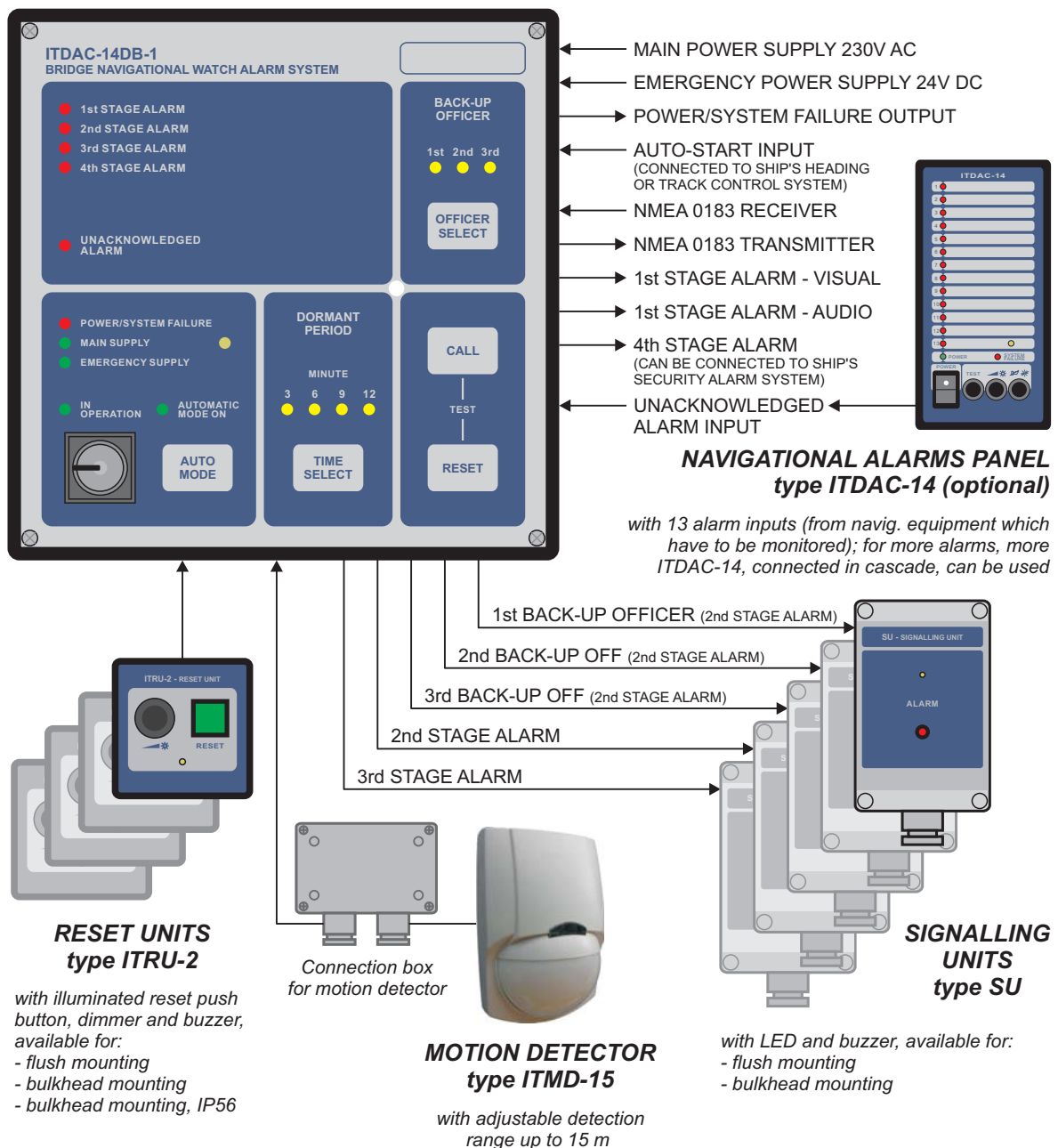


# BRIDGE NAVIGATIONAL WATCH ALARM SYSTEM (BNWAS) ITDAC-14DB-1

The purpose of the ITDAC-14DB-1 bridge navigational watch alarm system (BNWAS) is to monitor bridge activity and detect operator disability, which could lead to marine accidents. As such, the system provides continuous monitoring of the bridge operator fitness and automatically alerts the Master or another qualified back-up officer, if for any reason, the bridge operator becomes incapable of performing it's duties. This is achieved by a series of alarms, first to warn the bridge operator itself, and if he is not responding, then to alert others. If required, calling for immediate assistance is provided, too. System is realised using control unit type ITDAC-14DB-1 and required number of reset units type ITRU-2 and signalling units type SU. Additionally can be equipped with motion detectors type ITMD-15.

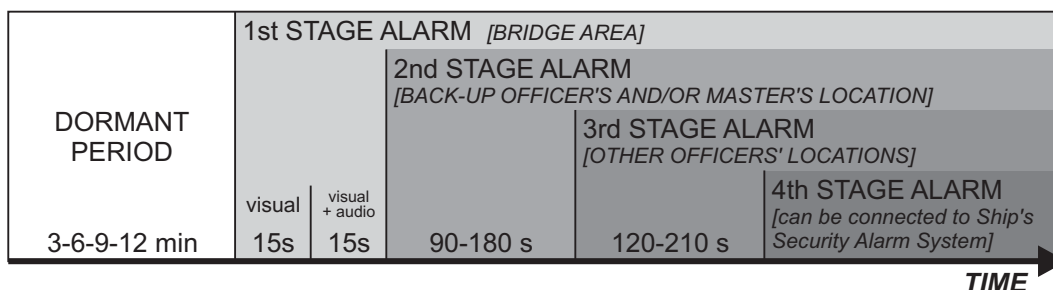
Bridge navigational watch alarm system (BNWAS) type **ITDAC-14DB-1** is fully compliant with MSC.128(75) - *Performance standards for a BNWAS* and IEC 62616 - *Maritime navigation and radiocommunication equipment and systems - BNWAS*.

## BLOCK DIAGRAM



## TECHNICAL CHARACTERISTICS

- Main power supply: 230V AC, -10% / +6%, 50/60Hz (115V AC on request)
- Emergency power supply: 18-32V DC
