

#### **☑** IN-BRANCH

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#### **SOLAR CONNECTORS** - Easy to install and connect

#### **Straight Connectors**



- **2.5mm**, 4mm and 6mm [2784-5287 10mm]
- IP68 when connected
- = 1500V DC
- Snap fit locking arrangement
- TUV certified





| F4P Ref          | Code      | Description                                    |
|------------------|-----------|--|
| F4PEMPV4N        | 2784-5308 | PV Straight MC4 Connector Pair 1.5kV           |
| F4PEMPV4NSINGLE  | 2784-5323 | PV Straight MC4 Connector Pair Singles 1 .5kV  |
| F4PEMPV4NF       | 2784-5311 | PV Straight MC4 Connector Female 1.5kV         |
| F4PEMPV4NFSINGLE | 2784-5314 | PV Straight MC4 Connector Female Singles 1.5kV |
| F4PEMPV4NM       | 2784-5317 | PV Straight MC4 Connector Male 1.5kV           |
| F4PEMPV4NMSINGLE | 2784-5320 | PV Straight MC4 Connector Male Singles 1.5kV   |
| F4PEMPV10N       | 2784-5287 | PV Straight MC4 Connector Pair 10mm 1.5kV      |

#### **Branch Connectors**

- IP68 when connected
- = 1500V DC
- Snap fit locking arrangement
- TUV certified



2784-5281

| F4P Ref     | Code      | Description                          |
|-------------|-----------|--------------------------------------|
| F4PEBPV4F-N | 2784-5281 | PV Branch MC4 Connector Female 1.5kV |
| F4PEBPV4M-N | 2784-5284 | PV Branch MC4 Connector Male 1.5kV   |

#### **Panel Connectors**

- IP68 when connected
- 1500V DC
- Snap fit locking arrangement
- TUV certified



| F4P Ref         | Code      | Description                     |
|-----------------|-----------|---------------------------------|
| F4PEMPVPCM4-EX  | 2784-5329 | PV Panel Connector Male 1.5kV   |
| F4PEMPVPCF4N-EX | 2784-5326 | PV Panel Connector Female 1.5kV |

#### **In-Line Fuse Connectors**



- IP68 when connected
- = 1500V DC
- Snap fit locking arrangement
- TUV certified





| F4P Ref                             | Code      | Description                         |  |
|-------------------------------------|-----------|-------------------------------------|--|
| In-Line Fuse Connector for 10       | OO VDC    |                                     |  |
| F4PEMPV4IFC-1000                    | 2784-5290 | PV IL Fuse Connector Pair 1kV       |  |
| F4PEMPV4IFCF-1000                   | 2784-5296 | PV IL Fuse Connector Female 1Kv     |  |
| F4PEMPV4IFCM-1000                   | 2784-5302 | PV IL Fuse Connector Male 1kV       |  |
| In-Line Fuse Connector for 1500 VDC |           |                                     |  |
| F4PEMPV4IFC1500                     | 2784-5293 | PV IL Fuse Connector Pair 1.5kV     |  |
| F4PEMPV4IFCF-1500                   | 2784-5299 | PV IL Fuse Connector Female 1.5kV   |  |
| F4PEMPV4IFCM-1500                   | 2784-5305 | F4P PV IL Fuse Connector Male 1.5kV |  |
|                                     |           |                                     |  |

#### **Fuse Holder for 1500 VDC**

- 1500V DC
- Holds a 10 mm x 85 mm Solar cartridge fuse
- Mounts on DIN rail



| F4P Ref        | Code      | Description                  |
|----------------|-----------|------------------------------|
| F4PEPVFH1500NV | 2784-5332 | PV Solar Fuse Terminal Block |

#### **SOLAR CONNECTOR ACCESSORIES**



| F4P Ref         | Code      | Description                       |
|-----------------|-----------|-----------------------------------|
| F4PEPVSCPF      | 2784-5341 | F4P Connector Sealing Caps Female |
| F4PEPVSCPM      | 2784-5344 | F4P Connector Sealing Caps Male   |
| F4PEPVOS-S      | 2784-5335 | F4P Spanner Tools                 |
| F4PEPVOS-U      | 2784-5338 | F4P Spanner Tool Disconnector     |
| F4PE0B40B41-001 | 2784-5272 | Solar Lead with connectors 2M     |









