

RJ45R Y-cable

Y-Cable for Production Environments

SUMMARY

The RJ45R Y-cable is an ingress protected cable with Ouster bayonet connector on the sensor side, a standard female modular plug used for terminating ethernet cables and a barrel jack connector for power supply.

HIGHLIGHTS

- IP68/69K rated Ouster connector and approved for outdoor use in production environments
- Available in 1m, 5m, 10m, and 15m lengths in standard inventory
- Operating temperature (Type 3 cable): -40°C to ~+125°C
- Ideal replacement for customers using Ouster interface box for bench-testing and prototyping



Cable Assembly Details

Specification description	Specification details
Ouster sensor connector	Proprietary Sinbon Connector
Cable components	Ouster Type 3 Cable Y Overmold Tube connecting to RJ45 Ethernet Receptacle Tube connecting to DC Power Jack Female Connector
Y cable junction connectors	RJ45 Ethernet Receptacle DC Power Jack Female Connector <ul style="list-style-type: none"> • Outside Contact Diameter: 5.5mm • Inside Contact Diameter: 2.1mm
Ouster connector orientation	Straight - available in 1 m, 5 m, 10 m, and 15 m cable length (L) Right angle - available in 5 m cable length (L)
Cable voltage rating	For usage with Ouster sensors only: 12 V nominal and 24 V nominal

IP Rating

Ouster sensor connector	IP68/69K
Y cable junctions (RJ45 Ethernet)	IP67

Cable cross section details (for Type 3 cable)

Insulation Extrusion	Core A	Core B	Core C
Conductor AWG	28AWG(7/0.127 mm), Tinned Stranded Copper	28AWG (7/0.127 mm), Tinned Stranded Copper	18AWG (41/0.16 mm), Tinned Stranded Copper
Conductor Dia. Nom.	0.38 mm	0.38 mm	1.18 mm
Primary Number	4P	2C	2C
Insulator	XLPE	XLPE	XLPE
Primary O. D.	1.0±0.10 mm	1.20±0.10 mm	2.0±0.10 mm
Nom. Thickness	0.30 mm	0.38 mm	0.38 mm
Min. Thickness	0.25 mm	0.33 mm	0.33 mm
Primary Color Code	A1. Brown&Brown/White, A2. Blue&Blue/White, A3. Green&Green/White, A4. Orange&Orange/White	B1. Yellow, B2. Purple	C1. Red, C2. Black,
Twisting. Pitch	A1. 20.0±2 mm A2. 14.3±2 mm A3. 17.2±2 mm A4. 10.7±2 mm	N/A	N/A
Filler	Cotton Thread	N/A	N/A
Al-mylar (overlapping,%) Foil Facing Out	≥ 25%	N/A	N/A

Assembly (for Type 3 cable)

Filler	Nylon Cord
Al-mylar-Al (overlapping,%)	≥ 25%(40 μm)
Drain	28AWG (7/0.127 mm), Tinned Stranded Copper

Shield (Braid)

Construction	Tinned Copper 0.10 mm
Coverage	≥ 85%

Jacket Extrusion (for Type 3 cable)

Jacket Material	XLPE
Jacket Diameter	8.20±0.30 mm
Nom. Thickness	0.76 mm
Min. Thickness	0.61 mm
Surface	Half Matte
Marking	E326837 AWM STYLE 21411 125°C 300V VW-1 --- c AWM I/II A/B 125°C 300V FT1 SINBON
Color	Black

