
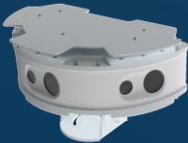
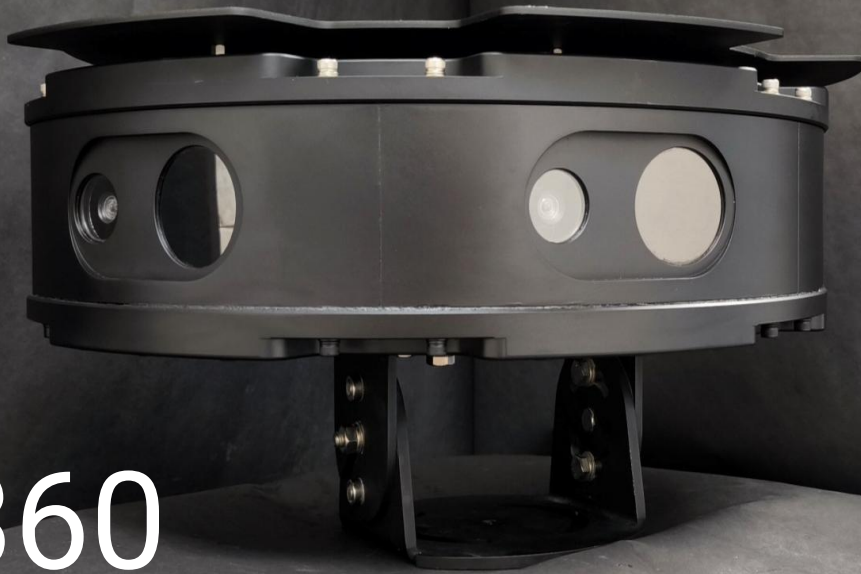


# SA SERIES

360 PANORAMIC 24/7 SITUATIONAL AWARENESS



	 SA360	 SA180
LOW LIGHT DAY	SIX (6) 1920x1080 Full HD 30 FPS SAPPHIRE Window	THREE (3) 1920x1080 Full HD 30 FPS SAPPHIRE Window
LWIR NIGHT	SIX (6) 1280x1024 or 640x512 12µm 30 FPS Germanium Window	THREE (3) 1280x1024 or 640x512 12µm 30 FPS Germanium Window
FOV	420° Deg. (H) 6 x 70° FOV (H) 420° (V) 46°	210° Deg. (H) 3 x 70° FOV (H) 210° (V) 46°
NATO/HUMAN DETECTION (640) DETECTION (1280)	370m / 167m 830m / 375m	370m / 167m 830m / 375m
STABILIZED POWER	2A@24VDC (9-40VDC)	1A@24VDC (9-40VDC)
DIMENSIONS (mm)	470x470x185	483x270x237
ETHERNET SWITCH	Gigabit Ethernet Switch 10/100/1000T	
CONNECTOR	Single Stainless Steel D38999/23YD35PN	
WEIGHT (Kg)	30 kg	16 kg
CHASSIS	CNC ALUMINUM, ANTI SALT BLACK POWDER PAINT	
IP RATE	IP67 Nitrogen Purged	



# SA360

## 360° REAL-TIME SITUATIONAL AWARENESS SYSTEM

SA-360 is a constant naval guard, real-time object detection video analyzer that reads and understands risks, based on real-time video data from multiple sources and sensors.

SA-360 has been successfully deployed in USVs (Unmanned Surface Vessels) and UGVs (Unmanned Ground Vehicles). SA-360 provides real-time 12 Ethernet streaming sensors. Six LWIR 1280x1024 or 640x512 and six Low Light day 1920x1080 Full HD sensors. The sensors can be streamed directly or merged into single stream by Ex-Sight's AIxNPU rugged computer.

The system can detect, track and classify threats on during day and night. It can also evaluate range and build a local NMEA passive Radar showing the different threats.



