



# SYNERGY

INNOVATIVE DIVING EQUIPMENT TRADING LLC

INSPIRING • ENGINEERING • INNOVATION

UAE • UK • INDIA • AZERBAIJAN



PRODUCT CERTIFICATE  
EC Attestation of Conformity

In Compliance with following  
Directives:

Machinery Directive  
2006/42/EC

Low Voltage Directive  
2014/35/EU

Pressure Equipment Directive  
2014/68/EU

## DP Alarm Slave Unit

### Operator & Maintenance Manual



The SY DP Alarm Slave Unit provides a means of repeating a simplified indicated status of a DP system to a remote location away from the vessels bridge. A main Master Unit provides an electrical signal to the Slave Unit illuminating corresponding LED's and sounding an alarm. A push button is located on the Slave Unit for the operator to accept and mute the alarm whilst still retaining the illuminated LED, this can only be changed from the Master Unit. Following a status change of the DP system on the Slave Unit an operator/superintendent can then pro-actively react as required for the safety of personnel involved.

The main components of this DP Alarm Slave Unit are as follows:

- LED Status Indicators
- Alarm
- Acceptance Switch
- Interface Glands

### Technical Specification

Designed and manufactured in accordance to HSE guidelines & BSI quality standards.

Please contact our sales team for further details on 009714 25807533.

Power Supply : 12 / 24 VDC

Protection : IP66 (Front Fascia Only)

Operating Temperature : -40 to 70°C

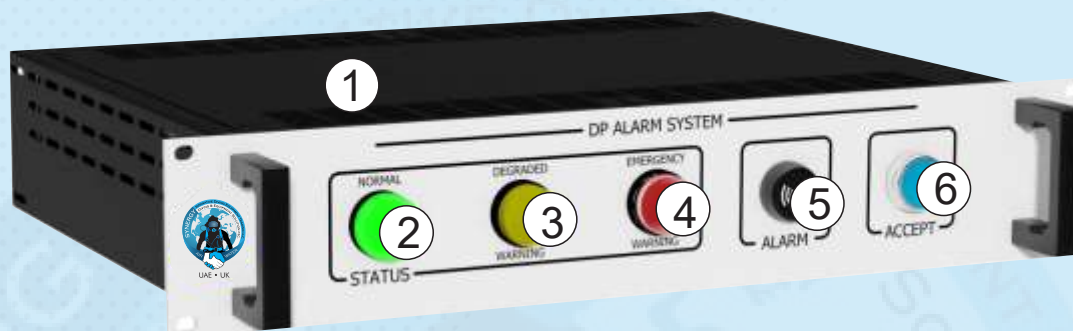
Dimensions : 2U x D 364mm

SYNERGY can provide servicing, spares and recertification on request. Please refer to section 3 for further information in relation to servicing, certification and maintenance schedules.



## DP Alarm Slave Unit

### Feature Identification



Above: Counter Operational Front View

1	2U Rack Enclosure with Glands to rear
2	Status LED Green – “NORMAL”
3	Warning Status LED Orange – “DEGRADED”
4	Warning Status LED Red – “EMERGENCY”
5	Buzzer / Alarm
6	Alarm Acceptance Switch

## OPERATING PROCEDURES

### Safety Warnings

This Operation Manual contains important safety information and should always be available to those personnel operating this equipment. Read, understand, and retain all instructions before operating this equipment to prevent injury or equipment damage.

Every effort was made to ensure the accuracy of the information contained within. SYNERGY, however, retains the right to modify its contents without notice. If you have problems or questions after reading the manual, stop and call SYNERGY on 009714 25807533 for information.

Throughout this manual we will use certain words to call your attention to conditions, practices or techniques that may directly affect your safety. Pay particular attention to information introduced by the following titles:



**Danger**

Indicates an imminently hazardous situation, which if not avoided, will result in serious personal injury or death.



**Warning**

Indicates a potentially hazardous situation, which if not avoided, could result in serious personal injury or death.

