

# TWIDS

TECHTROL WATER INGRESS DETECTION SYSTEM FOR BULK CARRIERS

**Techtrol**

SINCE 1984

IN ACCORDANCE WITH

**SOLAS CHAPTER XII REGULATION 12 AND**

**IMO PERFORMANCE STANDARD ANNEX 5, RESOLUTION MSC 145(77)**

**IACS-UR E-10 / UR-M-46 / UR-SC-180**



**TWIDS** consists of a control panel and a set of two water detectors in each hold. An audio / visual alarm is annunciated in case of water ingress in any hold / dry space. The control panel provides individual indication for status, fault & alarm for each cargo hold with distinct signals for pre & main alarm levels.

## FEATURES

- Suitable for all types of bulk cargoes.
- Robust, corrosion proof, dust protected & highly reliable detectors.
- Outer protection sleeve in SS to isolate and protect detector from damage during cargo handling operations.
- Simple installation, easy to operate & trouble free system.
- Functional testing of all detectors in-situ.
- Spare input channels can be used for water ballast, dry spaces & fore peak tanks.
- Over-ride facility available for using the hold for water ballast.
- User friendly, menu driven, 5 button operation with functional checks available at any time (holds empty or filled).
- Detectors are certified for use in hazardous area for intrinsic safety through built-in zener barrier in the control panel.

**IMFR**

**IBR**



**Lloyd's Register**

Certificate No. 04 / 10031(E1)  
Dt. 20th April 2009



Certificate No. 2010TAC139  
Dt. 25th Oct. 2010



### SPECIFICATIONS

#### TWIDS CONTROL PANEL

#### TWIDS-CP



<b>Mounting</b>	:	Wall
<b>Ingress Protection</b>	:	Weather proof to IP 56
<b>MOC</b>	:	CRCA with epoxy powder coating
<b>Power Supply</b>	:	110 or 230 V AC, 50-60 Hz
<b>Power Failure</b>	:	24 V DC emergency supply from ship with auto-change over
<b>Conduit Connections</b>	:	¾" ET brass cable glands
<b>Terminals</b>	:	Suitable for 1.5 mm <sup>2</sup> conductor size
<b>System Status</b>	:	<ul style="list-style-type: none"> <li>● Green LED-"Detector active"</li> <li>● Red LED-"Detector alarm"</li> <li>● Amber LED-"Detector fault" for each channel</li> <li>● Green LED-CPU (Watch Dog)</li> <li>● Amber LED-Sensor test</li> </ul>
		"LAMP TEST" push button for audio & visual alarm test
		LED's flashing on new alarm, steady on accept by Mute / Reset push button
<b>Alarm Override</b>	:	Through programme, indicated through flashing Green LED (ON time 0.1 sec., OFF time 1.9 sec.)
		Auto change over on emptying of cargo / water ballast tank
<b>Display</b>	:	16 characters x 2 line, large font - LCD, Dot matrix, back-lit to display channel and alarm status
<b>Intrinsic Safety (cat."ia")</b>	:	Through certified zener barriers for each channel (CMRI Certificate No. CMRI/TC/P/H19 dated 09.01.2004)
<b>Service Environment</b>	:	5 to 55°C, 0-99% Rh
<b>Output Relays</b>	:	One no. each for pre and main alarm per hold SPDT rated 5A @ 230 V AC
<b>Alarm Time Delay</b>	:	0 to 99 sec. (programmable)
<b>Power Status</b>	:	<ul style="list-style-type: none"> <li>● Green LED-Mains power</li> <li>● Red LED-Mains fail</li> <li>● Red LED-24 V DC emergency supply</li> </ul>
<b>Cable Check</b>	:	Fault alarm generated for short or open circuit
<b>Power Consumption</b>	:	20 W
<b>Options</b>	:	<ol style="list-style-type: none"> <li>1. Remote common audio alarm with Mute / Reset push button</li> <li>2. 24 nos. relay contacts assigned either for alarm or control or auto sensor test</li> </ol>
<b>Dimensions</b>	:	400 mm (W) x 500 mm (H) x 210 mm (D)
<b>Weight</b>	:	20 kg.

## HOOTERS

<b>Audio Alarms</b>	: 3 hooters, 8-tone mutable sounder, operating on pre alarm, main alarm & system alarm
<b>Ingress Protection</b>	: Weather proof to IP 65
<b>Dimensions</b>	: 101 mm Ø x 81 mm length
<b>Weight</b>	: 0.325 kg. each



## TWIDS WATER DETECTOR TWIDS-WD TYPE B & C

<b>Detector Type</b>	: Magnetically operated
<b>Switching Mechanism</b>	: Glass encapsulated hermetically sealed reed switch
<b>Contact Rating</b>	: 15 VA, 0.5A / 230 V AC
<b>Detector Action</b>	: Normally closed, Open on 'Alarm'
<b>Termination</b>	: 2 core, 0.75 mm <sup>2</sup> silicon cable 25 mtrs. long
<b>Ingress Protection</b>	: IP 68 in accordance with IEC 60529
<b>Intrinsic Safety</b>	: Through zener safety barriers
<b>Service Environment</b>	: -25 to 80°C, 0-99% Rh
<b>Dust Protection</b>	: Integral, inert, hydrophobic filter with manual / auto cleaning
<b>MOC</b>	: Detector in glass filled nylon, chamber in delrin
<b>Mounting</b>	: PP flange (65 NB BS - 10 T 'D')
<b>Air Hoses</b>	: 2 nos. P U flexible pipes x 25 mtrs. long
<b>In-situ Testing</b>	: Manual or auto
<b>Test / Cleaning Ports</b>	: 2 nos. with quick release fittings ( for Type 'B' only)
<b>Cable Check</b>	: Alarm for short / open circuit
<b>Dimensions</b>	: 73 mm Ø x 230 mm ht. Type 'B' with protection sleeve 55 mm Ø x 127 mm ht. Type 'B' 55 mm Ø x 102 mm ht. Type 'C'
<b>Weight</b>	: Type 'B' with protection sleeve : 5.75 kg. Type 'B' : 0.75 kg. Type 'C' : 0.60 kg.
<b>Service / Application</b>	: Type 'B' - for Cargo Hold (to suit all types of cargoes), Ballast & Fore Peak Tank Type 'C' - for Bilge Well & Dry Space
<b>Installation Accessories</b>	: 1 - Sensor protection sleeve in SS 304 (must for Type 'B' only) 2 - Outer filter in SS 304 for sensor protection sleeve / separate mounting with socket ( must for Type 'B' only)



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