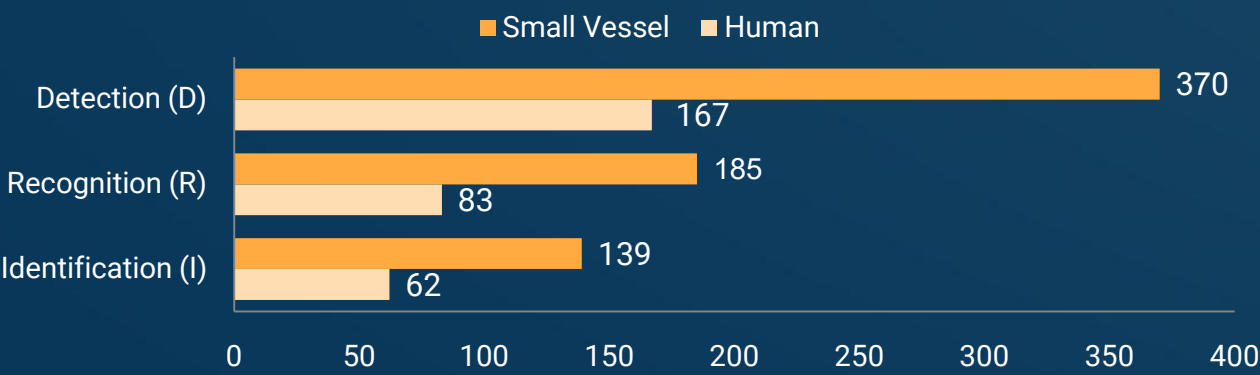
# SA360

## 360° REAL-TIME 24/7 SITUATIONAL AWARENESS SYSTEM

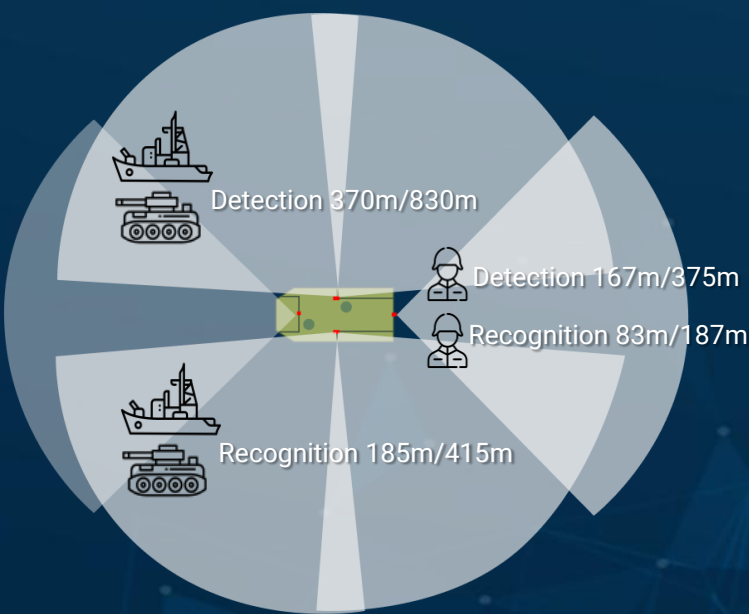
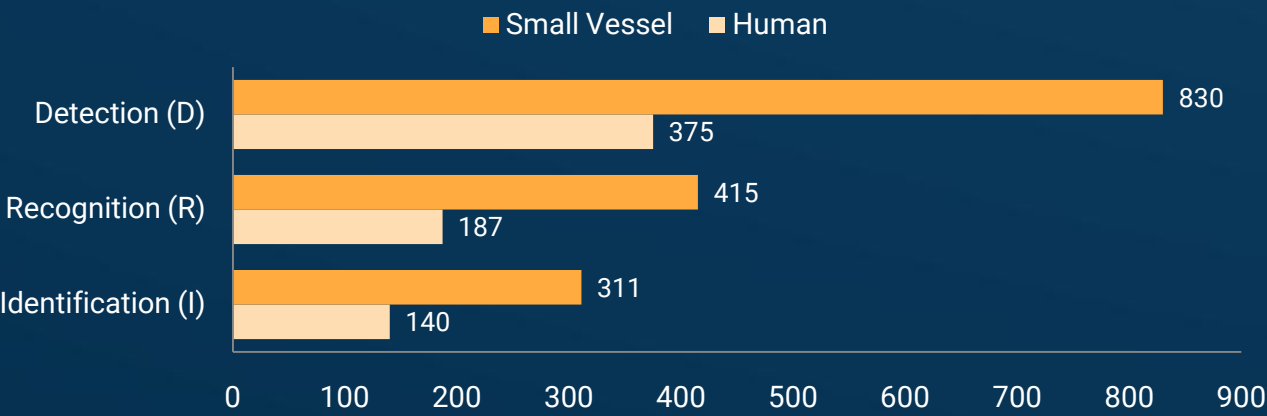
- Day & Night target recognition, detects static and dynamic targets\*
- Ethernet connectivity, modular architecture, single cable connection
- Real-Time six 1920x1080 Full-HD Day low light sensors 70 Deg FOV, Sapphire window
- Real time six 1280x1024 or 640x512 LWIR (Thermal) sensors 70 Deg FOV with Germanium window
- Optional Distance estimation using EO and TI sensors\*
- Visual RADAR view\*
- True North INS GPS\*
- IP-67 Hermetic sealed chassis, Nitrogen purged, MIL.STD Hermetic connectors
- Operating temp -40°C to +80°C
- **Dimensions (LxWxH,mm)** 470x470x185
- **WEIGHT** 30 kg

