# **EEZ PSU H24005 wire harness**

- Ethernet cable
- Cooling fan cable
- AUX temperature sensor cable
- AC switch patch cables
- Cable set #1
- Cable set #2
- Pre-assembled cables
- <u>BOM</u>

### 1. Ethernet cable

Total length 250 (± 5) mm

Type 4 pairs Ethernet, *stranded* wire

TME <u>HELUKAT100-FTP-FP</u> or e.g. cut <u>CA00600.00C01</u> to size

Farnell <u>1602385</u> or e.g. cut <u>1734894</u> to size

### **Connectors**

Side A	X8	Side B	X18
Housing type	Receptacle, 0.1"	Housing type	See side A
TME	NSR-08	TME	See side A
Farnell	<u>865667</u>	Farnell	See side A





Pin:	Female	Pin	See side A
Pin quantity	8	Pin quantity	7
TME	NDR-T	TME	See side A
Farnell	1022219	Farnell	See side A





Polarising key	Position #3
TME	NSDR-KEY
Farnell	512023



# Wiring

Name	Position	Color / description	Position	Color / description
LED link	1	Brown-white	1	Brown-white
LED act	2	Brown	2	Brown
Shield	3	Blue-white	3	Polarising key
RX+	4	Orange-white	4	Orange-white
RX-	5	Orange	5	Orange
TX+	6	Green-white	6	Green-white
TX-	7	Green	7	Green
+3.3V	8	Blue	8	Blue

#### **Picture**



# 2. Cooling fan cable

Total length 100 (± 5) mm

Type 3 wire, already mounted on the cooling fan

Fan: TME: <u>MB60251V1-G99</u>



#### **Connectors**

Side A	X6	Side B	N/A	
Housing type	Receptacle, 0.1"	Housing type	N/A	
TME	MX-6471-031	TME	N/A	
Farnell	<u>143127</u>	Farnell	N/A	



Pin	Female	Pin	N/A
Pin quantity	3	Pin quantity	0
TME	MX-0850-0114	TME	N/A
Farnell	<u>2063734</u>	Farnell	N/A



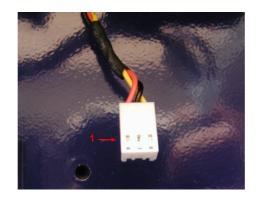
### **Additional info**

Fan is already equipped with cable that has to be cut to size and terminated with connector

# Wiring

Name	Position	Color / description
12 Vdc	1	Red
GND	2	Black
Sense	3	Yellow

### **Picture**



# 3. AUX temperature sensor cable

Total length 145 ( $\pm$  5) mm

Type Max. 0.35 mm<sup>2</sup> singe wire, stranded

TME E.g. brown: <u>LGY0.35/25-BR</u> (or any other color)

Farnell E.g. brown: <u>2425402</u> (0.22 mm<sup>2</sup>)

NTC TME: <u>NTCLE100E3103JB0</u>, Farnell: <u>1187031</u>

Wire TME: <u>LGY0.35/25-BR</u>, Farnell: <u>2425402</u>

#### **Connectors**

Side A	X17	Side B	N/A	
Housing type	Receptacle 0.1"	Housing type	N/A	
TME	MX-6471-021	TME	N/A	
Farnell	<u>143126</u>	Farnell	N/A	



Female	Pin	N/A
2	Pin quantity	0
MX-0850-0114	TME	N/A
<u>2063734</u>	Farnell	N/A
	2 MX-0850-0114	2 Pin quantity MX-0850-0114 TME



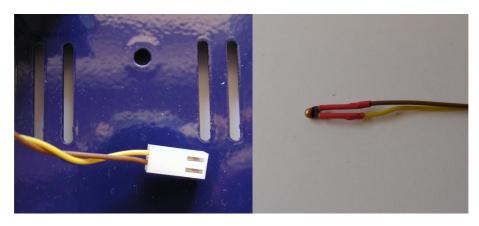
#### **Additional info**

The temperature sensor is already equipped with cable that has to be terminated with connector

# Wiring

Name	Position	Color / description
MCU_VCC	1	Any color
NTC	2	Any color

#### **Picture**



# 4. AC switch patch cables

Total length 45 (± 5) mm

Type 0.75 mm² singe wire, stranded, min. 250 VAC
TME Brown: <u>LGY0.75/25-BR</u>, Blue: <u>LGY0.75/25-BL</u>

Farnell Brown: <u>2528103</u>, Blue: <u>2528092</u>

#### **Connectors**

Side A	AC output	Side B	AC Switch input
Pin	Female quick discon- nect	Pin	See side A
Pin quantity	2	Pin quantity	See side A
TME	BM01148 or ST-003/2	TME	See side A
Farnell	<u>3625424</u>	Farnell	See side A
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### **Additional info**