- 230V AC / 24V DC converter inside, with automatic change-over from main to emergency supply
- Inputs (2 pcs) for External reset units - to connect the two lines of the reset units
- Inputs (2 pcs) for Motion detectors - to connect the two lines of the motion detectors
- Auto-start input - N.O. voltage-free contact for remote system activation (when BNWAS is turned to automatic mode)
- Unacknowledged alarm input - N.O. voltage-free contact for unacknowledged alarm immediately activates Emergency Call (2nd stage alarm)
- NMEA 0183 receiver 4800 bps (recognizes EVE, ALR, HTC and HTD sentences for dormant period reset, auto-start and unacknowledged alarm)
- Outputs 24V DC for 1st stage alarm - visual, 1st stage alarm - audio, 2nd stage alarm (2 pcs), 2nd stage alarm for 1st, 2nd and 3rd back-up officer, 3rd stage alarm and 4th stage alarm
- NMEA 0183 transmitter 4800 bps (\$BNALR sentence)
- Power/system failure N.C. voltage-free output contact
- 4th stage alarm output 24V DC or N.O. voltage-free contact, selectable during installation
- Buzzer loudness selectable during installation
- Automatic dimmer
- All inputs and outputs have their terminals on the rear panel of the main unit, so that the average system, with 2 reset units, 1 or 2 motion detectors and 5 signalling units, can be installed without any additional terminal blocks or junction boxes