## OPERATING PROCEDURES



### Caution

Indicates a potentially hazardous situation, which if not avoided, may result in minor or moderate injury or damage to equipment. It may also be used to alert against unsafe practices.



### Notice

Notifies people of installation, operation or maintenance information which is important but not hazard-related. SYNERGY has taken care in providing you with the information you will need to operate this diving panel. However, it is up to you to carefully read this manual and make the appropriate decisions about operational safety.



### Danger

Prior to use of this equipment, it is imperative that the divers and the dive supervisor have been previously trained in surface supplied diving techniques. Use of this equipment by persons unfamiliar with surface supplied diving will endanger the lives of the divers.



### Caution

When replacing parts on this equipment, only genuine manufacturer's spare parts should be used. The substitution of parts from other manufacturers will invalidate the warranty of this product. This may also cause damage to the equipment.



### Notice

SYNERGY can provide routine servicing and recertification for diving equipment including panels. We may choose to notify clients in relation to pending expiration of certificates we have issued in relation to equipment that we have supplied although ultimate responsibility for checking and renewing this rests firmly with the client.

## OPERATING PROCEDURES

### Safety Precautions



Think Safe – Dive Safe

Ensure Master Unit is connected and functioning.

Ensure all personnel are familiar with each DP Status.

### Initial System Setup from Storage

1. Ensure Master Unit is correctly connected to the Slave unit and is fully functional.  
Schematics are provided within this manual for electrical installation.

### Operation

1. From the Master Unit activate "NORMAL" status; the green LED (Item 2) should now be indicated on the Slave Unit.
2. From the Master Unit activate "DEGRADED" status; the orange LED (Item 3) should now be indicated on the Slave Unit and alarm (Item 5) should be sounding.
3. Push Accept switch (Item 6) to mute alarm, orange LED should remain illuminated.
4. On the master unit re-activate "NORMAL" status.
5. From the Master Unit activate "EMERGENCY" status; the red LED (Item 4) should now be indicated on the Slave Unit and alarm (Item 5) should be sounding.
6. Push Accept switch (Item 6) to mute alarm, red LED should remain illuminated.
7. On the master unit re-activate "NORMAL" status.
8. DP Alarm Slave Unit is ready for operation.





## MAINTENANCE & CERTIFICATION SCHEDULE

### IMPORTANT

When replacing parts on this equipment, only genuine manufacturer's spare parts should be used. The substitution of parts from other manufacturers will invalidate the warranty of this product. This may also cause damage to the equipment.

SYNERGY can supply all consumables and/or specific servicing kits, in addition SYNERGY offer full servicing and recertification work. For more information contact our sales team on 009714 25807533 or email [info@synergiequipment.com](mailto:info@synergiequipment.com)

### Replacement Spares and Servicing

The DP Alarm Slave Unit should be regularly inspected in accordance to local and company specific procedures. In addition to this SMP recommend the following:

- The mechanical condition of the instrument should be regularly checked. The interval between inspections depends upon environmental conditions. We recommend that initially instruments should be inspected annually.
- Removal/replacement of any components should only be carried out by qualified personnel. Following replacement of component(s) the panel should undergo specific testing in accordance to industry regulations.
- No special tools are required to maintain this system.

### Spares Kits

Item	Order Number
-	-

### Trouble Shooting Guide

Symptoms	Possible Cause	Remedy
No LED indication Master Unit	Master Unit LED Failure	Check PSU & Wiring Remove & Replace
No Sound from Alarm	Master Unit Relay Failure Switch Failure Buzzer Failure	Check PSU & Wiring Remove & Replace Remove & Replace Remove & Replace

## EQUIPMENT CERTIFICATION REQUIREMENTS

The DP Alarm Slave Unit and its components should be re-certified at regular intervals according to company and industry specific guidelines. Please refer to these standards for interval requirements.

