

**TWO DIVER PORTABLE PANEL WITH TWO DIVER RADIO AND TWO DIVER CCTV**  
#SY-2DAP-D040-R-2DV-SF / BF



**PART NO : SY-2DAP-D040-R-2DV**

Two diver panel with radio and diver 1 / diver 2 cctv system



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**DIVING PANEL WITH RIGHT SIDE (DIVER 1) AND LEFT SIDE (DIVER 2) INLET AND OUTLET FITTINGS**




**DIVING PANEL WITH DIVER 1 AND DIVER 2 INLET AND OUTLET FITTINGS FROM THE BACKSIDE OF THE PANEL**




## TWO DIVER PORTABLE PANEL WITH TWO DIVER RADIO AND TWO DIVER CCTV #SY-2DAP-D040-R-2DV-SF / BF

### Information Two Diver Panel

Case	Model 1650, Black, Interior (28.57" L x 17.52" W x 10.65" H), with wheels and handle, water, rust and dust proof), Pelican USA <b>Exterior dimensions:</b> 80.14 x 52.1 x 31.67cm (31.55" x 20.51" x 12.47") <b>Interior dimensions:</b> 72.16 x 44.2 x 27.03cm (28.41" x 17.40" x 10.64") <b>Weight without foam:</b> 10.9kg (24.03lbs)
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1 x 0-160 fsw/50 msw Depth gauge, 4.5", 0.25 % accuracy, mirror scale, with calibration point, Diver 1, Color coded Blue 
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1 x 0-160 fsw/50 msw Depth gauge, 4.5", 0.25 % accuracy, mirror scale, with calibration point, Diver 2, Color coded Red 
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Air Supplies	High pressure - Two independent HP inlet per diver Low Pressure : One independent LP inlet per diver
Communication	Amron 2820A-11 Two diver radio with ac/dc power supply
Regulator	1 x per diver, suitable for breathing air, Inlet : 6000 psi, outlet : 400 psi
Relief valves	0-250 psi on regulated diver supply line, 100 psi on pneumo gauges

### Air supply ports:

Option 1 - SF	All fittings provided on both sides of case – Left side all inlet fittings for hp air, lp air, right side divers air supply and pneumo fittings.
Option 2 - BF	All fittings provided from behind the panel for inlets and outlets
Calibration	Inbuilt calibration points for pneumo gauges

### One Diver CCTV :

CCTV	For both diver 1 and diver 2
Monitor	TFT 15.5" (split CCTV image for diver 1 / diver 2)
Surface control unit	All touch button controls with backlight for low visibility operations, video and light control
Primary recording	1 TB hard drive to record all diver video simultaneously
Secondary back up recording	1 TB backup hard drive to record all diver video simultaneously

**SY-2820A-11 AMCOM II TWO-DIVER RECHARGEABLE BASIC PORTABLE COMMUNICATOR**



**NEWLY DESIGNED ENHANCEMENTS:**

**High Audio Fidelity**

Ultra-low noise circuit combined with noise suppression circuitry produces crystal clear speech. Automatic gain adjustment will guard audio signal from distortion, enhance speaker protection and audio quality. Increases band width 47%.

**Extended Battery Operation Time**

Audio amplifier card deploys the state-of-the-art Class-D digital audio power amplifier. Has very low power dissipation, produces less heat, and extends battery life up to 32%.

**Flexible Gain Settings**

The audio amplifier card has adjustable gain settings to accommodate different communication applications and environments.

**Ultra-Low Electromagnetic Interference (EMI)**

EMI is achieved through spread-spectrum and de-phase control techniques providing for optimum integration with diving systems.

**Outdoor Rated AC Power Module**

Weather resistant, IP65 rated AC power entry module accommodates country specific AC power cords.

**Country Specific V-Lock AC Power Cord**

At time of order, simply choose the IP54 rated Locking AC power cord you need.

