

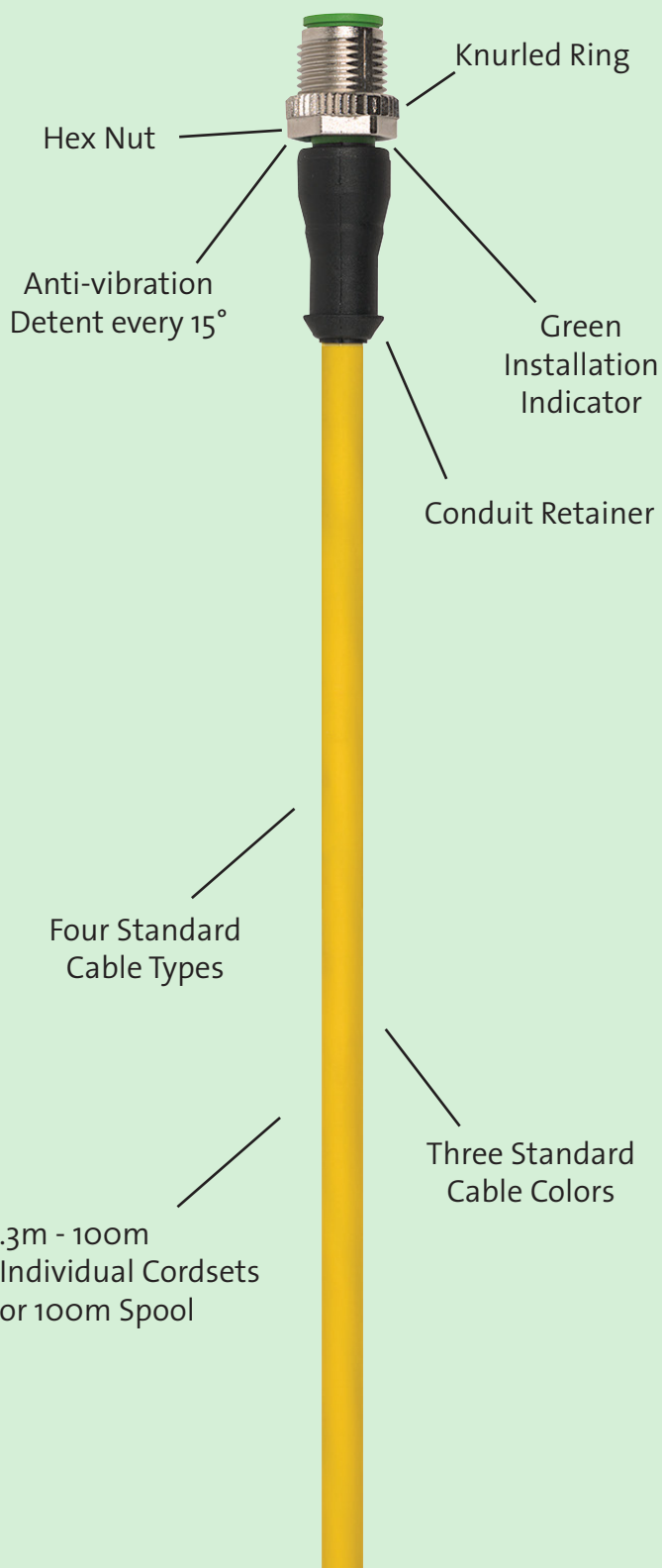
CABLE AND CONNECTORS

A Guide to Murrelektronik's Cable Families



Flexibility is our strength

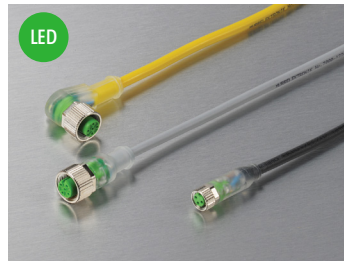
With over 30,000 combinations to choose from, we can help you find the right cordset for your application.



| CONNECTOR FAMILIES



Standard



LED



Lite (Plastic)



MQ12



Stainless Steel



7/8"



Food & Beverage



M12 Steel - IP69k



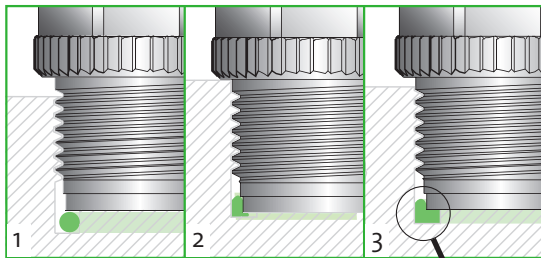
Network



Network

| TORQUE WRENCH

Murrelektronik's unique torque wrench ensures connectors are tightened to precisely the right degree. Turn the wrench until it clicks and guarantee long-term, consistent connection quality with IP67 protection.



