

# MB.LV.seco cable datasheet

MB.LV.seco cable is the cable that powers the ten Sector Collector (SC) crates from the A3100 modules. There are a total of 10 cables, one per SC crate.

<b>MB.LV.seco</b> (Cristina Fernandez)			
<b>PRR @ EDMS</b>	<b>Description</b>	<b>Size [mm]</b>	<b>GRAND TOTAL</b>
	LV Sector Collector Cable		10 cables
<b>Cable Listing</b>			
	<b>Label</b>	<b>Source</b>	<b>Destination</b>
1	MB.LV.seco @ X2J21/1 : X2J22/1	X2J21	X2J22
1	MB.LV.seco @ X2J21/2 : X2J22/2	X2J21	X2J22
1	MB.LV.seco @ X2J11/1 : X2J12/1	X2J11	X2J12
1	MB.LV.seco @ X2J11/2 : X2J12/2	X2J11	X2J12
1	MB.LV.seco @ X2J01/1 : X2J02/1	X2J01	X2J02
1	MB.LV.seco @ X2J01/2 : X2J02/2	X2J01	X2J02
1	MB.LV.seco @ X2V11/1 : X2V12/1	X2V11	X2V12
1	MB.LV.seco @ X2V11/2 : X2V12/2	X2V11	X2V12
1	MB.LV.seco @ X2V21/1 : X2V22/1	X2V21	X2V22
1	MB.LV.seco @ X2V21/2 : X2V22/2	X2V21	X2V22

It is made of:

## Power wires:

- 2 flexible copper cables 25 mm<sup>2</sup> light blue (SCEM 04.08.61.356.1) for 5 V.
- 2 flexible copper cables 25 mm<sup>2</sup> black (SCEM 04.08.61.354.3) for 0 V.
- 5V connector: 2 REMA 80188-00 red housing 75 A with REMA 78265-00 contacts
- 0V connector: 2 REMA 80188-02 black housing 75 A with REMA 78265-00 contacts

## Sense wires:

- 1 flexible copper cable 0x25 mm<sup>2</sup> violet (SCEM 04.01.61.320.5) for sensor 5V.
- 1 flexible copper cable 0x25 mm<sup>2</sup> yellow/green (SCEM 04.01.61.416.8) for sensor 0V.
- Connector on the SC crate side: plugs DIN 3 pin PREH 71430-030/0800
- Connector Power supply side: 4 ways Tyco Electronics AMP 280359 with Tyco Electronics AMP 181270-2 contacts.

## Shielding:

- 1 flexible copper cable 0x50 mm<sup>2</sup> white (SCEM 04.01.61.680.4).
- Tinned copper screen sheath 20 mm diameter (SCEM 04.01.33.180.6)

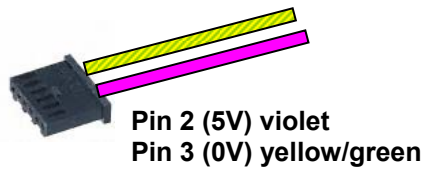
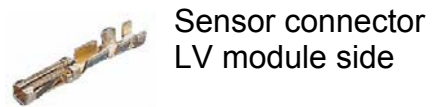
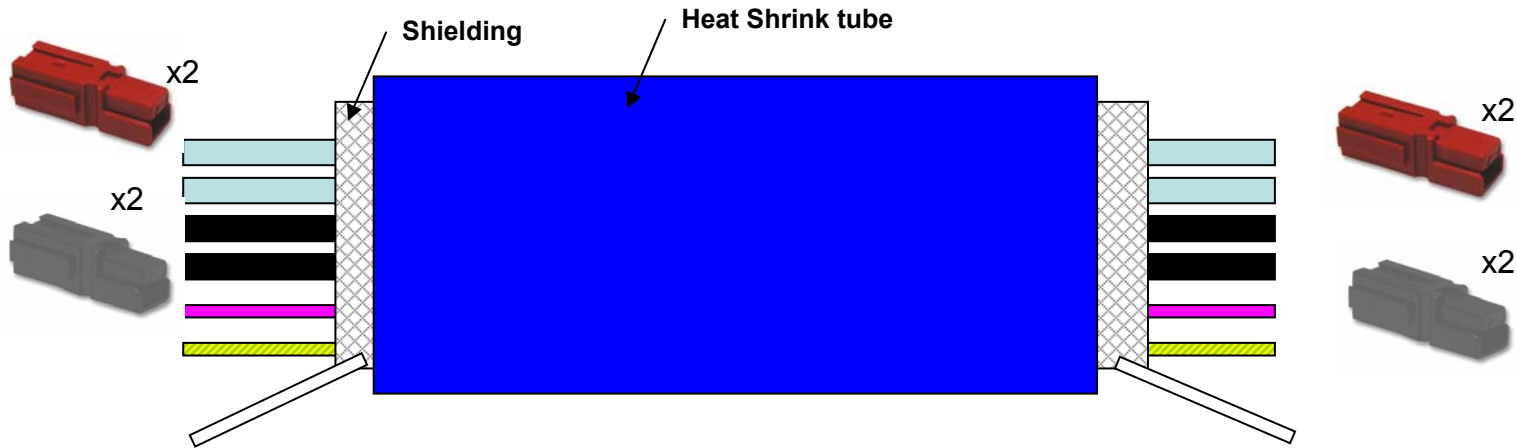
The copper cable is soldered to the screen sheath on both sides of the cable.