**FEATURES:**

- Single volume control for both divers.
- Diver's umbilicals can be set up on 4-wire mode (full duplex) or 2-wire mode (push-to-talk) or any combination of the two modes for each diver.
- Ability to use both dynamic and pre-amplified diver microphones with a unique circuit that detects microphone type and automatically adjusts volume levels.
- The divers' connections consist of cross-talk and separate speaker and microphone inputs.
- Internal charger allows for simultaneous charging and operation of the unit while protecting the rechargeable battery from being over-charged. Automatically supplies power to the audio amplifier when AC power is disconnected to allow for continued operation.
- See Tech Note (below) for recommended accessories.

## SY-2820A-11 AMCOM II TWO-DIVER RECHARGEABLE BASIC PORTABLE COMMUNICATOR

### SPECIFICATIONS:

- Input Impedance (Each Input): 250 Ohms
- Frequency Response: 300 - 10000 Hz
- Common Mode Rejection: 40 dB Minimum
- Current Drain Maximum Full Volume: 3 Amps
- Minimum Quiescent: 0.190 Amps
- Output Impedance: 4 Ohm
- Power Supply Voltage: 12 VDC Nominal (9 Volts Minimum - 16 Volts Maximum)
- AC Power Operating Range: 90-264 VAC, 50-60 Hz
- Sensitivity (Input): 0.5 mV
- Output Power (RMS @ 4 Ohm Load, 12 VDC): 10 Watts Audio
- Battery Life: 45 hours
- Dimensions: 10 in. H x 9 in. W x 14.5 in. L (25.4 cm x 22.9 cm x 36.8 cm)
- Weight: 16.25 Lbs. (7.37 Kg)

### INCLUDED WITH COMMUNICATOR:

SY-2820A-11AMCOM II Two-Diver Rechargeable Basic Portable Communicator with Outdoor Power Module and International Locking Power Cord includes:

- (1) SY-2890-05 Amron 12 VDC Sealed Lead Acid Gel-Cell Rechargeable Battery with Slide terminals
- (1) SY-282XA-UM Amron Two Diver Portable Communicator User Manual

### AVAILABLE OPTIONS:

- SY-2460SM-28 Amron Single Muff Operator Headset with Boom Mic and Dual Banana Plugs
- SY-2405-28 Amron Hand-Held Push-to-Talk Microphone
- SY-2401-28 Amron Deluxe Headset with Boom Mic
- SY-2460-28 Amron Standard Headset with Boom Mic
- SY-2822-28 Amron Remote Walk-and-Talk (4-wire mode)
- SY-2821-28 Amron Remote Walk-and-Talk (2-wire mode)

### TECH NOTE:

All communicators will inherently transfer topside noise to the divers when the tender speaks directly into the communicator's panel speaker. To eliminate background noise at the surface, we recommend purchasing the 2405-28 Push-to-Talk Microphone (not included with this model). For optimum communications, it is recommended to use the 2401-28 Deluxe Headset with Boom Mic, topside. For tender maneuverability, use the 2401-28 Deluxe Headset with Boom Mic along with the 2822-28 Remote Walk-and-Talk (4-wire mode) or the 2821-28 Remote Walk-and-Talk (2-wire mode). For wireless tender communications, order the 2825A-03 Two Diver Deluxe Portable Communicator with built-in Wireless Tender option.

## SYNERGY SURFACE DIVING HOSES AND UMBILICALS SY-AQUAFLOW



**Diving Umbilical with protective outer sheet**



**Diving Umbilical with spiral wrap**



**Diving Umbilical without protective outer sheet**

## OUTLAND VIDEO CAMERA / LIGHTS / UMBILICALS

Mechanical	Specification
Weight	6 oz (.2kg) Dry, 3 oz(.06kg) wet
Depth Rating	2000 ft (600m)
Housing	Black delrin
Electrical	
Image Device	1/3" CCD sensor (412k pixel)
Sensitivity	.001 lux @f1.4
Resolution	600 TV lines standard
Video Out	1.2 Vpp
Power	12 VDC @ 110 ma.
Optical	
Lens	3.6mm, Electronic-Iris
Focus	Fixed 4" to infinity
Angle of View	70 horz. (in water)