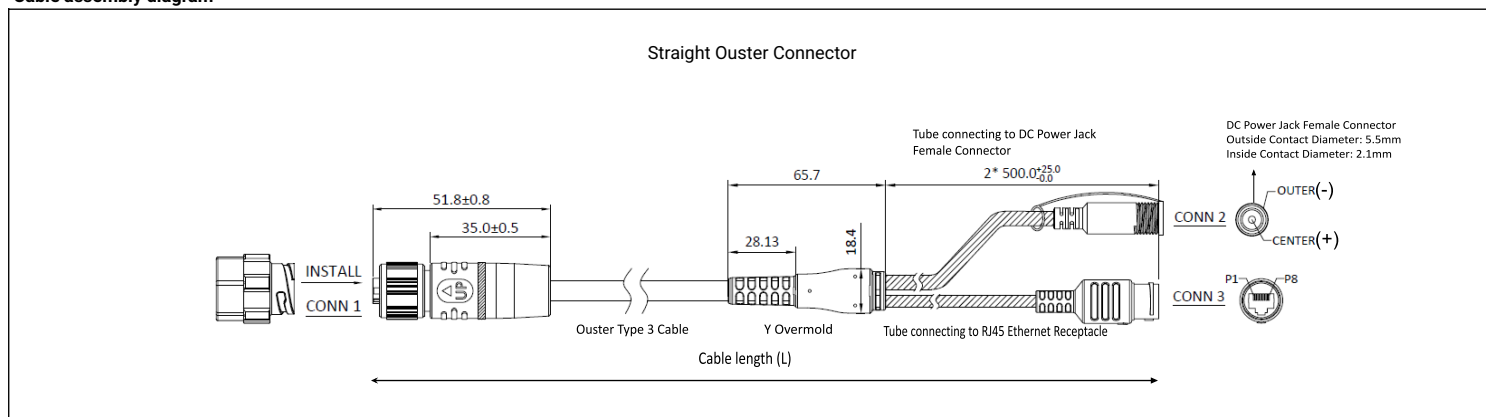
Characteristics (for Type 3 Cable)

Max. Conductor DC Resistance(20°C)	Core A: 239(Ω/km) Core B: 239(Ω/km) Core C:23.2 (Ω/km)
Dielectric Strength	2000V/min AC
Impedance	100±15Ω(Pair A1-A4) Refer to Cat 5e
UV Resistance	720 Hrs (UL 1581-1200)
Flammability Test	FT2 (UL 1581-1100)
Tensile Strength before Aging	≥ 10.3 MPa
Elongation before Aging	≥ 300%
Oil Resistance(IRM902)	70°C x 4 Hrs
Tensile Strength after Aging	≥ 50% of original
Elongation after Aging	≥ 50% of original
Rated Temperature	-40~+125°C
Rated Voltage	300 V
Current	7 A (Core C)
Min.Bending radius (for Type 3 cable)	Static: 41 mm Flexible: 82 mm

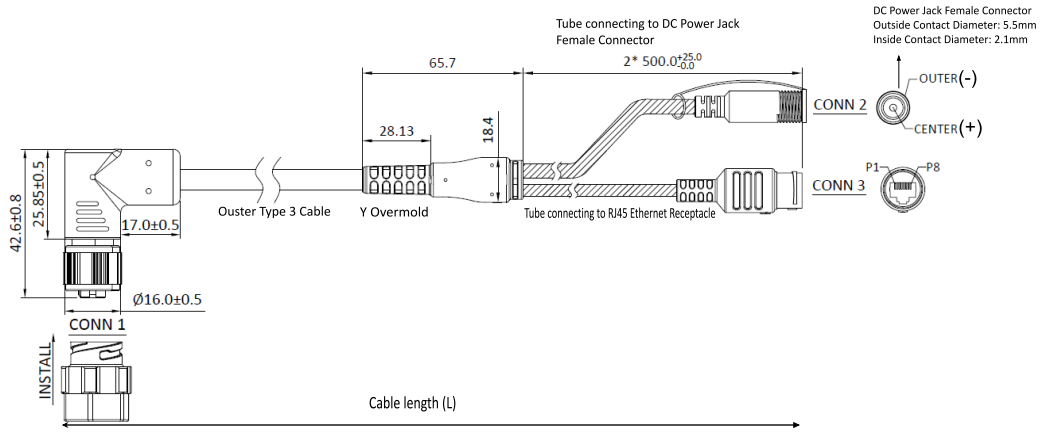
Specifications for other cable components