\* Optional Configuration

SA360-640-5,8mm LWIR DRI (m)

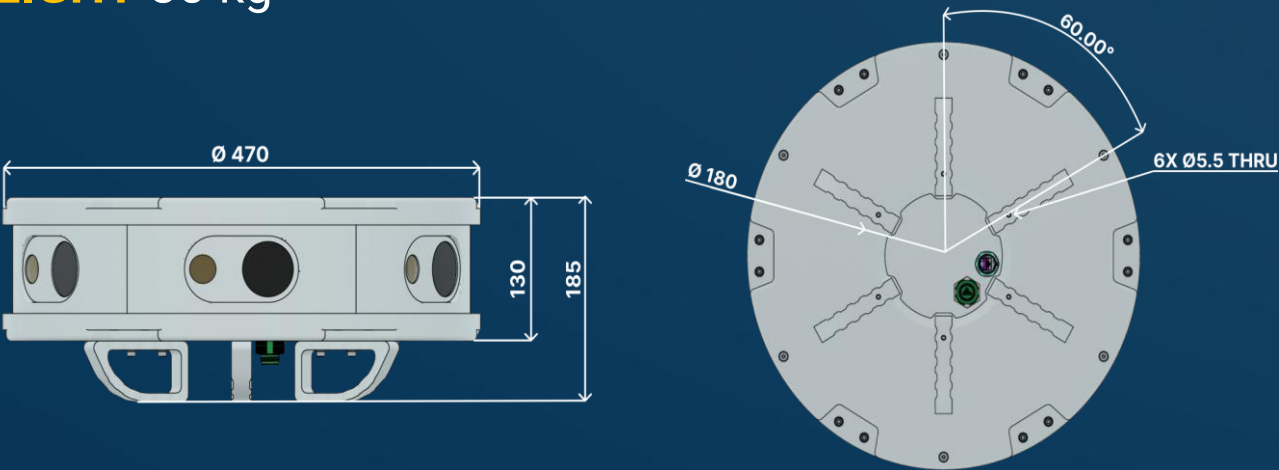


SA360-1280-13mm LWIR DRI (m)