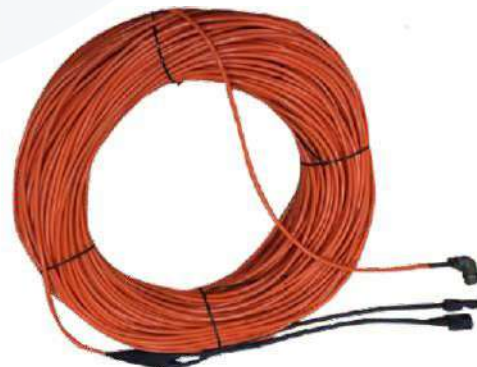
**PART NO : SY-UWC-325/p/e**



**PART NO : SY-UWL-401**

Mechanical	Specification
Weight	7oz(0.2kg) Dry, 3 oz.(.1kg) Wet
Depth Rating	2000 ft (600m)
Housing	6061-16 Anodized Aluminium
Electrical	
Power	12 VDC @ 110 ma.
Wattage	18 watt (Eq to 150 watt halogen)
Output	700 lux at 1 meter

Mechanical	Specification
Conductors	16ea #22 awg 1 RG-59 Coax
Length (mtrs)	100/150/200 as per requirement
Diameter	8.5mm (0.35")
Materials	Orange Polyurethane jacket
Breaking Strength	1200 lbs
End fittings	
Diver End	Moulded Y connection
Camera	Rmk-5-fs with locking sleeve
Light	Rmg-3-fs with locking sleeve
Surface end	Soldered connection
Cable	8 pin amphenol connector



**PART NO : SY-VC-150M**



## SYNERGY PIGTAILS AND CONNECTORS

Connector	SY-RMK-5-FS
Type	5 Female Sockets
Cable	18 in Pigtail of 18 SO AWG Cable
Material	Special Neoprene, Molded
Contacts	Copper Alloy, Hard Gold Plated per ASTM-B-488
Voltage Rating	600 VDC
Pressure Rating, Mated	Up to 20,000 psi
Mates with	SY-XSL-5-BCL on Outland Camera SY-UWC-325/p/e

**PART NO : SY-RMK-5-FS**



**PART NO : SY-RMG-3FS**



Locking sleeve for Rmg-3-fs

**PART NO : SY-G-FLS-D**



Locking sleeve for Rmk-5-fs

**PART NO : SY-K-FLS-D**



Connector	SY-RMG-3-FS
Type	3 Female Sockets
Cable	18 in Pigtail of 18 SO AWG Cable
Material	Special Neoprene, Molded
Contacts	Copper Alloy, Hard Gold Plated per SY-ASTM-B-488
Voltage Rating	600 VDC
Pressure Rating, Mated	Up to 20,000 psi
Mates with	SY-XSG-3-BCL on Outland light SY-UWL-401

**PART NO : SY-MS3108B-18-08P**



<b>Certifications</b>	Provided with each system
International	IMCA D023
Manufacturer	Synergy Certificates
Electrical	Continuity/Function test



**PART NO : SY-CLBRK**

SS camera and light bracket with jubilee clamp

Cannon Right Angle Amphenol Connector is used for connecting the video camera umbilical to the surface video console unit.

# CLASS WITNESS CERTIFICATES

Industry & Facilities Division  
Third Party Inspection Report  
Page 7 of 7  
Revision No. 0

INSPECTION REPORT No. ISIA.4.21.1018-41

**BY/Ones:** Dubai  
Inspection Report Date: 14.06.2020

**ABSTRACT:**  
 CLIENT  
 MANUFACTURE  
 OTHER

**REFERENCE DOCUMENTATION:**  
 Refer to attachment section 5 (noted)  
 Refer to attachment section 6 (noted)  
 Refer to attachment section 7 (noted)

**ATTACHMENTS:**

Name	Quantity	Reporting
Mr. Alan Hill	1	Inspection Report
Mr. Alan Hill	1	Inspection Report

**TESTING EQUIPMENT USED:**  
 Refer to attachment section 5 (noted)  
 Refer to attachment section 6 (noted)  
 Refer to attachment section 7 (noted)

Equipment Type	Equipment Identity #	Last Calibration Date	Expiry Date
Digital Pressure Gauge	9162	18.11.2019	21.11.2020
Digital Pressure Gauge	90212457	18.11.2019	21.11.2021