## Outer sheath:

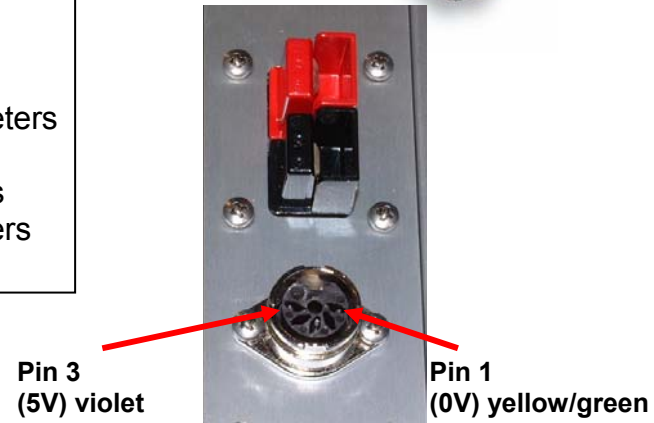
- 38.1 mm PRO POWER (SP381/5/BLUE) blue heat shrink

**LV Module side**

**SC crate side**



**LENGHT**  
YB+1, YB+2:  
SC top = 2 meters  
SC bottom = 1,5 meters  
YB-2, YB-1, YB0:  
SC top = 2,5 meters  
SC bottom = 2 meters

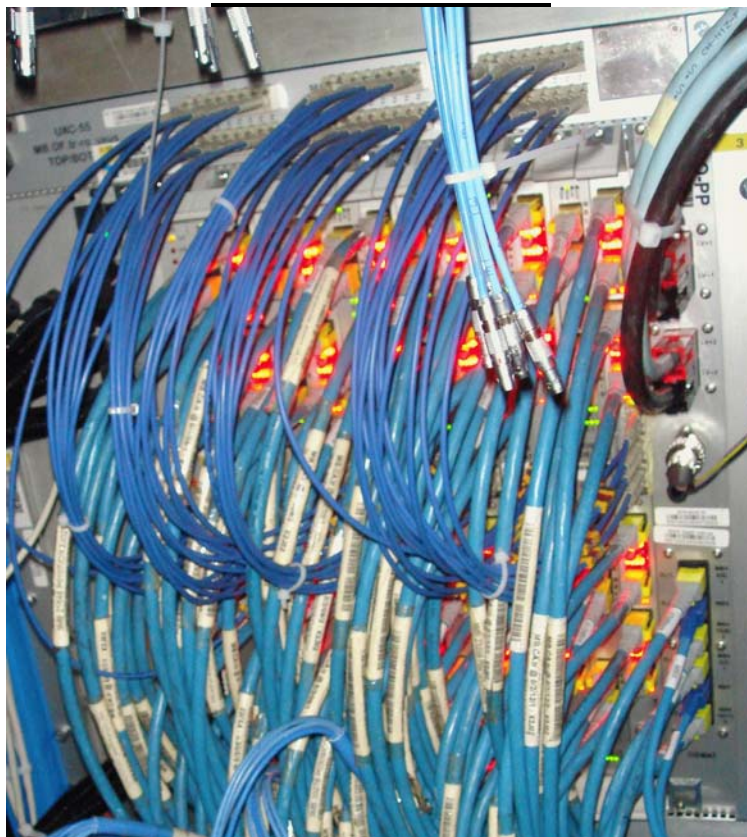




**POWER SUPPLY SIDE:**



**SC CRATE SIDE:**



# DETAILED TECHNICAL INFORMATION

## POWER WIRES

- 2 flexible copper cables 25 mm<sup>2</sup> light blue (04.08.61.356.1) for 5 V.
- 2 flexible copper cables 25 mm<sup>2</sup> black (04.08.61.354.3) for 0 V.

### **Description:**

- Specification: LO-GE N° 358
- Conductor: Copper - class 5
- Insulation: EVA
- Rated input voltage: U = 0.5 kV r.m.s.
- Temperature range: -50 to + 150°C
- ACCORDING TO SAFETY INSTRUCTION IS 23

## POWER CONNECTOR:

- 5V connector: 2 REMA 80188-00 red housing 75 A with REMA 78265-00 contacts
- 0V connector: 2 REMA 80188-02 black housing 75 A with REMA 78265-00 contacts

**Manufacturer:** REMA

**Order Code (Farnell):** 1122504 (black), 1122505(red)

**Manufacturer Part No:** 80188-02 (black), 80188-00 (red)

### **Description**

- HOUSING 75 AMPS BLACK/RED
- Connector type: Rectangular
- Ways, No. of: 1
- Material, contact: Copper
- Plating, contact: Silver
- Series: MC
- Current rating: 75A
- Poles, No. of: 1
- Voltage rating, AC: 600V
- Voltage, working: 600V
- AWG 6

## SENSE WIRES:

- 1 flexible copper cable 0x25 mm<sup>2</sup> violet (04.01.61.320.5) for sensor 5V.
- 1 flexible copper cable 0x25 mm<sup>2</sup> yellow/green (04.01.61.416.8) for sensor 0V.