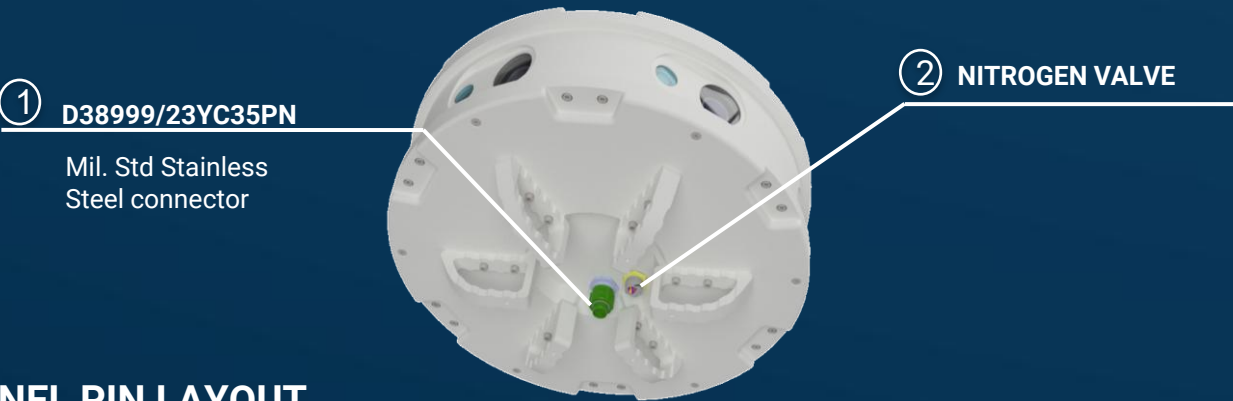




**DIMENSIONS** (LxWxH, mm) 470x470x185  
**WEIGHT** 30 kg



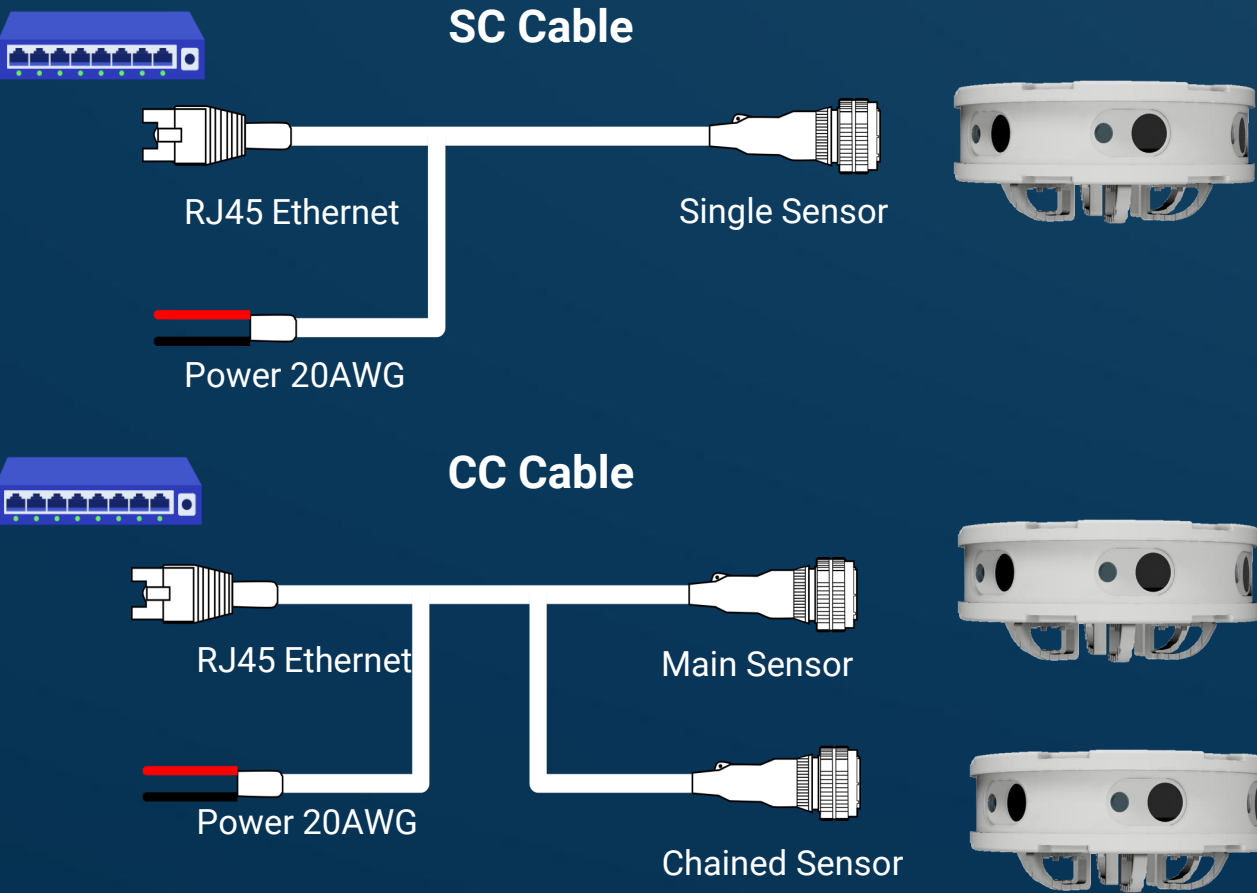
CONNECTION INTERFACE



PANEL PIN LAYOUT  
D38999/23YD35PN Stainless Steel Hermetic Connector

PIN DESCRIPTION			PIN DESCRIPTION		
1	Main ETH 1 (White Orange)	Giga Ethernet Port to Switch	12	GND	
2	Main ETH 2 (Orange)		13	+POWER INPUT VDC Backup	
3	Main ETH 3 (White Green)		14	GND Backup	
4	Main ETH 4 (Blue)		15	CHAIN ETH 1 (White Orange)	Giga Ethernet to Chained Sensor
5	Main ETH 5 (White Blue)		16	CHAIN ETH 2 (Orange)	
6	Main ETH 6 (Green)		17	CHAIN ETH 3 (White Green)	
7	Main ETH 7 (White Brown)		18	CHAIN ETH 4 (Blue)	
8	Main ETH 8 (Brown)		19	CHAIN ETH 5 (White Blue)	
9	NC	Not Connected	20	CHAIN ETH 6 (Green)	
10	NC		21	CHAIN ETH 7 (White Brown)	
11	+POWER INPUT VDC		22	CHAIN ETH 8 (Brown)	
			23-37	NC	Not Connected

CABLE PART NUMBERING



SA360 PART NUMBERING			
SA360-[RES]-[FOV]			
[RES]	LWIR RESOLUTION	640 (LWIR 640x512) 5.8 mm	1280 (LWIR 1280x1024) 13 mm
[FOV]	FIELD OF VIEW	70 - 70° LWIR (69.4°x57.3°) 90° DAY (84.6°x45.9°)	S - 70° LWIR (69.4°x57.3°) 70° DAY (70.7°x43.5°) SYNC
CABLE PART NUMBERING			
SA360-CABLE-[CT]-[LEN1]-[LEN2]			
[CT]	CABLE TYPE	SC (SINGEL CABLE)	CC (CHAINED CABLE)
[LEN1]	CABLE LENGTH	In Meters	
[LEN2]	CHAINED CABLE LENGTH	In Meters (CC cable only)	