### Equipment Re-Certification Intervals

Item	Duration
<b>Visual and Function Test Certificate</b> <i>Tested to IMCA D018 11 Electrical Equipment</i>	<b>6 months</b>

## DRAWINGS

For future technical reference, we have included several design drawings as follows:

1421-101 Sht 1 : DP Alarm Slave Unit – GA

1421-103 Sht 1 : DP Alarm Slave Unit – Internals

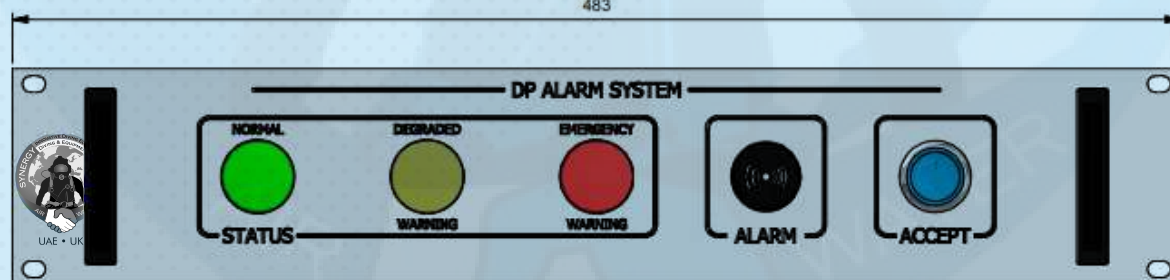
1421-104 Sht 1 : DP Alarm Slave Unit – Electrical Distribution



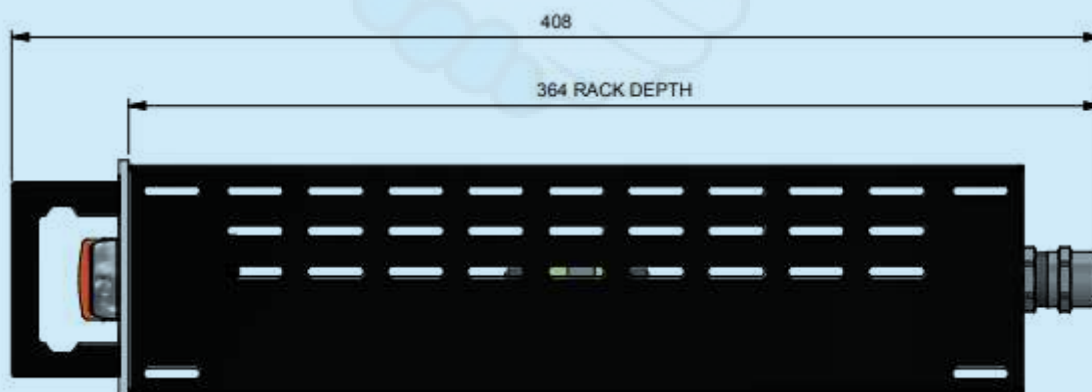
DP ALARM SLAVE UNIT RACK MOUNT PANEL - 2U  
REAR VIEW  
SCALE - 2 : 5