0.6 Nm

1. Connector is not screwed tight. Medium can penetrate between connector and O-ring.
2. Connector is screwed too tight. O-ring is destroyed and medium can penetrate between connector and O-ring.
3. M12 connector is best tightened to 0.6 Nm. **Then it's sealed tight!**

| M8 TORQUE WRENCH

Art. No. 7000-99101-0000000

| M12 TORQUE WRENCH

Art. No. 7000-99102-0000000

| 7/8" TORQUE WRENCH

Art. No. 7000-99105-0000000



| IDC

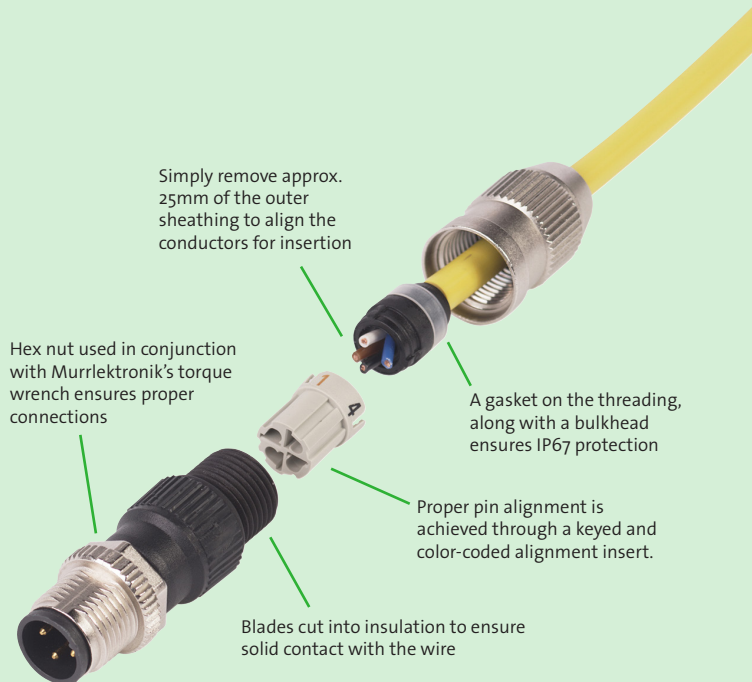
Insulation Displacement Connectors

Murrelektronik's Insulation Displacement Connectors (IDC) are a fast and easy way to terminate cables with either M8 or M12 connections. These robust connectors are rated to IP67 and can stand up to tough industrial environments.

With minimal tools needed, these connectors are the fastest way to terminate a cable to a connector. IDC products from Murrelektronik take less than 50% of the time it takes to install a traditional screw terminal connector. With knife blades in the base to make the actual connection to the wire, the IDC connector makes connections easy: simply tighten the strain relief, by hand, with minimal force. No more force is needed than it takes to re-tighten a drink cap.

IDC Advantages:

- Male and Female connector options
- Quick turn MQ12 connectors available
- Decrease wiring connection efforts
- IDC connectors reduce the chances for improper pin & conductor alignment
- Maintains an IP67 rating when properly installed



Use your mobile device to scan the QR code at left to see just how easy an IDC is to use or visit:



www.youtube.com/murrelektronik



stay connected

Connector Sizes:

- M8
- M12
- 7/8"