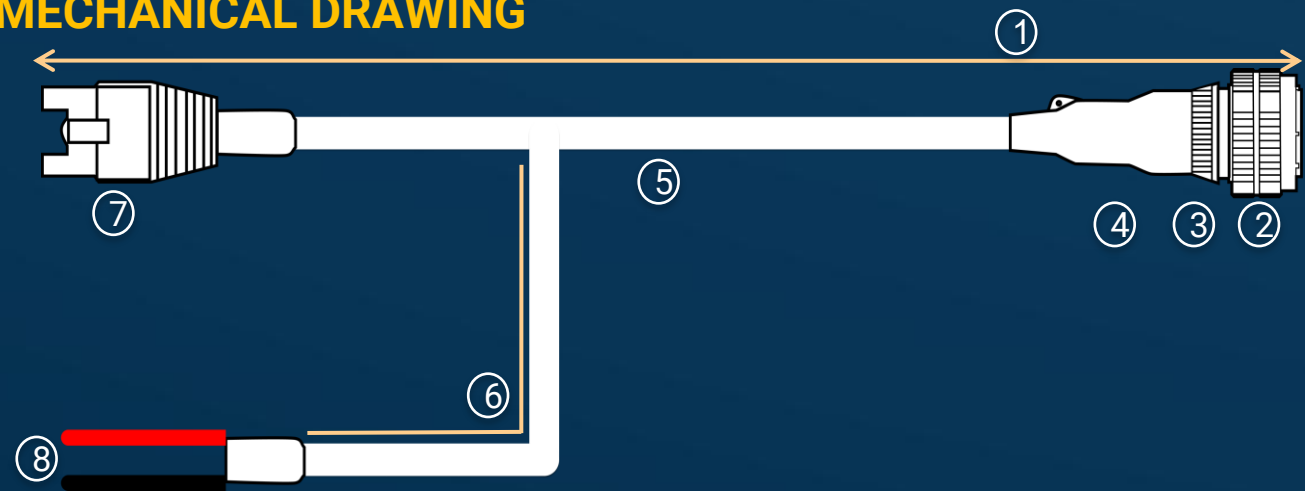
SA360-CABLE-SC-[LEN1]

SA360-CABLE is RQT1601875 Cable (6\*20AWG + SPEC 55) with specified length.

The cable includes connector D38999/26KD35SN Mil. Std Stainless Steel that connects to the connector D38999/23YD35PN on the SA180 system.

On the other side of the cable there is a connection to Power 9-36V (open black wire + open red wire) and RJ45 Giga Ethernet connection

MECHANICAL DRAWING



CABLE PART NUMBERING INDEX

#	P/N	DESCRIPTION
1	[LEN1]	Total Cable length (meters)
2	D38999/26KD35SN	Mil. Std Stainless Steel connector (200°C, firewall capability, 500 hour salt spray resistance)
3	27140S141010410	Stainless Steel Backshell
4	202K132-25-0/202K132-25-0	Boot
5	Cable RQT1601875	6*20AWG + SPEC55 (RAYCHEM DR-25)
6	Cable RQT1601875	6*20AWG + SPEC55 (1m) (RAYCHEM DR-25)
7	RJ45 Ethernet	Main Ethernet connector
8	Power Wires	20AWG For 9V-36V input



SA360-CABLE-CC-[LEN1]-[LEN2]