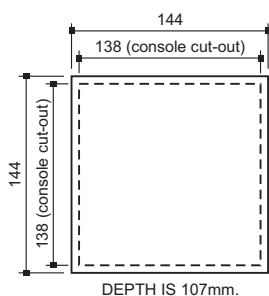
## ORDERING INFORMATION

02-05-016	Control unit type ITDAC-14DB-1, 230VAC/24VDC, flush mounting
02-05-017	Control unit type ITDAC-14DB-1, 115VAC/24VDC, flush mounting
02-05-018	Reset unit type ITRU-2, with buzzer and dimmer, 24VDC, flush mounting
02-05-014	Reset unit type ITRU-2, with buzzer and dimmer, 24VDC, bulkhead mounting
02-05-015	Reset unit type ITRU-2, with buzzer, without dimmer, 24VDC, bulkhead mounting, IP56
02-05-019	Motion detector type ITMD-15, 12VDC
02-05-020	Connection box for motion detector type ITMD-15 (02-05-019)
01-15-004	Signaling unit type SU, 24VDC, one cable gland, bulkhead mounting
01-15-005	Signaling unit type SU, 24VDC, two cable glands, bulkhead mounting
01-15-006	Signaling unit type SU, 24VDC, flush mounting
05-04-004	Box for bulkhead mounting, size 300x300x210

## DIMENSIONS

### ITDAC-14DB-1 Main unit

FLUSH MOUNTING:

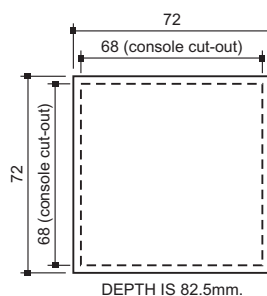


For BULKHEAD MOUNTING standard steel box 300x300x210 is used.

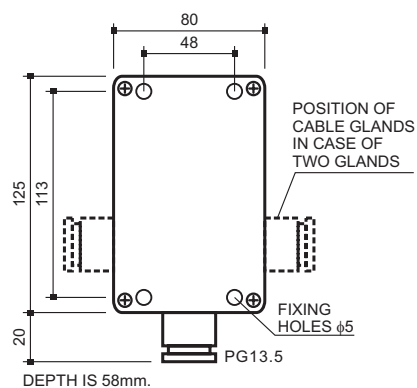
All dimensions are in mm.

### ITRU-2 Reset unit, SU Signalling unit

FLUSH MOUNTING:



BULKHEAD MOUNTING:



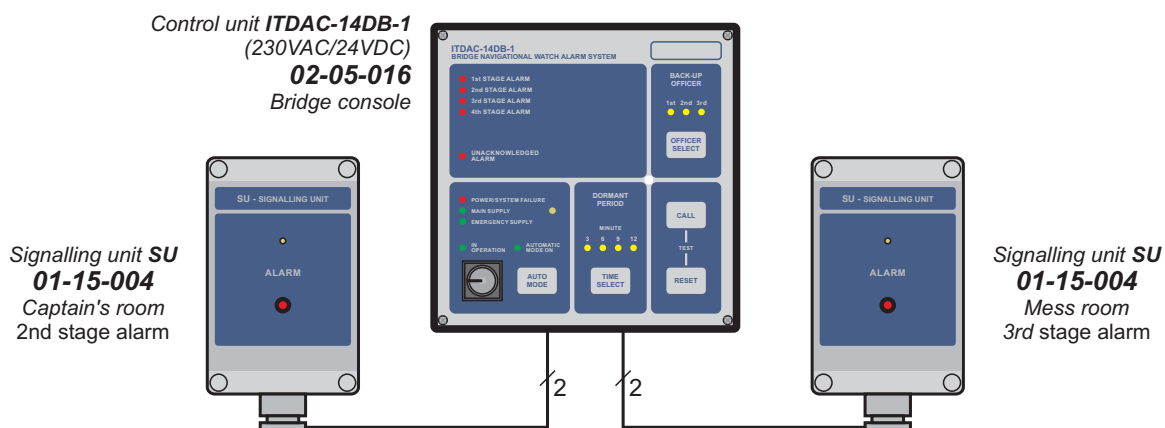
# BRIDGE NAVIGATIONAL WATCH ALARM SYSTEM (BNWAS) ITDAC-14DB-1