Required for Schurter 4304.6090 IEC inlet (C14, 6765, 10A)

### Wiring1

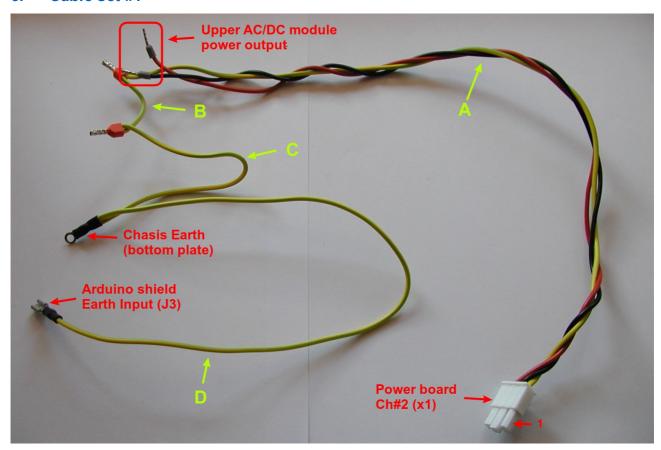
Name	Position	Color / description	Position	Color / description
Line	1	Brown	1	Brown

# Wiring2

Name	Position	Color / description	Position	Color / description
Neutral	1	Blue	1	Blue
Picture				



#### 5. Cable set #1



# 5.1. Section A: Power board (CH2) X1 cable

Length 420 (± 5) mm

Type 0.75 mm² singe wire, stranded, min. 250 VAC TME Red: <u>LGY0.75/25-RD</u>, Black: <u>LGY0.75/25-BK</u>

Green-Yellow: LGY0.75/25-YL/GR

Farnell Red: <u>2528175</u>, Black: <u>2528082</u>, Green-Yellow: <u>2528140</u>

#### **Connectors**

Side A	Power board X1 (Ch2)	Side B	AC/DC module power output		
Housing type	Male, Mini-Fit Jr.	Housing type	Ferrule, single wire		
TME	MX-5557-03R2	TME	H0.75/14D/GY		
Farnell	9963480	Farnell	<u>841195</u>		
	1	Farnell 841195			

Pin Female Quantity 2 Pin quantity 3 Housing type Ferrule, twin entry TME TME MX-5556-T3L H0.75/15D2/GY Farnell 9732675 Farnell 1121751





# Quantity

1

Wiring				
Name	Position	Color / description	Position	Color / description
Earth	1	Green-Yellow	N/A	Ferrule, twin entry
Vin-	2	Black	N/A	Ferrule
Vin+	3	Red	N/A	Ferrule

### 5.2. Section B: AC/DC module Earth

Length 70 (± 1) mm

Type 0.75 mm<sup>2</sup> singe wire, stranded, min. 250 VAC

TME <u>LGY0.75/25-YL/GR</u>

Farnell <u>2528140</u>

#### **Connectors**

Side A	AC/DC module Earth output	Side B	AC/DC module Earth (in)
Housing type	Use twin entry ferrule, See E side, Section A	B Housing type	Ferrule, twin entry
		TME	H0.75/15D2/GY
		Farnell	<u>1121751</u>
		Quantity	1

# 5.3. Section C: Chassis Earth

Length: 170 (± 5) mm

Type: 0.75 mm² singe wire, stranded, min. 250 VAC

TME <u>LGY0.75/25-YL/GR</u>

Farnell <u>2528140</u>

#### **Connectors**

Side A	AC/DC module Earth (in)	Side B	Chassis Earth (bottom plate)
Housing type	Use twin entry ferrule, See side, Section B	B Housing type	Non-insulated, Ring terminal, 3 mm
		TME	BM01148 or ST-003/2
		Farnell	<u>7356528</u>
		Quantity	1

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### 5.4. Section D: Arduino Shield Earth

Length: 350 (± 5) mm

Type: 0.75 mm<sup>2</sup> singe wire, stranded, min. 250 VAC

TME <u>LGY0.75/25-YL/GR</u>

Farnell <u>2528140</u>

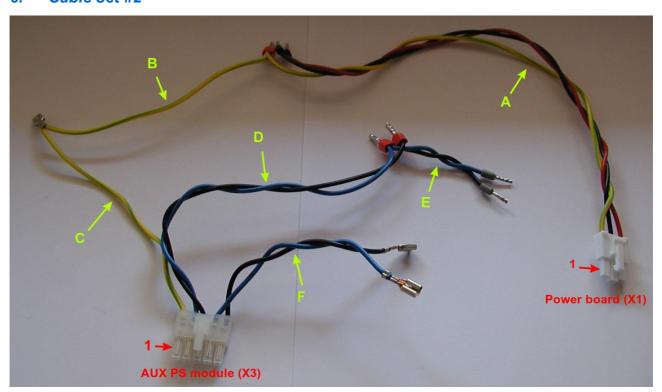
#### **Connectors**

Side A	Chassis Earth (bottom plate)	Side B	Arduino Shield Earth input (J3)	
Housing type	Use ring terminal, See B side, Section C	Housing type	Female quick disconnect	
		TME	BM01148 or ST-003/2	
		Farnell	<u>3625424</u>	