#### **SOLAR CONNECTOR ACCESSORIES**

#### **Specialist Solar Crimping Tool**

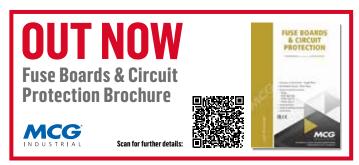


 The professional Crimping tool is specifically designed for fitting connectors commonly found in Solar systems

- High-precision ratchet mechanism for complete crimps
- Ratchet release point in case of user error when crimping



| F4P Ref  | Code      | Description                    |
|----------|-----------|--------------------------------|
| F4PESSCT | 2784-5278 | Specialist Solar Crimping Tool |



#### **SOLAR FUSES**

#### Solar gPV Fuses



■ Sizes: 10 mm x 38 mm & 10 mm x 85 mm



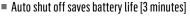
| F4P Ref     | Code      | Description    |
|-------------|-----------|----------------|
| 10mm x 38mm | Jour      | Description    |
| LFPV324     | 2785-9390 | Solar Fuse 4A  |
| LFPV325     | 2785-9393 | Solar Fuse 5A  |
| LFPV326     | 2785-9396 | Solar Fuse 6A  |
| LFPV328     | 2785-9399 | Solar Fuse 8A  |
| LFPV3210    | 2785-9381 | Solar Fuse 10A |
| LFPV3212    | 2785-9384 | Solar Fuse 12A |
| LFPV3225    | 2785-9387 | Solar Fuse 25A |
| LFPV3232    | 2785-9402 | Solar Fuse 32A |
| 10mm x 85mm |           |                |
| LFPV3515    | 2785-9405 | Solar Fuse 15A |
| LFPV3520    | 2785-9408 | Solar Fuse 20A |
| LFPV3532    | 2785-9411 | Solar Fuse 32A |

#### **KLEIN TOOLS SOLUTIONS**

#### Rare Earth Magnet Torpedo Level



- Large, bright LED high definition vials are easy to read in any lighting condition
- Patented magnet track prevents powerful rare earth magnets from falling out
- Large, easy to read high visibility vials at 3 angles [level, 90 and 45 degrees]
- Large top view vial windows enable easy readability from multiple angles
- High visibility orange professional grade billet aluminium body is easy to see on conduit and at the jobsite



V-Groove fits contour of conduit and pipe

Tapered nose easily pushes into pockets

Water and impact resistant



| F4P Ref | Code      | Description                           |
|---------|-----------|---------------------------------------|
| 935RBLT | 2579-4706 | Klein Rare Earth Magnet Torpedo Level |

## Rare Earth Magnet Aluminium Torpedo Level



- Locking track prevents powerful rare earth magnets from falling out
- Large, easy to read, high visibility vials at 3 angles: level, 90 and 45 degrees
- Large, top view vial window is easy to read from different angles

Description

- High visibility orange body is easy to see on conduits and on the job site
- V-Groove fits conduit and pipe contours



| 935R   | 2243-1223 | Klein Rare Earth Magnet Aluminium Torpedo Level  |   |
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#### **KLEIN TOOLS SOLUTIONS**

#### **Lightweight & Heavy-duty Knee Pad Sleeves**

- The Lightweight Knee Pad Sleeves provide all day comfort
- The Heavy-duty Knee Pad Sleeves have triple-layer protection for all day comfort
- Unique, compact design keeps knee pads close to the body and centred for a second-skin fit, allowing for agility when working in tight spaces
- Can be worn under or over trousers
- Stay cool and comfortable with the lightweight, breathable mesh back
- Perfect for the jobsite and weekend tasks
- Sold in pairs

| F4P Ref | Code      | Description                              |
|---------|-----------|--|
| 60492   | 2756-9473 | Klein Lightweight Knee Pads Sleeves M/L  |
| 60592   | 2756-9479 | Klein Lightweight Knee Pads Sleeves L/XL |
| 60511   | 2756-9476 | Klein Heavy Duty Knee Pads Sleeves M/L   |
| 60611   | 2756-9482 | Klein Heavy Duty Knee Pads Sleeves L/XL  |