According to MSC.282(86), BRIDGE NAVIGATIONAL WATCH ALARM SYSTEM (BNWAS) has to be installed, as follows:

- 1) cargo ships of 150 gross tonnage and upwards and passenger ships irrespective of size, constructed on or after 1. July 2011;
- 2) passenger ships irrespective of size, constructed before 1. July 2011, not later than the first survey after 1. July 2012;
- 3) cargo ships of 3 000 gross tonnage and upwards, constructed before 1. July 2011, not later than the first survey after 1. July 2012;
- 4) cargo ships of 500 gross tonnage and upwards but less than 3 000 gross tonnage, constructed before 1. July 2011, not later than the first survey after 1. July 2013;
- 5) cargo ships of 150 gross tonnage and upwards but less than 500 gross tonnage, constructed before 1. July 2011, not later than the first survey after 1. July 2014.

NEW BUILT SHIPS	Cargo ships 150GT and upwards	BNWAS			
	Passenger ships (all)				
EXISTING SHIPS	Passenger ships(all)				
	Cargo ships 3000GT and upwards				
	Cargo ships 500GT and upwards, less than 3000GT				
	Cargo ships 150GT and upwards, less than 500GT				
		1. July 2011.	1. July 2012.	1. July 2013.	1. July 2014.

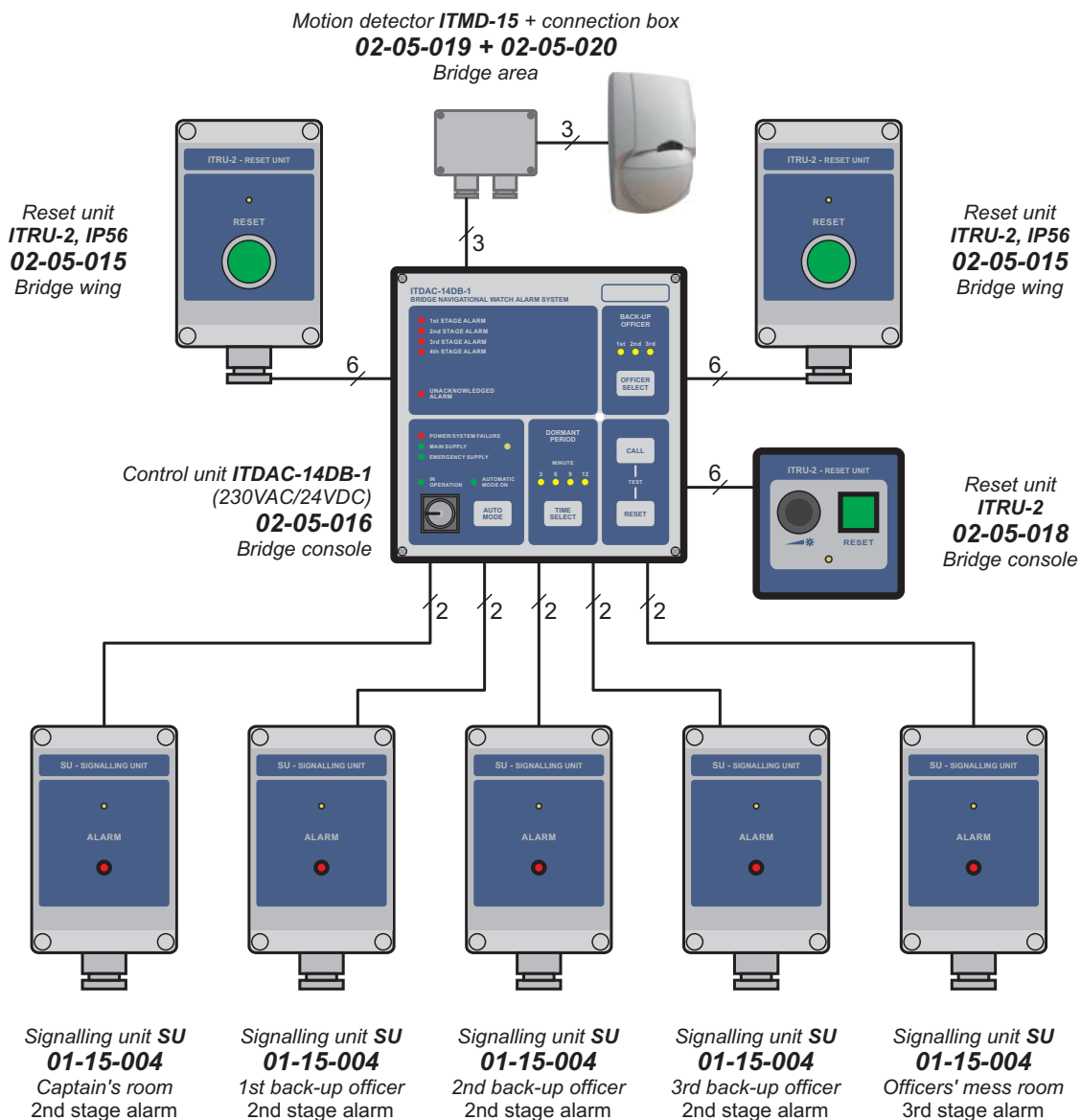
## EXAMPLE OF SYSTEM FOR SMALL SIZED VESSEL / Min. requirement to comply with the rules



