

# PV-KBT4-EVO 2A/6I-UR

## MC4-Evo 2 Female Cable Coupler

Photovoltaic DC cable coupler, socket – DC 1500 V, 4–6 mm<sup>2</sup>

Order No. 32.0316P0001-UR | Stäubli Electrical Connectors



The Stäubli PV-KBT4-EVO 2A/6I-UR is the female (socket) half of the Original MC4-Evo 2 cable coupler, used to terminate PV string cable in the DC circuits of a photovoltaic array. It is a crimp connector for 4 mm<sup>2</sup> and 6 mm<sup>2</sup> conductor with a cable outer diameter of 4.7–6.4 mm, approved for DC 1500 V under both IEC 62852 and UL 6703. The MULTILAM contact system maintains constant spring pressure across many contact points, holding contact resistance below 0.2 mΩ for the service life of the connector and preventing the localised heating that drives hot-spots and power loss. IP65/IP68 sealing when mated, UL94-V0 insulation and certified UV and ammonia resistance suit it to permanent outdoor installation.

### GENERAL / IDENTIFICATION

|                              |                                                    |
|------------------------------|----------------------------------------------------|
| Manufacturer                 | Stäubli Electrical Connectors AG                   |
| Type designation             | PV-KBT4-EVO 2A/6I-UR                               |
| Order number                 | 32.0316P0001-UR                                    |
| Product family               | Original MC4-Evo 2                                 |
| Function                     | Female cable coupler (socket), single-pole         |
| Gender / polarity convention | Socket – positive (+) side in standard PV practice |

### ELECTRICAL

|                                           |                                                                       |
|-------------------------------------------|-----------------------------------------------------------------------|
| Rated voltage (IEC 62852:2014+Amd.1:2020) | DC 1500 V                                                             |
| Rated voltage (UL 6703)                   | DC 1500 V                                                             |
| Rated current, IEC                        | 45 A (4 mm <sup>2</sup> ) / 53 A (6 mm <sup>2</sup> )                 |
| Rated current, UL                         | 39 A (12 AWG) / 50 A (10 AWG)                                         |
| Conductor cross-section                   | 4 mm <sup>2</sup> and 6 mm <sup>2</sup> (IEC); 12 AWG and 10 AWG (UL) |
| Cable outer diameter                      | 4.7 – 6.4 mm                                                          |
| Width of crimp opening                    | 5.8 mm                                                                |
| Contact resistance                        | < 0.2 mΩ                                                              |
| Overvoltage category                      | III                                                                   |

### MECHANICAL & ENVIRONMENTAL

|                                  |                          |
|----------------------------------|--------------------------|
| Protection class (IEC)           | II                       |
| Contact system                   | MULTILAM                 |
| Type of termination              | Crimping                 |
| Locking system                   | Locking type             |
| Contact material                 | Copper, tin plated       |
| Insulation material              | PA (polyamide)           |
| Flame class                      | UL94-V0                  |
| Degree of protection, mated      | IP65 / IP68 (1 m, 168 h) |
| Degree of protection, unmated    | IP2X                     |
| Ambient temperature range        | -40 °C ... +85 °C        |
| Upper limiting temperature (IEC) | 115 °C                   |

|                                  |                 |
|----------------------------------|-----------------|
| Transport / storage temperature  | -30 °C / +60 °C |
| Transport / storage humidity     | < 70 % RH       |
| Temperature level (IEC TS 63126) | Level 2         |

#### COMPLIANCE / STANDARDS

|                                                |                                                                |
|------------------------------------------------|----------------------------------------------------------------|
| Maximum operating altitude                     | 5000 m above sea level                                         |
| UV resistance                                  | Yes                                                            |
| Ammonia resistance                             | TÜV Rheinland certified to 2 PFG 1911/03.2011 (Q60139020-0001) |
| TÜV Rheinland certificate (IEC 62852)          | R 60127169                                                     |
| UL file number (UL 6703 / CSA C22.2 No. 182.5) | E343181 – cULus Listed and UL Recognized                       |
| Assembly instructions                          | MA298                                                          |

#### ORDERING / ACCESSORIES

|                                        |                                                            |
|----------------------------------------|------------------------------------------------------------|
| Order number, individual part          | 32.0316P0001-UR                                            |
| Order number, contacts on carrier band | 32.0316P2000 (2000 contacts per reel)                      |
| Mating half                            | PV-KST4-EVO 2A/6I-UR, order no. 32.0317P0001-UR            |
| Sealing cap, socket side               | PV-BVK4, order no. 32.0716                                 |
| Crimping tool                          | PV-CZM-61100, order no. 32.6020-61100 with locator 32.6084 |
| Unlocking tool                         | PV-MS-MC4-EVO, order no. 32.6066                           |

#### TYPICAL APPLICATIONS

Module-to-module and module-to-string interconnection, string harnesses, combiner-box and inverter string inputs, module table and string wiring in rooftop, ground-mount and tracker PV arrays.

**Installation note:** do not disconnect under load. In accordance with NEC 2023 the connector requires a tool to open. Unmated connectors must be protected with Stäubli sealing caps.