### **Description:**

- Conductor: Tinned copper
  - Construction: 19 X 0.15 mm dia.
  - Dia. 0.66 mm
  - Cross-section: 0.25 mm<sup>2</sup>
- Insulation: SILTEM
  - o.d. 1.50 mm

- Specification: Rated voltage: 380 V r.m.s.
  - Test voltage: 3500 V r.m.s.
  - Maximum operating temperature: -40 to +125 °C
- ACCORDING TO SAFETY INSTRUCTION IS 23

**SENSOR CONNECTOR SC CRATE SIDE:**

- Connector on the SC crate side: plugs DIN 3 pin PREH 71430-030/0800

**Manufacturer:** PREH

**Manufacturer Part No:** 71430-030/0800

**Description**

- PLUG, DIN, 3PIN
- Connector type: Audio, DIN
- Gender: Plug
- Ways, No. of:3
- Mounting type: Cable
- Contacts, No. of:3
- Current rating:3A
- Diameter, cable max:5.5mm
- Length / Height, external:60mm
- Poles, No. of:3
- Voltage rating, AC:34V
- Current, DC max:3A
- Diameter, body:20mm

**SENSOR CONNECTOR POWER SUPPLY SIDE:**

- Connector Power supply side: 4 ways socket Tyco Electronics AMP 280359

**Manufacturer:** TYCO ELECTRONICS / AMP

**Manufacturer Part No:** 280359

**Description:**

- RECEPTACLE HOUSING, 4WAY
- Connector type: Rectangular
- Gender: Receptacle
- Ways, No. of:4
- Termination method: Crimp
- Series: AMPMODU
- Connector insert type: Female
- Contact style: Socket
- Mounting type: PC Board
- Colour: Black
- Flammability rating:UL94V-1
- Material: Thermoplastic (PPO)
- Temp, op. max:+80°C
- Temp, op. min:-40°C
- Pitch:2.54mm

### **SENSOR CONNECTOR POWER SUPPLY SIDE CONTACTS:**

- Tyco Electronics AMP 181270-2 contacts.

**Manufacturer:** TYCO ELECTRONICS / AMP

**Manufacturer Part No:** 182206-2

#### **Description:**

- CONTACT SOCKET, TIN, 26-22AWG
- Series: AMPMODU
- Connector type: Contact, Crimp
- Gender: Socket
- Termination method: Crimp
- Material, contact: Phosphor Bronze
- Plating, contact: Tin
- Wire size, AWG:22AWG
- Area, wire size min:0.15mm<sup>2</sup>
- Area, wire size max:0.4mm<sup>2</sup>
- Diameter, cable max:1.55mm
- Diameter, cable min:1mm
- Wire size, AWG max:22AWG
- Wire size, AWG min:26AWG

### **COPPER SHEATH**

- Tinned copper screen sheath 20 mm diameter (04.01.33.180.6)

#### **Description:**

- Conductor: Tinned copper on disposable core
- Nominal diameter: 20 mm
- Sheath diameter: 17-22 mm
- Composition 324 wires of 20/100
- Type: 12317

### **SHIELDING CONNECTION CABLE:**

- 1 flexible copper cable 0x50 mm<sup>2</sup> white (04.01.61.680.4).

#### **Description:**

- Conductor: Tinned copper
  - Construction: 19 x 0.19 mm dia.
  - Dia. 1.0 mm
  - CROSS-SECTION 0.50 mm<sup>2</sup>
- Insulation: SILTEM
  - o.d. 1.80 mm
- Specifications: Rated Voltage: 380 V r.m.s.
  - Test Voltage: 3500 V r.m.s.
  - Max. Operating Temperature: -40 to + 125°C
- ACCORDING TO SAFETY INSTRUCTION IS 23

## **HEAT SHRINK**

- 38.1 mm PRO POWER (SP381/5/BLUE) blue heat shrink

**Manufacturer:** PRO POWER

**Manufacturer Part No:** SP381/5/BLUE.

**Description:**

- HEAT SHRINK, 38.1MM BLUE 5M
- Diameter, unshrunk:38.1mm
- Diameter, fully shrunk:19mm
- Ratio, shrink:2:1
- Material: Irradiated Polyolefin
- Colour: Blue
- Temperature, shrink:100°C
- Approval Bodies: UL
- Approval category:UL224
- Dielectric strength:20kV/mm
- Flammability rating:VW-1
- Length, Reel (Metric):5m
- Standard: CSA, LR54949
- Temp, op. max:135°C
- Temp, op. min:-55°C