## ORDERING INFORMATION

02-05-016	Control unit type ITDAC-14DB-1, 230VAC/24VDC, flush mounting	1 pcs
01-15-004	Signaling unit type SU, 24VDC, one cable gland, bulkhead mounting	2 pcs

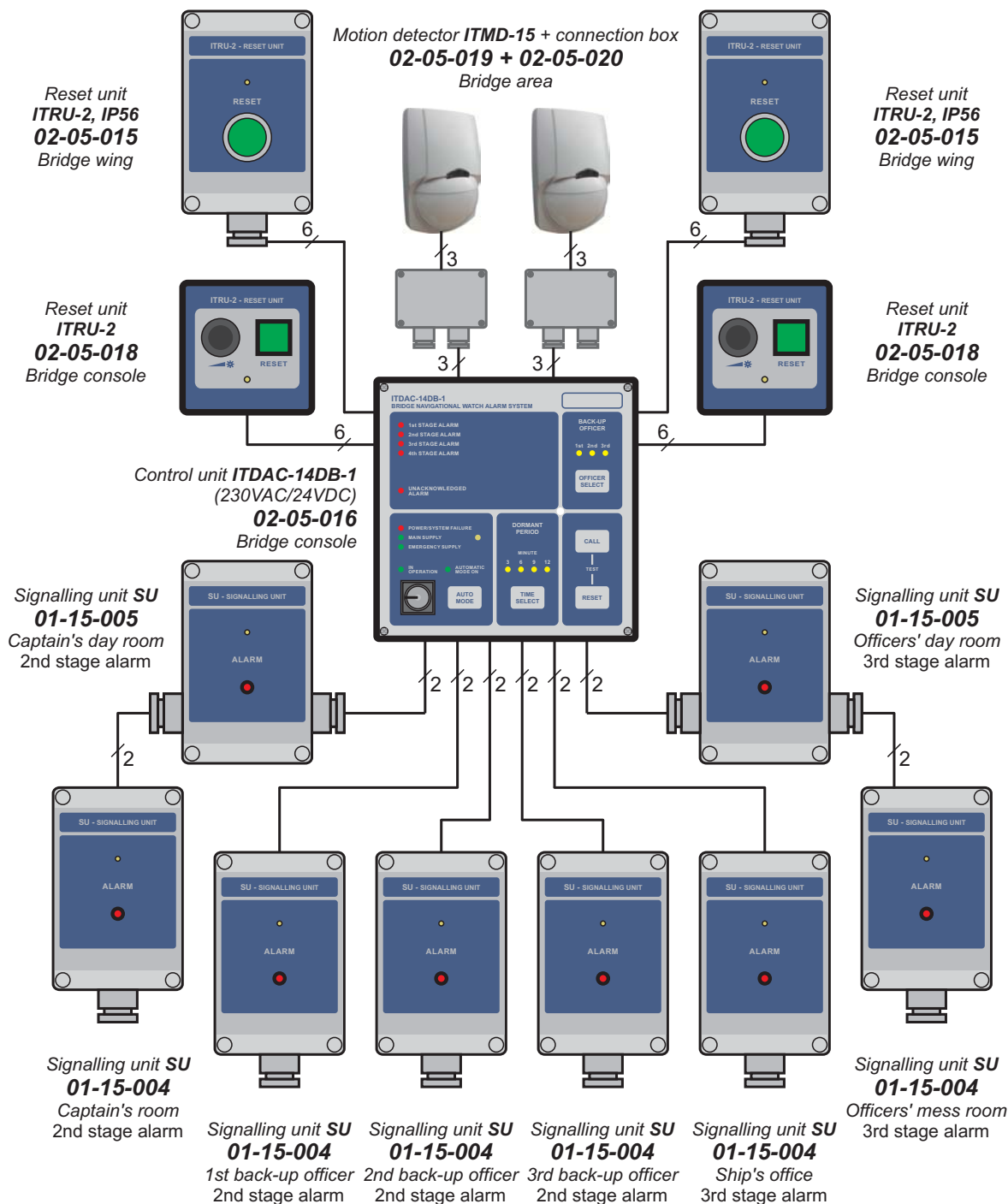
**EXAMPLE OF SYSTEM FOR MEDIUM SIZED VESSEL /  
Standard configuration suitable for the most of vessels**