#### 0.15mm<sup>2</sup> to 4.00mm<sup>2</sup> Wire Stripper / Cutter





#### The perfect tool for stripping 4mm solar cable

- Cuts and strips 0.15 4.0mm<sup>2</sup> wire with ease
- Compound action stripping: grip and strip via single-action squeezing motion
- Precision-machined stripping holes remove insulation easily without damaging the wire
- Remove up to 24mm in length of the insulation layer (jacket layer) in a single step
- Tension loaded wire grip gently holds the cable in place while retaining the cable geometry
- Recoil spring design returns tool to ready position upon cycle completion
- Cast alloy chassis with heavy-duty Ecoat finish for corrosion resistance and durability



| F4P Ref   | Code      | Description                                     |
|-----------|-----------|---|
| 11063WMET | 1917-0802 | Klein 0.15mm² to 4.00mm² Wire Stripper / Cutter |

#### **MEASURING SOLUTIONS**

#### **Digital Level with Programmable Angles**





- Digital level measures 0 to 90 degree, 0 to 180 degree or dual axis bullseye ranges
- Pre-programmed commonly used target pitches for efficiency and ease of use: 1/8 inch, 1/4 inch, 3/8 inch and 1/2 inch per foot
- Easily achieve target angle by setting an audible alarm, LCD will change colour as a visual indicator of reaching the set target angle
- Use in bullseye orientation to accurately determine X- and Y-axis





#### Includes:

- Soft carry case
- 2 x AA batteries

| F4P Ref | Code      | Description                                  |
|---------|-----------|--|
| 935DAG  | 2658-3655 | Klein Digital Angle Guage & Level            |
| 935DAGL | 2687-3845 | Klein Digital Level with Programmable Angles |









#### **ISOLATOR SWITCHES**

#### **Enclosed Rotary Isolators DC IP66**



- Suitable for Photovoltaic Isolators, Inverter Applications, DC Solar Pumps
- Insulated enclosure flame retardant material
- Low smoke and halogen free
- Wiping contacts
- Padlockable for added security (up to 3 padlocks)
- Interlock Feature (Cover opens only in OFF position)
- Knockout cable entries



|           |           | Current Rating | Current Rating | Dimensions (mm) |     |    |  |
|-----------|-----------|----------------|----------------|-----------------|-----|----|--|
| Ref No.   | Code      | 1500V          | 1000V          | W               | Н   | D  |  |
| 4 Pole    |           |                |                |                 |     |    |  |
| SMI16-4DC | 2781-7849 | 16A            | 20A            | 100             | 160 | 74 |  |
| SMI20-4DC | 2781-7852 | 20A            | 25A            | 100             | 160 | 74 |  |
| SMI25-4DC | 2781-7855 | 25A            | 32A            | 100             | 160 | 74 |  |
| SMI32-4DC | 2781-7858 | 32A            | 40A            | 100             | 160 | 74 |  |

#### **Enclosed Rotary Isolators AC IP65**



- Flame retardant ABS plastic
- Easy access and switch removal
- Current rating: AC21 [resistive loads]
- Padlockable in the Off position
- Cable entry: 20 40A 20 mm[Ø] Knockouts
  63 125A 25 mm[Ø] Knockouts
- Mounted: Surface
- BS EN 60947-3



0576-1585

|          |           |                | Din | ensions (n | nm) |
|----------|-----------|----------------|-----|------------|-----|
| Ref No.  | Code      | Current Rating | W   | н          | D   |
| 3 Pole   |           |                |     |            |     |
| SMI20-3  | 0576-1585 | 20A            | 100 | 125        | 74  |
| SMI25-3  | 0433-1995 | 25A            | 100 | 125        | 74  |
| SMI32-3  | 0433-2007 | 32A            | 100 | 125        | 74  |
| 4 Pole   |           |                |     |            |     |
| SMI20-4  | 0576-1588 | 20A            | 100 | 125        | 74  |
| SMI25-4  | 0433-2001 | 25A            | 100 | 125        | 74  |
| SMI25-4L | 1462-6450 | 25A            | 175 | 125        | 90  |
| SMI32-4  | 0433-2013 | 32A            | 100 | 125        | 74  |
| SMI32-4L | 1462-6471 | 32A            | 175 | 125        | 90  |