Quantity

1

#### 6. Cable set #2



#### 6.1. Section A: Power board X1 cable

Length	330 (± 5) mm
T	0.75

Type 0.75 mm² singe wire, stranded, min. 250 VAC TME Red: <u>LGY0.75/25-RD</u>, Black: <u>LGY0.75/25-BK</u>

Green-Yellow: <u>LGY0.75/25-YL/GR</u>

Farnell Red: <u>2528175</u>, Black: <u>2528082</u>, Green-Yellow: <u>2528140</u>

**Connectors** 

Side A Power board X1 (Ch1) Side B AC/DC module power output

Housing type Male, Mini-Fit Jr. Housing type Ferrule, single wire TME  $\frac{MX-5557-03R2}{Farnell}$  TME  $\frac{H0.75/14D/GY}{841195}$ 





	***************************************		
Pin	Female	Quantity	2
Pin quantity	3	Housing type	Ferrule, twin entry
TME	MX-5556-T3L	TME	H0.75/15D2/GY
Farnell	<u>9732675</u>	Farnell	<u>1121751</u>
		Quantity	1

# Wiring:

Name	Position	Color / description	Position	Color / description
Earth	1	Green-Yellow	N/A	Ferrule, twin entry
Vin-	2	Black	N/A	Ferrule
Vin+	3	Red	N/A	Ferrule

# 6.2. Section B: AC/DC module Earth

Length 150 (± 5) mm

Type 0.75 mm<sup>2</sup> singe wire, stranded, min. 250 VAC

TME <u>LGY0.75/25-YL/GR</u>

Farnell <u>2528140</u>

#### **Connectors**

Side A	AC/DC power module Earth (in)	Side B	AC inlet Earth
Housing type	Use twin entry ferrule, See I side from Section A	B Housing type	Female quick disconnect
		Quantity	1
		TME	BM01148 or ST-003/2
		Farnell	<u>3625424</u>

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# 6.3. Section C: AUX PS module Earth

Length 150 (± 5) mm

Type 0.75 mm² singe wire, stranded, min. 250 VAC

TME <u>LGY0.75/25-YL/GR</u>

Farnell <u>2528140</u>

### Connectors

Side A	AC inlet Earth	Side B	AUX PS module (X3)
Housing type	Use Female quick disconnect terminal, See B side, Section B		Male, Mini-Fit Jr.
		TME	MX-5557-05R2
		Farnell	9963502
		Pin	Female
		Pin quantity	5
		TME	MX-5556-T3L
		Farnell	<u>9732675</u>

# Wiring:

Name	Position	Color / description	Position	Color / description
_	_	Female quick disconnect	1	Earth

# 6.4. Section D: Lower AC/DC module power input

Length 200 (± 5) mm

Type 0.75 mm² singe wire, stranded, min. 250 VAC TME Brown: <u>LGY0.75/25-BR</u>, Blue: <u>LGY0.75/25-BL</u>

Farnell Brown: <u>2528103</u>, Blue: <u>2528092</u>

#### **Connectors**

Side A	AUX PS module (X3)	Side B	Lower AC/DC module power input
Housing type	See Side B, Section C	Housing type	Ferrule, twin entry
TME	-	TME	H0.75/15D2/GY
Farnell	-	Farnell	<u>1121751</u>



Pin Female Quantity 2

Pin quantity 2

TME <u>MX-5556-T3L</u> Farnell <u>9732675</u>



### Wiring:

Name	Position	Color / description	Position	Color / description
Neutral	4	Blue	N/A	Ferrule, twin entry
Line	5	Brown	N/A	Ferrule, twin entry

### 6.5. Section E: Upper AC/DC module power input

Length 75 (± 1) mm

Type 0.75 mm² singe wire, stranded, min. 250 VAC TME Brown: <u>LGY0.75/25-BR</u>, Blue: <u>LGY0.75/25-BL</u>

