mm |
| 2827410000 | FC50 TN/80A S1 B BX | 80 | TPE | 500±10mm |