#### **SURGE PROTECTION**

### Surge Arresters for Solar PV Installations



- Ideal for photovoltaic/solar systems
- Designed for the protection of the DC side before the inverter
- End of module life indication
- Remote signal contacts
- Pluggable and replaceable module
- Mounted: DIN rail
- Cable size: 6mm² to 25mm²
- Conforms to IEC 61643-1 and EN 61643-11



| Ref No.    | Code      | Туре   | Back Up Fuse Required | Modules | DC Rating |
|------------|-----------|--------|-----------------------|---------|-----------|
| SPD PV600  | 2524-0903 | T2 + 3 | 63A                   | 3       | 600V      |
| SPD PV1000 | 2524-0900 | T2 + 3 | 63A                   | 3       | 1000V     |
| LSPDPV1000 | 2764-7161 | T1 + 2 | 63A                   | 3       | 1000V     |

#### Single Module T2 -3 Surge Arresters AC



- Ideal for domestic applications
- Suitable for TN-S, TN-C-S, TT and PME earthing systems
- End of module life indication
- No earth leakage [can be placed either side of RCDs]
- Pluggable and replaceable module
- Mounted: DIN rail
- Cable size: 2.5mm² to 4mm²
- Suitable for use with any brand of consumer unit
- Conforms to IEC 61643-1 and EN 61643-11
- Compliant to latest BS 7671 wiring regulations

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| 11/2 | 20 | *   |
|      |    | 200 |

2524-0903

| Ref No. | Code      | Туре   | Back Up<br>Fuse Required | Version      | Auxiliary<br>Contact |
|---------|-----------|--------|--------------------------|--------------|----------------------|
| SY2-D   | 2433-7003 | T2 + 3 | 16 - 32A                 | Single Phase | No                   |

#### T2-3 Surge Arrester AC Protection Kits



#### Cable Kit includes:

- 1 x Earth Cable (280mm)
- 1 x Neutral Cable (255mm)
- 2 x Live Cables (120mm)
- 1 x Auxiliary Block

Ref No. SPDT2PACK-M

SPDT2PACK-S



| 2696-8078 |   |
|-----------|---|
| Code      | Description   |
| 2696-8078 | 1 x Surge Protection Devices Ltd SPD, 1 x 32A MCB and 1 x Cable Kit |
| 2708-4952 | 1 x MCG Industrial SPD, 1 x 32A MCB and 1 x Cable Kit               |



#### **SURGE PROTECTION**

#### Two Module T2 - T3 Surge Arrester AC



- Protects against indirect lightning effects and transient surges
- Prolongs the life of appliances and sensitive electronic equipment
- Visual and remote end-of-life indication
- Recommended backup MCB: 32A
- Mounted: DIN rail
- BS EN 61643-11 and BS EN 62305
- Warranty: 10 Years [enclosure warranty: 1 Year]



| Ref No.                                     | Code      | Type   | Suitable For |           | No. of Pole | s No. of Mod | ules |  |
|---|-----------|--------|--------------|-----------|-------------|--------------|------|--|
| Device Only                                 |           |        |              |           |             |              |      |  |
| SY1-C40X                                    | 2433-6997 | 2 + 3  | TN-S a       | nd TN-C-S | 2           | 2            |      |  |
| Ref No.                                     | Code      | No. of | Ways         | Height    | Widt        | th Dept      | h    |  |
| Device Complete with Metal Enclosure [IP20] |           |        |              |           |             |              |      |  |
| SY1-C40XME                                  | 2441-3881 | 2 +    | 3            | 145 mm    | 80 mr       | m 82 mn      | n    |  |

#### Four Module T2 - T3 Surge Protection AC



- Protects against indirect lightning effects and transient surges
- Prolongs the life of appliances and sensitive electronic equipment
- Visual and remote end-of-life indication
- Recommended backup MCB: 32A
- Mounted: DIN rail
- BS EN 61643-11 and BS EN 62305
- Warranty: 10 Years [enclosure warranty: 1 Year]



| Ref No.                                     | Code      | Type   | Suitable For |           | No. of Poles | No. of Modules |  |  |
|---|-----------|--------|--------------|-----------|--------------|----------------|--|--|
| Device Only                                 |           |        |              |           |              |                |  |  |
| SY2-C40X                                    | 2433-7000 | 2 + 3  | TN-S a       | nd TN-C-S | 4            | 4              |  |  |
| SY2-C40X-LED                                | 2606 4946 | 2 + 3  |              | TT        | 4            | 4              |  |  |
| Ref No.                                     | Code      | No. of | Ways         | Height    | Width        | Depth          |  |  |
| Device Complete with Metal Enclosure [IP20] |           |        |              |           |              |                |  |  |
| SY1-C40XME                                  | 2441-3887 | 2 +    | 3 175 mm     |           | 110 mm       | 82 mm          |  |  |