483



DP ALARM SLAVE UNIT RACK MOUNT PANEL - 2U  
FRONT VIEW  
SCALE - 2 : 5



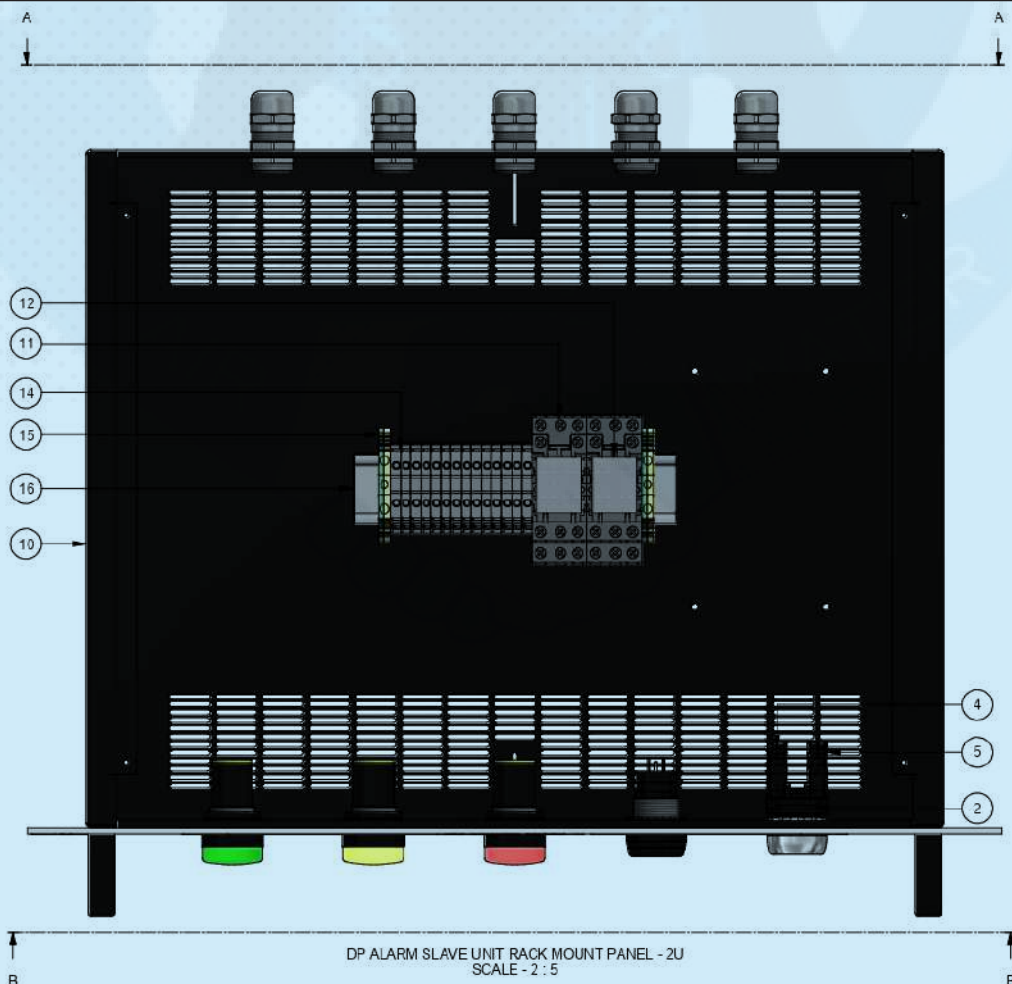
408

364 RACK DEPTH

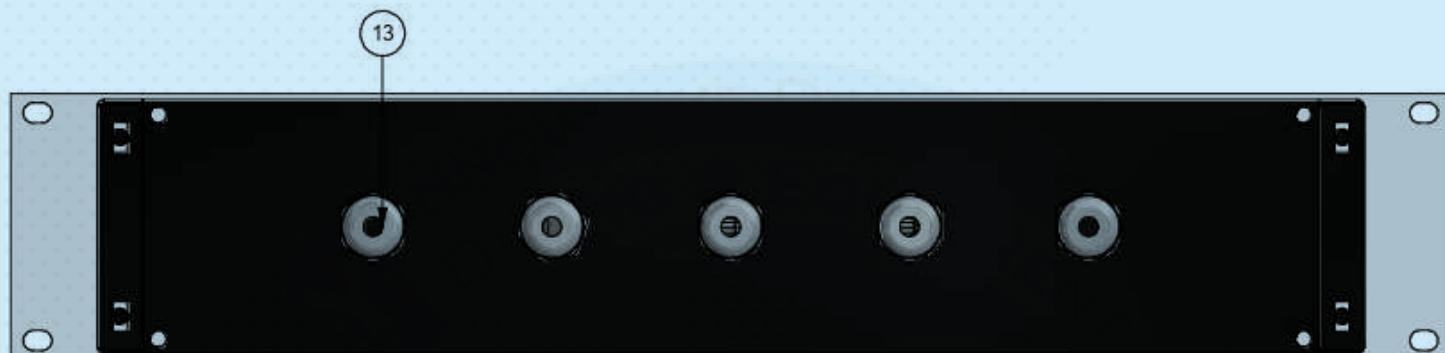
## DRAWINGS

## PARTS LIST

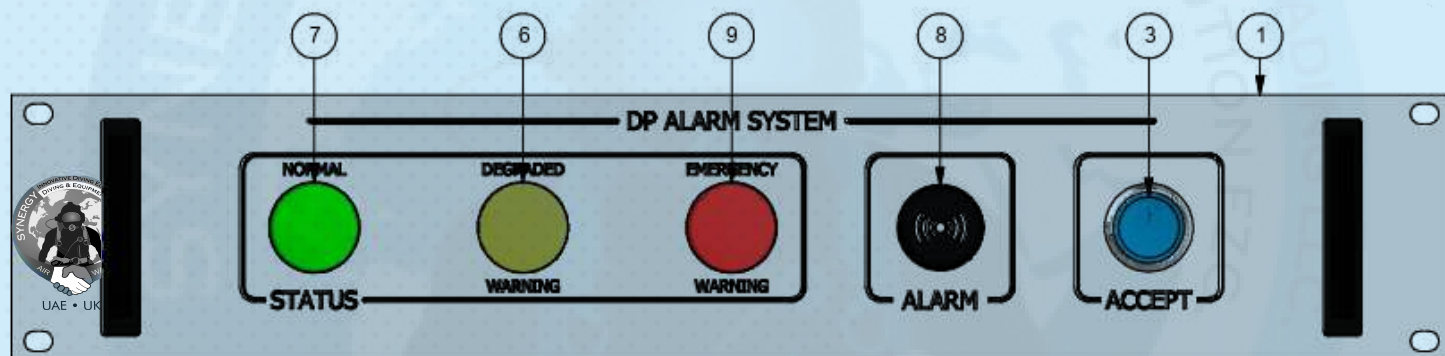
FOR ITEMS	DESCRIPTION	STOCK NUMBER	ITEM QTY
1	2U DP ALARM SYSTEM RACK MOUNT PANEL FASCIA		
2	SWITCH RETAINING LATCH		
3	BLUE PUSH BUTTON SWITCH		
4	CONTACT BLOCK, N/O		
5	CONTACT BLOCK, N/C		
6	LED INDICATOR, YELLOW, 24V		
7	LED INDICATOR, GREEN, 24V		
8	BUZZER, PANEL MOUNT		
9	LED INDICATOR, RED, 24V		
10	2U VENTILATED RACK MOUNT ENCLOSURE		
11	SOCKET, 3 POLE, DIN		
12	RELAY, 24VDC, 3 POLE		
13	CABLE GLAND, ROUND TOP, M20		
14	TERMINAL, 2.5mm <sup>2</sup> , 26A, GREY		
15	EARTH TERMINAL, 4mm		