**ORDERING INFORMATION**

02-05-016	Control unit type ITDAC-14DB-1, 230VAC/24VDC, flush mounting	1 pcs
02-05-018	Reset unit type ITRU-2, with buzzer and dimmer, 24VDC, flush mounting	1 pcs
02-05-015	Reset unit type ITRU-2, with buzzer, without dimmer, 24VDC, bulkhead mounting, IP56	2 pcs
02-05-019	Motion detector type ITMD-15, 12VDC	1 pcs
02-05-020	Connection box for motion detector type ITMD-15 (02-05-019)	1 pcs
01-15-004	Signaling unit type SU, 24VDC, one cable gland, bulkhead mounting	5 pcs

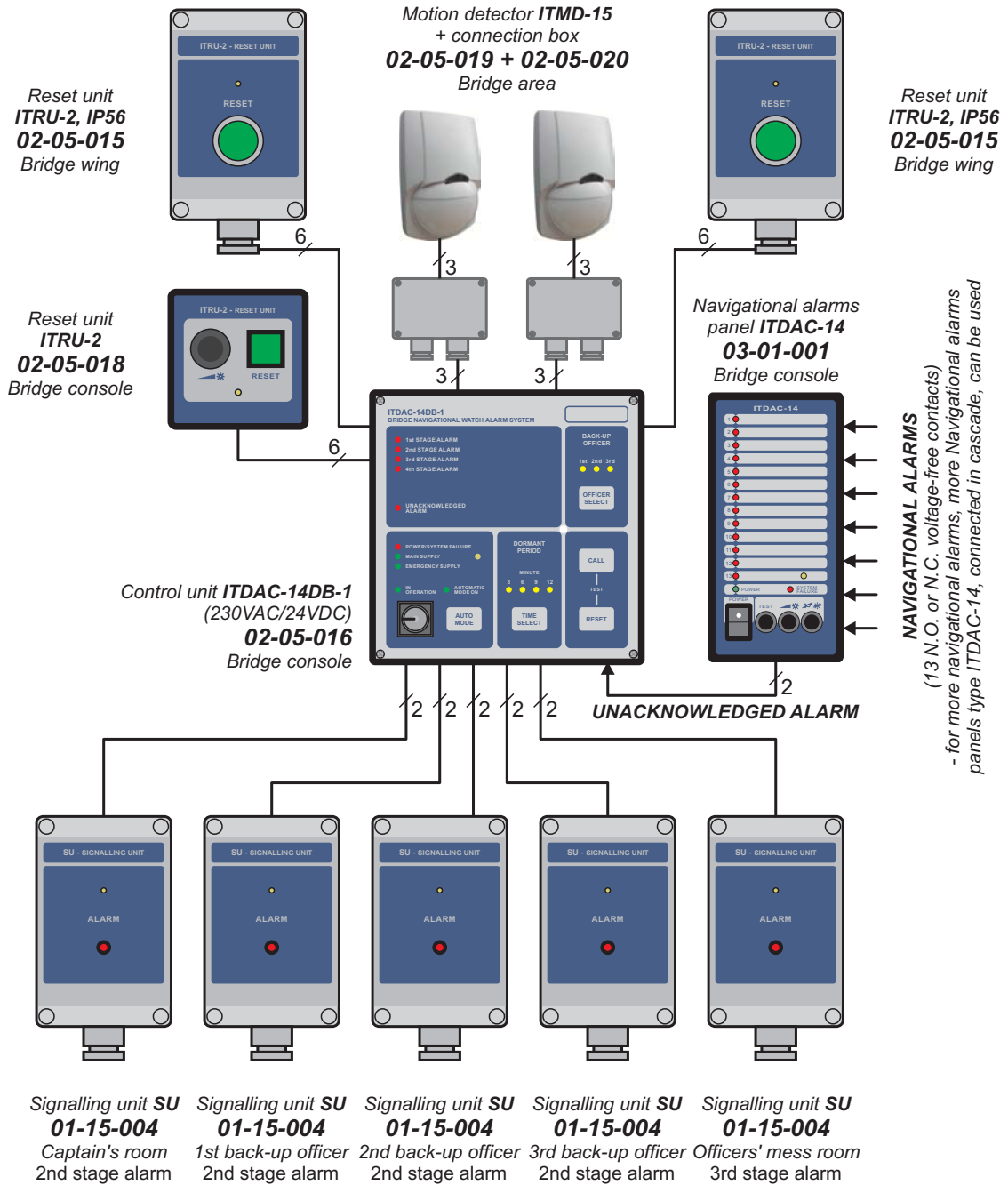
## EXAMPLE OF SYSTEM FOR LARGE SIZED VESSEL



## ORDERING INFORMATION

02-05-016	Control unit type ITDAC-14DB-1, 230VAC/24VDC, flush mounting	1 pcs
02-05-018	Reset unit type ITRU-2, with buzzer and dimmer, 24VDC, flush mounting	2 pcs
02-05-015	Reset unit type ITRU-2, with buzzer, without dimmer, 24VDC, bulkhead mounting, IP56	2 pcs
02-05-019	Motion detector type ITMD-15, 12VDC	2 pcs
02-05-020	Connection box for motion detector type ITMD-15 (02-05-019)	2 pcs
01-15-004	Signaling unit type SU, 24VDC, one cable gland, bulkhead mounting	6 pcs
01-15-005	Signaling unit type SU, 24VDC, two cable glands, bulkhead mounting	2 pcs

**EXAMPLE OF SYSTEM WITH NAVIGATIONAL ALARMS PANEL**



**ORDERING INFORMATION**

02-05-016	Control unit type ITDAC-14DB-1, 230VAC/24VDC, flush mounting	1 pcs
02-05-018	Reset unit type ITRU-2, with buzzer and dimmer, 24VDC, flush mounting	1 pcs
02-05-015	Reset unit type ITRU-2, with buzzer, without dimmer, 24VDC, bulkhead mounting, IP56	2 pcs
02-05-019	Motion detector type ITMD-15, 12VDC	2 pcs
02-05-020	Connection box for motion detector type ITMD-15 (02-05-019)	2 pcs
01-15-004	Signaling unit type SU, 24VDC, one cable gland, bulkhead mounting	5 pcs
03-01-001	Navigational alarms panel type ITDAC-14, 13 alarm points, 24VDC, flush mounting	1 pcs