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#### **Combined Lightning and Surge** Protection Devices T1 +2 +3



- Protects against direct and indirect lightning effects and transient surges
- Prevents dangerous flashover to protect life in the case of a direct lightning strike
- Prolongs the life of appliances and sensitive electronic equipment
- Visual and remote end-of-life indication
- Mounted: DIN rail
- BS EN 61643-11 and BS EN 62305
- Warranty: 10 Years



| uitable For | No. of Poles | No. of Modules |
|-------------|--------------|----------------|
|             |              |                |

| Ref No.      | Code      | Type Suitable For |    | No. of Poles | No. of Modules |  |
|--------------|-----------|-------------------|----|--------------|----------------|--|
| Device Only  |           |                   |    |              |                |  |
| SY123/25KA2P | 2562-0748 | 1+2+3             | TT | 2            | 2              |  |
| SY123/50KA4P | 2562-0751 | 1+2+3             | TT | 4            | 4              |  |

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#### **ELECTRICITY METERS**

#### **Renewable Energy Meters - Single Phase**

• Suitable for import and export applications used for solar PV installations











| Ref No.          | Code      | Tariff | Туре   | Reading                                       | Connection     | Mounting                               | Cable<br>Cover          | Ouput                          | Smart Enabled   |
|------------------|-----------|--------|--|---|----------------|--|-------------------------|--------------------------------|---|
| MIPHMIDMETER     | 2027-1052 | Single | kWh Meter                                    | Import Only                                   | Direct Connect | Surface<br>Mounted                     | Standard                | Optional Pulse<br>Output       | No  |
| M1PH100MID/BI/EC | 2764-4347 | Single | Generation Meter<br>[Solar PV]               | Import / Export                               | Direct Connect | Surface<br>Mounted                     | Extended<br>Cable Cover | Optional Pulse<br>Output       | No  |
| M1PH100MID/NR/EC | 2764-4353 | Single | Generation Meter<br>[Net Reading / Solar PV] | Import / Export /<br>Net Reading              | Direct Connect | Surface<br>Mounted                     | Extended<br>Cable Cover | Optional Pulse<br>Output       | No  |
| D1P100A/2M       | 2648-6740 | Single | Generation Meter<br>[Solar PV]               | Import / Export<br>(Export only<br>on modbus) | Direct Connect | Din Rail<br>Mounted [2<br>Module Wide] | Standard                | Pulse/ Modbus /<br>Mbus Output | No  |
| EMGSM1           | 2757-2011 | Single | Generation Meter<br>[Solar PV]               | Import / Export                               | Direct Connect | Surface<br>Mounted                     | Standard                | -                              | Auto Meter Reading<br>- Read Only<br>[Modem & Meter-online SIM] |
| WIFIDCMETER      | 2757-2029 | Single | Generation Meter<br>[Solar PV]               | Import<br>[Export Via APP]                    | Direct Connect | Surface<br>Mounted                     | Standard                | Pule Output<br>Optional        | Auto Meter Reading<br>[WIFI] Read Only                          |

120A 3PH 4 Wire Dual Elec/Pulsed Meter Dir. Con.

 A three phase, single tariff, kWh micro-generation meter, a multifunction meter capable of measuring Reactive energy (kVArh), Voltage (V)and Current (I).





| Ref No.     | Code      | Tariff | Туре                           | Reading         | Connection     | Mounting           | Cable<br>Cover | Ouput        | Smart Enabled |
|-------------|-----------|--------|--------------------------------|-----------------|----------------|--------------------|----------------|--------------|---------------|
| ISK/MT174DC | 1629-7411 | Three  | Generation Meter<br>[Solar PV] | Import / Export | Direct Connect | Surface<br>Mounted | Standard       | Pulse Output | No            |

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