Industry & Facilities Division  
Third Party Inspection Report  
Page 6 of 7  
Revision No. 0

INSPECTION REPORT No. ISIA.4.21.1018-41

**E-INSPECTION DETAILS**

**E1 - Details of Witness (If a Third-Party Inspection Point)**

1. Pressure test was conducted by TRITON 362 for High Pressure (HP) PSL.
2. Pressure test was conducted by TRITON 362 for High Pressure (HP) PSL.
3. Verification of Calibration Certificate for measuring instruments and pressure gauges used found in order.

**E2 - Details of Manufacturer and Manufacturer Points**

Yes (to be completed by manufacturer)  
 No (to be completed by inspector)

1. Visual inspection of two diver arguments was inspected and found satisfactory at the time of inspection.
2. Verification of serial number TRITON 362 was inspected and found to be valid.
3. Pressure test was witnessed over multiple cycles and no pressure drop was observed and found satisfactory.
4. Verification of calibration certificate for the measuring instruments were found in order.

**E3 - Details of Calibration Review**

Yes (to be completed by manufacturer)  
 No (to be completed by inspector)

- Calibration certificates of all measuring instruments used were verified and satisfactory.

**F-HEALTH, SAFETY & ENVIRONMENT COMMENTS**

(Current to Observations and Actions taken During the Inspection)

- All safety procedures during inspection proceeded and satisfactory.

**G- NON CONFORMITIES**

Refer to attachment section 5 (noted)  
 Refer to attachment section 6 (noted)  
 Refer to attachment section 7 (noted)

No.	Description	Status	Resolution	Report	Accepted	Comments

Industry & Facilities Division  
Third Party Inspection Report  
Page 4 of 7  
Revision No. 0

INSPECTION REPORT No. ISIA.4.21.1018-41

**H- PUNCH LIST ITEMS**

No.	Description	Status	Resolution	Report	Accepted	Comments

**I-DIGITAL PICTURES**



DESCRIPTION: Check listed inspection (if the panel is inspected)  
 INSPECTION REPORT No. ISIA.4.21.1018-41

Industry & Facilities Division  
Third Party Inspection Report  
Page 8 of 8  
Revision No. 0

INSPECTION REPORT No. ISIA.4.21.1018-41

**J- ATTACHMENTS**

No.	Attachment Name	Total Pages	Description
1	1.001 - Long list items	8	Strong list items
2	2.001 - Test report	8	Test report
3	3.001 - Calibration certificate	8	Calibration certificate

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Industry & Facilities Division  
Third Party Inspection Report  
Page 7 of 7  
Revision No. 0

INSPECTION REPORT No. ISIA.4.21.1018-41

**ANNEXURE**

**Inspection Details: TRITON 362 Two Diver Panel**

- Witnessed Two Diver Panel - Insurance Pressure Testing with following details:

**Description:** Two diver Panel  
**Country of Origin:** UAE  
**Manufacturer Serial No:** TRITON 362  
**Year of Manufacture:** Year 2020  
**Design Pressure:** LP 330psi / HP 5300psi  
**Test Pressure:** LP 330psi / HP 5300psi  
**Date of Witness for Pressure Test:** 14.06.2020

**Pneumatic Test Details**

1. Pneumatic pressure test of Two Diver panel (Serial No: TRITON 362) was witnessed per the approved procedure.
2. High pressure supplied to the panel was 5300 psi - design pressure being 5300 psi.
3. Low pressure supplied to the panel was 330 psi - design pressure being 200 psi.
4. Open Pressure on the panel was held for 10 mins duration, observing no pressure drop or leakage and three sound satisfactory.
5. Gas Solenoid lock test was performed on lock gas valves and piping showing no indications of leakage and three sound satisfactory.