Spec description	Y overmold	Tube connecting to RJ45 Ethernet	Tube connecting to DC Power Jack Female
Material	Thermoplastic Vulcanizate	Polyolefin	Outer Layer Material: EVA (Ethylene-Vinyl Acetate) Inner Layer Material: Hot Melt Adhesive
Dielectric Strength	32 kV/mm (or 800 V/mil) Measured at a thickness of 2.03 mm (0.0800 in). Testing method: ASTM D149	Measured at 2500 V for 60 seconds without breakdown Testing method: UL224	Measured at 2500 V for 60 seconds without breakdown Testing method: UL224
Flammability Test	UL 94 HB	VW-1	VW-1
Tensile Strength before Aging	11.1 MPa (1610 psi) Testing method: ASTM D412	≥10.4 MPa Testing method: UL224	≥12 Mpa Testing method: ASTM D2671
Elongation before Aging	Requirement≥540% Testing method: ASTM D412	Requirement≥200 % Testing method: UL224	Requirement≥300 % Testing method: ASTM D2671
Tensile Strength after Aging	≈10.5MPa Testing method: 150°Cx168h		Requirement≥7.3 Mpa Testing method: UL224 158°Cx168h
Elongation after Aging	Requirement≥ 475 % Testing method: 150°Cx168h	Requirement≥ 100 % Testing method: UL224 158°Cx168h	Requirement≥200 % Testing method: UL224 158°Cx168h
Rated Temperature	N/A	-55°C~125°C	-45°C~125°C
Rated Voltage	N/A	58 V	58 V

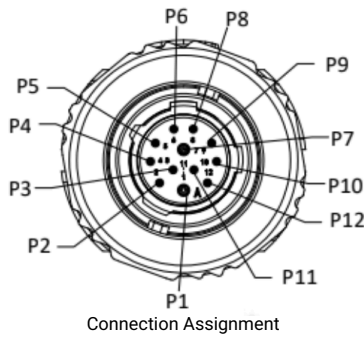
Cable assembly diagram



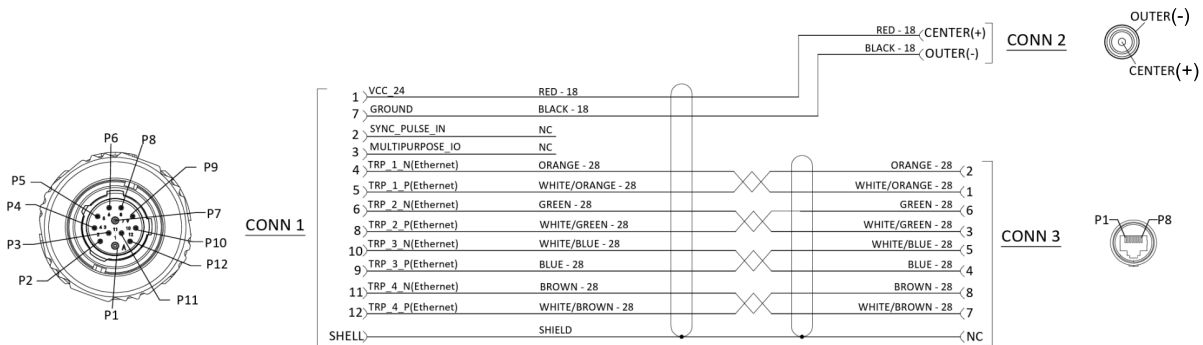
Right Angle Ouster Connector



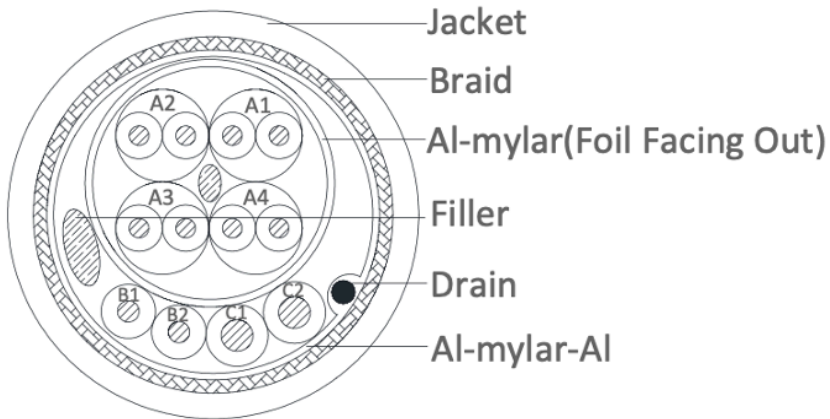
Conn 1 Enlarged Figure



Connection Assignment



Cable Cross-section diagram



*Specifications are subject to change without notice.