



# U4SP100WW# UHF SPLITTER 4 WAY

- Low Loss - near theoretical insertion loss to main arterial, Split-1 and Split-2
- 3A DC power through feed facility on all ports
- Brass block custom connection system specifically for radiating cable systems

## FEATURES

Becker Mining Systems smartcom® UHF 4 way Splitter is used to split the main arterial line into three separate Leaky Feeder Arterials. In doing so the RF power is divided equally between the four resultant arterials. The DC Power may also be routed in various directions by opening and closing the on board jumpers. DC injection screw terminals also allow this unit to be used as a make shift “Power Coupler”. Additional jumpers allow the technician to internally terminate the unused RF ports.

The RF and DC Signals present on the “Base Station” port are separated using a passive network. The 3dB SMD splitter and PCB transmission lines redirect the RF signals to the “Main Arterial”, “Split-1” and “Split-2” ports with a minimum of loss. The DC portion is similarly split to the four ports through a set of 4 jumper terminals, one for each of the ports. The “Main Arterial”, “Split-1” and “Split-2” ports are driven by passive combiner networks used to re-combine the DC and RF signals.

A local DC-Injection screw terminal is also included to act as a power coupler for any or all of the 4 ports simultaneously. The unit thereby takes the DC and RF signals present on the original arterial and repeats (-3dB RF+DC) copies on to three additional arterials.

## TECHNICAL DATA

| PERFORMANCE SPECIFICATIONS       |                                  |
|----------------------------------|----------------------------------|
| Frequency Band                   | 200 MHz to 500 MHz               |
| Impedance                        | 50 Ω                             |
| Connectors                       | 50 Ω Brass Blocks                |
| Port Output to Output Isolation  | 20 dB min. 25 dB typical         |
| <u>Insertion Loss</u>            |                                  |
| Main Arterial:                   | < 4.5 dB                         |
| Split 1 & 2:                     | < 7.6 dB                         |
| VSWR                             | 1.3:1 (430 MHz to 480 MHz)       |
| Internal Port Termination jumper | Main Arterial & Split - 75R      |
| Through current capacity         | 3.0 A (max)                      |
| Power Requirement                | None - Passive                   |
| DC Power Jumper Selections       | Input to All                     |
| DC Power Injection               | Input to Main, Individual or All |

| ENVIRONMENTAL SPECIFICATIONS       |   |
|------------------------------------|---|
| Operating Temperature              | -20°C to +55°C  |
| Storage Temperature Limits         | -40°C to +65°C  |
| Operating Altitude                 | Up to 5500m ASL   |
| Operating Humidity                 | 10% to 85% (Non Condensing)   |
| Ingress Protection Rating          | IP68 according to EN60529   |
| Impact Resistance                  | 7Nm - Body Only - Not indicator lights                                  |
| Flammability                       | UL94 V-0  |
| Toxicity                           | Halogen and Cadmium Free  |
| Electromagnetic Interference (EMI) | FCC Emissions Class A (Industrial)<br>CE Emissions Class A (Industrial) |

## MECHANICAL SPECIFICATIONS

|                        |   |
|------------------------|---|
| Dimensions (H x W x L) | 61 x 75 x 190 mm<br>2.4 x 3.0 x 7.5 in  |
| Weight                 | 1.23 kg   |
| Principal Materials    | Enclosure: Glass Reinforced Polyester GRP<br>Connectors: Electroplated Brass<br>Thermoplastic polymer glass fiber |
| Finish                 | Natural Grey - (Similar to RAL7001)   |
| Gasket                 | Silicon rubber  |
| Mounting Options       | 4 holes M6 directly   |

Technical data are limit values.

If the product is integrated into systems or operated in combination with other devices, its permissible operating values can deviate from these limit values. Subject to technical modifications without prior notice.

Rev. D

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