**END OF REPORT**

Industry & Facilities Division  
Third Party Inspection Report  
Page 6 of 7  
Revision No. 0

INSPECTION REPORT No. ISIA.4.21.1018-41



DESCRIPTION: Pressure Test and Inspection  
 DESCRIPTION: Safety Valve  
 DESCRIPTION: Safety Valve  
 DESCRIPTION: Safety Valve  
 DESCRIPTION: Safety Valve

Industry & Facilities Division  
Third Party Inspection Report  
Page 1 of 7  
Revision No. 0

INSPECTION REPORT No. ISIA.4.21.1018-41

**Project:** Third party inspection services  
**By Client:** H&M Safety Diving and Equipment Solutions PSC  
**Inspection requested by:** H&M Safety Diving and Equipment Solutions PSC  
**Inspection performed on:** 14.06.2020  
**Inspection performed at:** 14.06.2020

**INSPECTION SUBJECT OF INSPECTION**

ITEM / TAG No.	QTY	QTY Offered to Inspector
Two Diver Panel - Insurance Test	01	01

**INSPECTION RESULT**

Satisfactory (Without comments)  
 Satisfactory with comments (After closing Panels or after Confirmation items is still open)  
 Not Satisfactory (With reason during the inspection)

**Inspection Summary:** (for details refer to section 5)

- At the request of Mr. SYNERGY INNOVATIVE DIVING EQUIPMENT TRADING witness for the Diver Panel Pneumatic testing was carried out at Synergy Al Qudra on 14th June 2020 and results were found satisfactory.
- High Pressure Inspection carried out @ 5300 psi and low pressure @ 330 psi - certificate: ISIA.4.21.1018-41

**Open Box Certificates:**  
 Yes, visible in section L  
 No  
 Yes, visible in section H  
 No  
 Yes, visible in section B  
 No  
 Yes, visible in section C  
 No

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## Certifications

## Provided with each panel

Manufacturer	Synergy certification
International	IMCA D040
Class	Bureau Veritas pressure test certificates
Warranty	1 year international manufacturer warranty
Weight	46 kg

## TWO DIVER PORTABLE PANEL WITH TWO DIVER RADIO AND TWO DIVER CCTV #SY-2DAP-D040-R-2DV-SF / BF

### ORDERING INFORMATION

Sr.	Part Number	Description
1	SY-2DAP-D040-R-1DV-SF	Portable two diver panel, offshore, imca with radio and diver 1 cctv, side inlet and outlet fittings
2	SY-2DAP-D040-R-1DV-BF	Portable two diver panel, offshore, imca with radio and diver 1cctv, back inlet and outlet fittings

Sr.	Part Number	Description
1	SY-2820A-11	Amcom ii two-diver rechargeable basic portable communicator
2	SY-UDA-0204	4 core Umbilical air/gas, pneumo, communication and video cables
3	SY-UDA-0103	3 core Umbilical air/gas, pneumo, communication
4	SY-ORANGESHEATH	Full braided protective outer sheath (for complete protection of umbilicals)
5	SY-SPIRAL WRAP	Spiral wrap (in 10 mtr lengths) (for umbilical protection)
	<b>Fittings as below</b>	
6	SY-386-PB-AIR	3/8"x 6 jic phosphor bronze reusable umbilical air/gas hose end fitting
7	SY-144-PB-PNEUMO	1/4" x 4 jic phosphor bronze reusable umbilical pneumo end fitting
8	SY-RMG-3-FS	Marsh marine, 3 pin, Female, 18"
9	SY-BANPLUGS-TWIN	Twin banana plugs surface communication end fitting (Red/Black)
10	SY-RMK-5-FS	Marsh marine, 5 pin, female, 18"
11	SY-K-FLS-D	Locking sleeve, delrin , for RMK-5-FS
12	SY-RMG-3-FS	Marsh marine, 3 pin, female, 18"
13	SY-G-FLS-D	Locking sleeve, delrin, for RMG-3-FS
14	SY- MS3108B-18-08P	Cannon right angle amphenol connector is used for connecting the Surface end of the video camera umbilical to the surface video console unit

### BESPOKE DESIGNS – ANY CONFIGURATION AS PER CLIENT REQUIREMENT

**TWO DIVER PORTABLE PANEL WITH TWO DIVER RADIO AND TWO DIVER CCTV**  
**#SY-2DAP-D040-R-2DV-SF / BF**

# Contact us



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