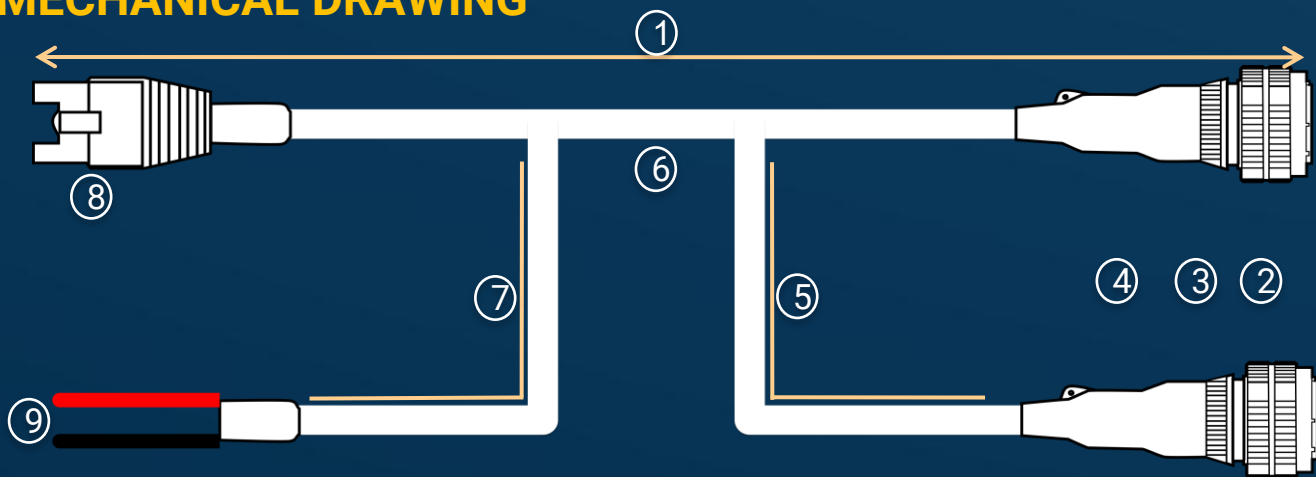
SA360-CABLE is RQT1601875 Cable (6\*20AWG + SPEC 55) with specified length and Additional Chained sensor connector.

The cable includes two D38999/26KD35SN Mil.

Std Stainless Steel connectors that connects to the D38999/23YD35PN on two SA180 systems.

On the other side of the cable there is a connection to Power 9-36V (open black wire + open red wire) and RJ45 Giga Ethernet connection.

MECHANICAL DRAWING



CABLE PART NUMBERING INDEX

#	P/N	DESCRIPTION
1	[LEN1]	Total Cable length (imeters)
2	D38999/26KD35SN	Mil. Std Stainless Steel connector (200°C, firewall capability, 500 hour salt spray resistance)
3	27140S141010410	Stainless Steel Backshell
4	202K132-25-0/202K132-25-0	Boot
5	[LEN2]	Chained Cable Length (in meter) from split
6	Cable RQT1601875	6*20AWG + SPEC55 (RAYCHEM DR-25)
7	Cable RQT1601875	6*20AWG + SPEC55 (1m) (RAYCHEM DR-25)
8	RJ45 Ethernet	Main Ethernet connector
9	Power Wires	20AWG For 9V-36V input

## RQT1601875 CABLE CABLE SPECIFICATION

### 22 Conductor Cabel

#### Components:

##### Cat. 5e Cable:

Conductor: 24 AWG 7/32 Tinned Copper

Insulation: XLPE, OD 1.3mm

Color Code: Blue X White, Orange X White, Green X White, Brown X White

Shield: Aluminum foil + Tinned copper braid 80% Min coverage

Jacket: PTX, OD 7.6 mm, Black, Numbered 1-2

##### 20 AWG pairs:

Conductor: 20 AWG 19/32 Tinned Copper

Insulation: ETFE, OD 1.4 mm

Color Code: Black, Red

#### Cable:

Two (2) Cat 5e4X2X24 AWG SF/UTP

Three (3) 20 AWG unshielded twisted pairs

#### Jacket:

Halogen-free, flame retardant, Cross Linked Thermoplastic Elastomer

To 17.5 mm nom - Black

#### Marking:

Jacket marked 'RQT1601875 - Week & Year of Manufacture' at 1000mm intervals

#### Performance:

Min.Bend Radius: 180° mm

Min. Band Radius for Operation: 150° mm

Max. Operation Temperature: +90° C

Min.Operation Temperature: -40° C

UV Resistance: Yes

Weight: 260 Kg/Km