## DRAWINGS



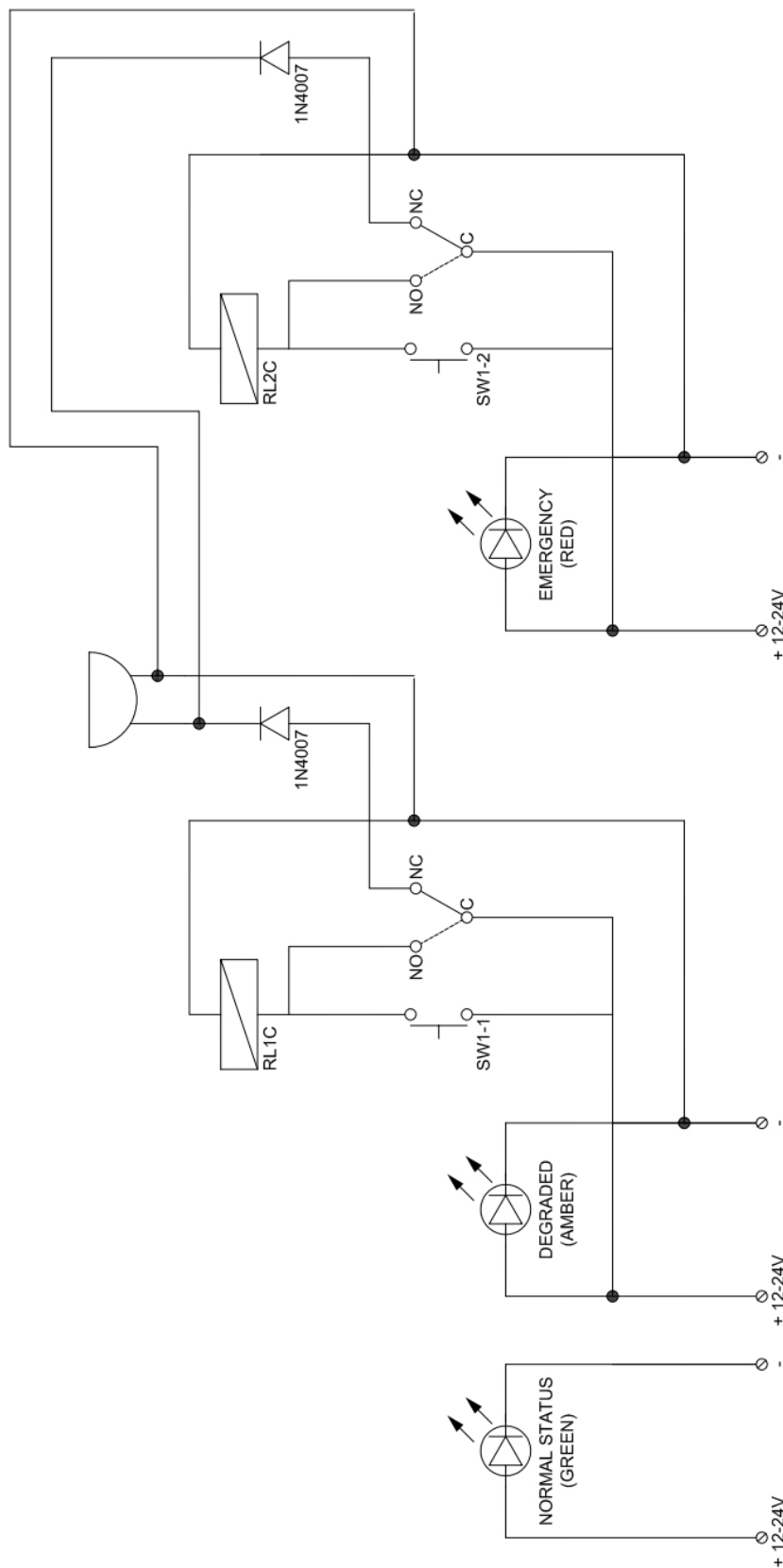
VIEW A-A  
SCALE - 2 : 5



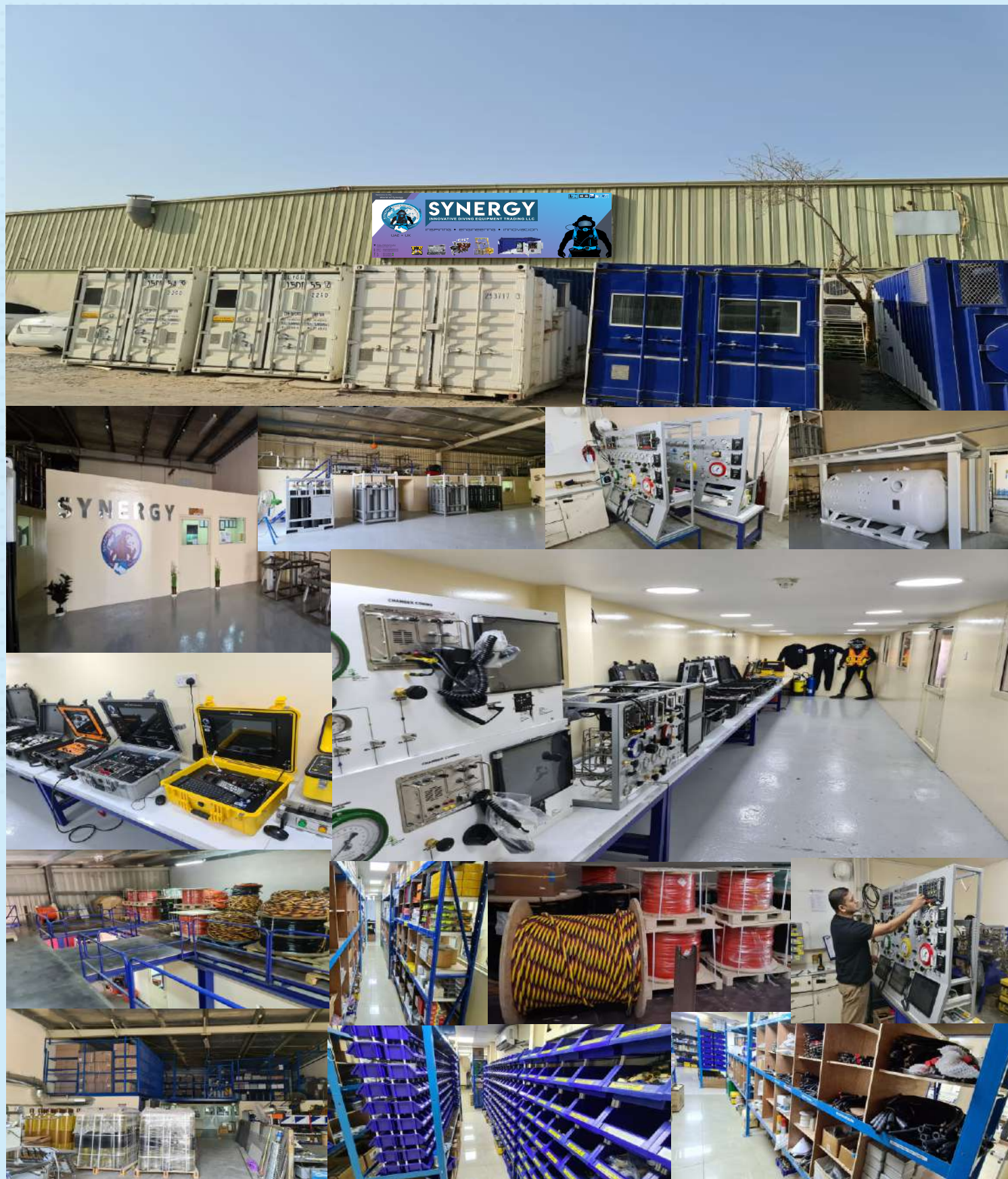
VIEW B-B  
SCALE - 2 : 5



## DRAWINGS



## SYNERGY INFRASTRUCTURE







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## DP Alarm Slave Unit

## Contact us

29th Street, Amman Road, Behind Al Huraiz Est. For Industry,  
Al Qusais, Industrial Area – 1,  
Dubai, United Arab Emirates

Tel : 009714 2580533   
Fax : 009714 2580534   
UAE : 00971505648178   
UK : 00447951966260 

Website : [www.synergiequipment.com](http://www.synergiequipment.com)  
Email : [ram@synergiequipment.com](mailto:ram@synergiequipment.com)  
For Sale : [info@synergiequipment.com](mailto:info@synergiequipment.com)