Farnell Brown: <u>2528103</u>, Blue: <u>2528092</u>

Connectors

Side A	Lower AC/DC module power input	Side B	Upper AC/DC module power input	
Housing type	Use twin entry ferrule, See B side, Section D	Housing type	Ferrule, single wire	
		TME	H0.75/14D/GY	
		Farnell	1121751	



Quantity 2

# 6.6. Section F: AUX PS module power input

Length 110 (± 5) mm

Type 0.75 mm² singe wire, stranded, min. 250 VAC
TME Brown: <u>LGY0.75/25-BR</u>, Blue: <u>LGY0.75/25-BL</u>

Farnell Brown: <u>2528103</u>, Blue: <u>2528092</u>

**Connectors** 

Side A	AUX PS module (X3)	Side B	Lower AC/DC module power input
Housing type	See Side B, Section C	Housing type	Female quick disconnect
TME	-	TME	BM01148 or ST-003/2
Farnell	-	Farnell	<u>3625424</u>



Pin Female Quantity 2

Pin quantity 2

TME  $\underline{\text{MX-5556-T3L}}$  Farnell  $\underline{9732675}$ 



Wiring:

Name	Position	Color / description	Position	Color / description
Neutral	2	Blue	N/A	Female quick disconnect
Line	3	Brown	N/A	Female quick disconnect

# 7. Pre-assembled cables

# 7.1. Arduino shield power cable

Length 300 mm

Type Ribbon cable with IDC connectors; 10x28AWG

TME <u>FC10300-0</u>

Farnell N/A

### **Picture**



### **Pinout:**

Name	Position	Description
Gnd	1	Ground
Gnd	2	Ground
PWR_DIRECT	3	Triac control (continuous power)
PWR_SSTART	4	Triac control (soft-start)
FAN_SENSE	5	Tachometer output
FAN_PWM	6	Fan PWM speed control
DOUT2	7	Power relay control
+5V	8	+5 V for Arduino Shield
Gnd	9	Ground
+5V	10	+5 V for Arduino Shield

#### **Arduino USB cable** 7.2.

300 or 500 mm Length

Type USB Micro to 5-pin receptacle cable

TME N/A Farnell N/A

e.g. <u>High Quality 50CM micro usb 5pin male to 1x 5Pin Female 0.1" USB header PCB motherboard cable</u> AliExpress



#### **Pinout:**

Name	Position	Color	Description
VCC	1	Red	+5 Vdc
D-	2	White	Data -
D+	3	Green	Data +
GND	4	Black	Ground
Shield	5	Black	Shield

# 8. **BOM**

Туре	Part (Farnell)	Part (TME)	Total	
Receptacle	865667	<u>NSR-08</u>	2	ASSESSED TO THE PARTY OF THE PA
Receptacle	143127	MX-6471-031	1	
Receptacle	<u>143126</u>	<u>MX-6471-021</u>	1	
Receptacle Mini-Fit Jr.	9963480	MX-5557-03R2	2	
Receptacle Mini-Fit Jr.	<u>9963502</u>	MX-5557-05R2	1	
Pin	1022219	NDR-T	15	
Polarising key	512023	NSDR-KEY	1	
Pin	2063734	MX-0850-0114	5	
Pin	<u>9732675</u>	MX-5556-T3L	11	
Female quick disconnect	<u>3625424</u>	BM01148 or ST-003/2	6	

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Ferrule	<u>841195</u>	H0.75/14D/GY	6	
Ferrule, twin entry	<u>1121751</u>	H0.75/15D2/GY	5	
Ring terminal	<u>7356528</u>	<u>BM 91103</u>	1	
Cat5e cable	<u>1602385</u>	HELUKAT100-FTP-FP	0.25 m	
0.75 cm <sup>2</sup> cable (Brown)	<u>2528103</u>	LGY0.75/25-BR	0.43 m	
0.75 cm <sup>2</sup> cable (Blue)	2528092	LGY0.75/25-BL	0.43 m	
0.75 cm <sup>2</sup> cable (Red)	<u>2528175</u>	LGY0.75/25-RD	0.75 m	
0.75 cm <sup>2</sup> cable (Black)	2528082	LGY0.75/25-BK	0.75 m	
0.75 cm <sup>2</sup> cable (Yellow- Green)	<u>2528140</u>	LGY0.75/25-YL/GR	1.64 m	
0.35 cm <sup>2</sup> cable	2425402	LGY0.35/25-BR	0.29 m	
12 Vdc cooling fan	-	MB60251V1-G99	1	G BURDA
NTC	<u>1187031</u>	NTCLE100E3103JB0	1	
IDC ribbon cable	_	FC10300-0	0.3 m	
USB Micro cable	Shenzhen W Ltd. or searc	onderwing Electronics h Aliexpress	0.5 m	