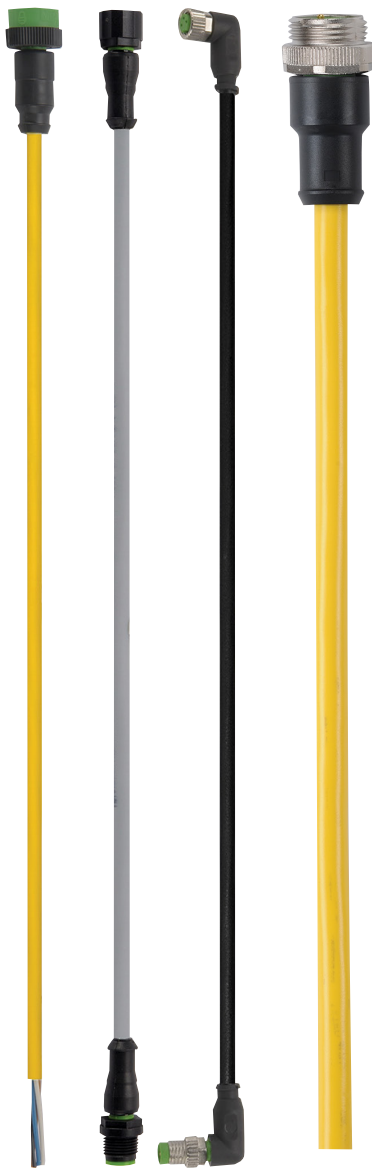
Connector Types:

- LED
- LITE
- MQ12
- 304
- 316

Cable Colors:



PVC



Connector Sizes:

- M8
- M12

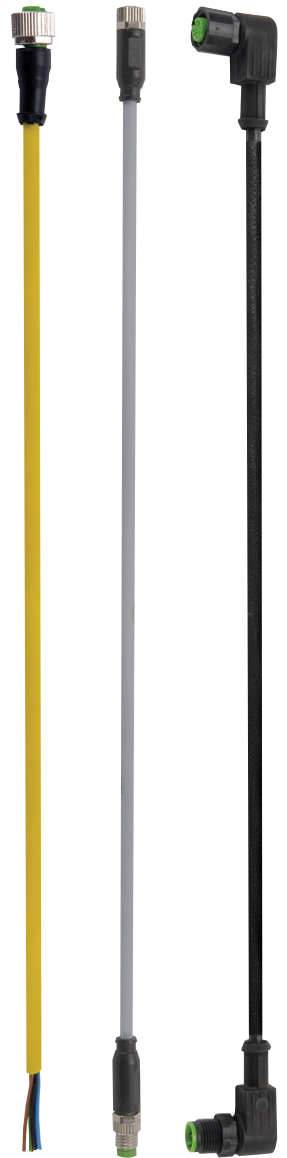
Connector Types:

- LED
- LITE
- MQ12

Cable Colors:



PUR/PVC



Cable Types	PVC		PUR/PVC
	M8/M12	Mini (7/8")	
Material	PVC (Type 1)	PVC (UB_)	PUR/PVC (Type 2)
UL AWM	2464 80C 300V		20549 80C 300V
Approvals	UL 2238 VW1 / FT1	UL 2238 UL/CSA: STOOW 105C (-40C) 600V	UL 2238 FT2
Flame Retardant	✓	✓	✓
Chemical Resistant	✓	✓	✓
Oil Resistant		✓	✓
UV Resistant			
Halogen Free			
Weld Slag Resistant			
Flex Rating			2 million
Torsion Rating			
Temperature Range (Flexing)		-20 to 90°C (-4 to 194°F)	-5 to 80°C (23 to 176°F)
Temperature Range (Fixed)	-30 to 80°C (-22 to 176°F)	-50 to 105°C (-58 to 221°F)	-30 to 80°C (-22 to 176°F)

Connector Sizes:

- M8
- M12
- 7/8"

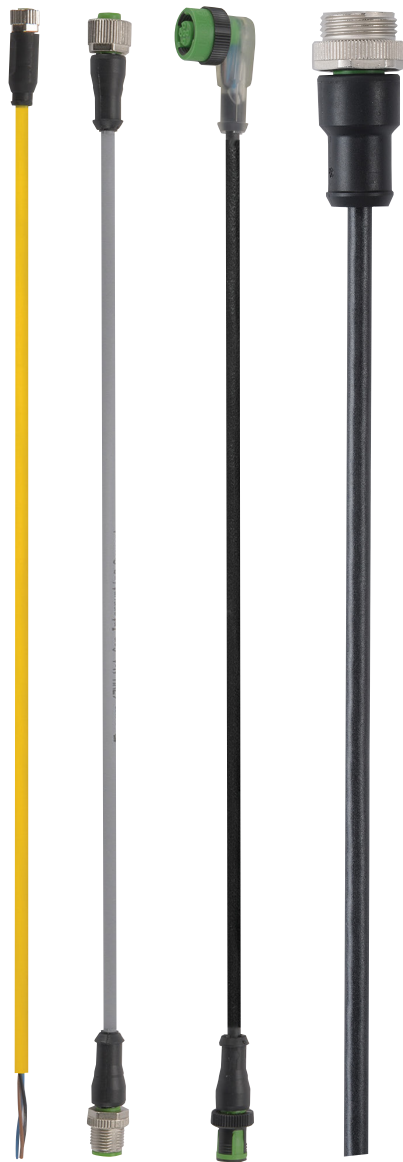
Connector Types:

- LED
- LITE
- MQ12

Cable Colors:



PUR



Connector Sizes:

- M8
- M12

Connector Types:

- LED

Cable Colors:



ROBOTIC



Cable Types	PUR		PUR
	M8/M12	Mini (7/8")	
Material	PUR (Type 3)	PUR (UM_)	PUR (Type 5)
UL AWM	20233 80C 300V	20234 80C 1000V	21198 80C 300V
Approvals	UL 2238 VW1 / FT1	UL 2238 CSA	UL 2238 FT2
Flame Retardant	✓	✓	✓
Chemical Resistant	✓	✓	✓
Oil Resistant	✓	✓	✓
UV Resistant	✓		✓
Halogen Free	✓	✓	✓
Weld Slag Resistant			✓
Flex Rating	5 million	5 million	10 million
Torsion Rating	±180		±360
Temperature Range (Flexing)	-25 to 80°C (-13 to 176°F)	-20 to 80°C (-4 to 176°F)	-25 to 90°C (-13 to 194°F)
Temperature Range (Fixed)	-40 to 80°C (-40 to 176°F)	-50 to 80°C (-58 to 176°F)	-40 to 90°C (-40 to 194°F)

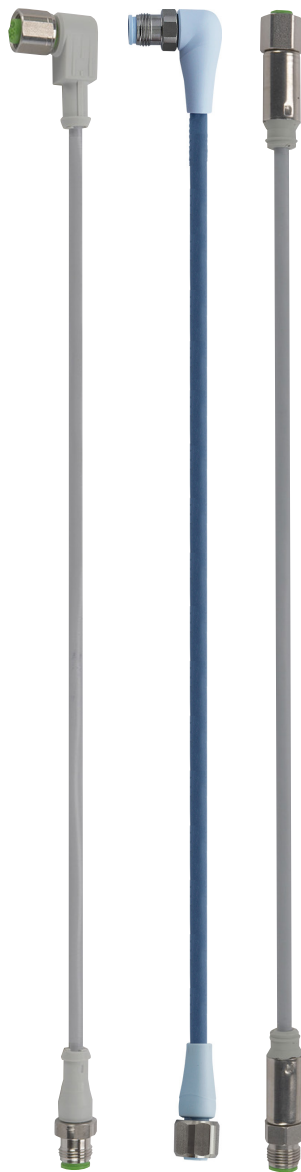
Connector Sizes:

- M8
- M12

Connector Types:

- LED
- 304
- 316

Cable Colors:



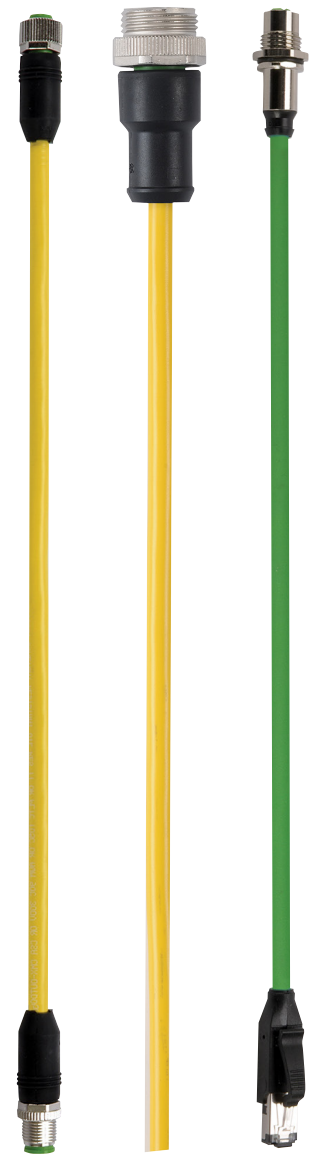
Connector Sizes:

- M8
- M12
- 7/8"

Connector Types:



Cable Colors:



F & B

TPE

Cable Types	Food & Beverage			PLTC-FT4	Mini	100MBit/s
	F & B	F & B Pro	M12 Steel	M12	7/8"	ProfiNet PLTC
Material	PVC (214)	TPE-S (315, 321, 339)	TPE-S (336)	TPE (150, 161, U0_, U6_)	TPE (U1_)	TPE (S7V) SF/UTP Cat 5e
UL AWM	2464 80C 300V	AWM 105C 300V		22 AWG = 20626 90C 300V 18 AWG = 20626 90C 600V	21002 105C 600V	2463 80C 600V
Approvals	VW1 / FT1	Ecolab® FDA Compliant	Ecolab® FDA Compliant	UL 2238 ITC / PLTC 105C FT4	UL 2238 UL: TC-ER 90C (-40C) CSA: CIC-TC FT4	UL DUXR ITC / PLTC 75C CM / CMX Outdoor
Flame Retardant	✓	✓	✓	✓	✓	✓
Chemical Resistant	✓	✓	✓	✓	✓	✓
Oil Resistant				✓	✓	✓
UV Resistant				✓	✓	✓
Halogen Free						
Weld Slag Resistant				✓	✓	✓
Flex Rating		4 million		10 million	2 million	1 million / 10 million
Torsion Rating		2 million @ ±180		3 million @ ±180		3 million @ ±180
Temperature Range (Flexing)		-25 to 105°C (-13 to 221°F)	-30 to 105°C (-22 to 221°F)	-20 to 90°C (-4 to 194°F)	-20 to 90°C (-4 to 194°F)	-20 to 80°C (-4 to 176°F)
Temperature Range (Fixed)	-30 to 80°C (-22 to 176°F)	-40 to 105°C (-40 to 221°F)	-50 to 125°C (-58 to 257°F)	-40 to 105°C (-40 to 221°F)	-50 to 105°C (-58 to 221°F)	-40 to 80°C (-40 to 176°F)

Connector Sizes:



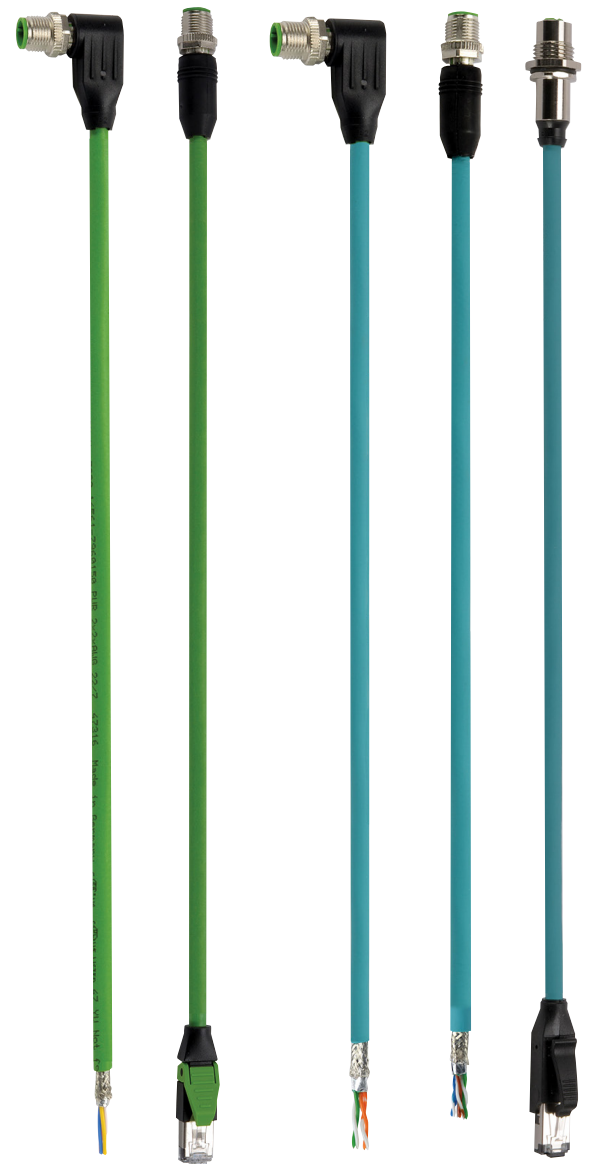
Coding:



Cable Colors:



NETWORK



Performance	100 MBit/s		1 GBit/s	10 GBit/s	
	ProfiNet	EtherNet/IP (ODVA)	Industrial Ethernet	X Code	
Material	PUR (792, 796, 798)	TPE (S4U)	TPE (S4W)	PUR (790)	TPE (S4X)
Construction	SF/Quad	SF/UTP	SF/UTP	S/FTP	SF/UTP
Category	Cat 5e	Cat 5e	Cat 5e	Cat 6a	Cat 6a
UL AWM	20236 80C 30V	2463 80C 600V	2463 80C 600V	20236 80C 30V	2463 80C 600V
Approvals	UL DUXR VW1 / FT1	UL DUXR CM 75C CMX OUTDOOR	UL DUXR CM 75C CMX OUTDOOR	UL DUXR VW1 / FT1	UL DUXR CMR 75C CMX OUTDOOR
Flame Retardant	✓	✓	✓	✓	✓
Chemical Resistant	✓	✓	✓	✓	✓
Oil Resistant	✓	✓	✓	✓	✓
UV Resistant		✓	✓		✓
Halogen Free	✓			✓	
Weld Slag Resistant		✓	✓		✓
Flex Rating	2 million	1 million / 10 million	1 million / 10 million		1 million / 10 million
Torsion Rating		3 million @ ±180	3 million @ ±180		3 million @ ±270
Temperature Range (Flexing)	-20 to 60°C (-4 to 140°F)	-20 to 80°C (-4 to 176°F)	-20 to 80°C (-4 to 176°F)	-10 to 50°C (14 to 122°F)	-20 to 80°C (-4 to 176°F)
Temperature Range (Fixed)	-40 to 80°C (-40 to 176°F)	-40 to 80°C (-40 to 176°F)	-40 to 80°C (-40 to 176°F)	-30 to 80°C (-22 to 176°F)	-40 to 80°C (-40 to 176°F)

Cable Selection Guide

7 0 0 0 — 4 0 1 2 1 — 2 3 4 0 3 0 0

7000 - Standard
 7002 - 304 Stainless
 7004 - 316 Stainless
 7005 - Lite (Plastic)
 7014 - Food & Bev
 7024 - Food & Bev Pro
 7044 - M12 Steel
 7050 - MQ12
 7072 - xtreme
 7700 - TPE

0 - Yellow
 2 - Gray
 6 - Black

1 - PVC
 2 - PUR/PVC
 3 - PUR
 5 - Robotic

0030 = .3m
 0060 = .6m
 0100 = 1m
 0150 = 1.5m
 0200 = 2m
 0300 = 3m
 0500 = 5m
 0750 = 7.5m
 1000 = 10m

M8			
Single Ended	08001		3 pole
	08011		4 pole
	08021		3 pole
	08031		4 pole
	08041		3 pole
	08061		4 pole
	08081		3 pole
	08101		4 pole
Double Ended	88001		3 pole
	88011		4 pole
	88021		3 pole
	88031		4 pole
	88061		3 pole
	88071		4 pole

M12			
Single Ended	12001		3 pole
	12021		4 pole
	12041		5 pole
	12081		3 pole
	12101		4 pole
	12121		5 pole
	12181		3 pole
	12221		4 pole
	12241		5 pole
	12321		3 pole
	12341		4 pole
	12361		5 pole
Double Ended	40001		3 pole
	40021		4 pole
	40041		5 pole
	40101		3 pole
	40121		4 pole
	40141		5 pole
	40171		3 pole
	40201		4 pole
40221		5 pole	

0 - 3 x 24 AWG
 1 - 4 x 24 AWG
 3 - 3 x 22 AWG
 4 - 4 x 22 AWG
 5 - 5 x 22 AWG

Yellow TPE
 150 = 4 x 18AWG
 161 = 5 x 18AWG
 U03 = 3 x 22AWG
 U04 = 4 x 22AWG
 U05 = 5 x 22AWG
 U08 = 8 x 22AWG

Black TPE
 U67 = 4 x 18AWG
 U68 = 5 x 18AWG

7 7 0 0 — 4 0 1 2 1 — 1 5 0 0 3 0 0

