

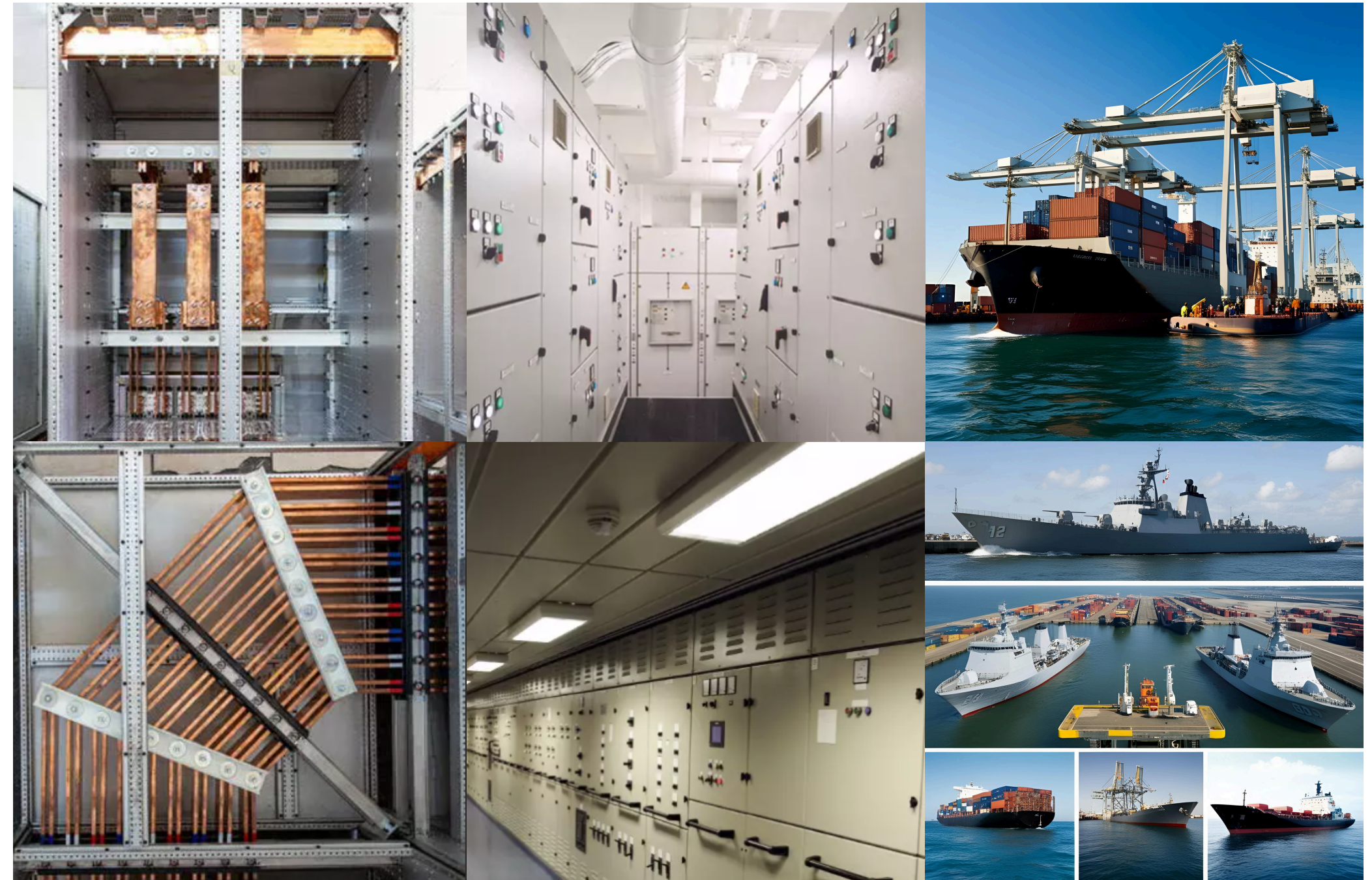
Cuadros de distribución para la marina.

Los tableros de distribución LOGSTRUP están pensados para alimentar proyectos exigentes. Logstrup lleva varios años dedicándose al diseño y fabricación de sistemas de baja tensión para aplicaciones marinas y mar adentro. Su sistema modular ofrece soluciones resistentes y flexibles, adecuadas para las exigentes condiciones ambientales marinas y de alta mar.

TABLEROS PROTOCOLIZADOS Y A PRUEBA DE ARCO INTERNO

El sistema modular cumple y supera los requisitos de la norma IEC 61439-1/2, cumple las normas de las principales sociedades internacionales de clasificación de buques y cuenta con certificados de homologación de DNV-GL y Lloyd's Register. Sólo utiliza piezas estándar que han sido probadas y cuya idoneidad se ha demostrado para sectores muy exigentes. De este modo, usted sabe que cualquier solución naval y de alta mar que incluya el sistema modular Logstrup es segura y fiable.

Gracias a su experiencia en una amplia gama de proyectos marinos y alta mar, Logstrup es un proveedor de calidad para buques de suministro de alta mar, buques especiales (cableeros, plataformas elevadoras, grúas flotantes, instalación de turbinas eólicas, dragas, etc.), superyates y megayates, transbordadores, cruceros y buques comerciales.



NÖLLMANN cuenta con el aval oficial para el armado de tableros eléctricos y es distribuidor directo de la marca Logstrup en Sudamérica. Esta alianza estratégica garantiza acceso a productos de alta calidad y tecnología de vanguardia.

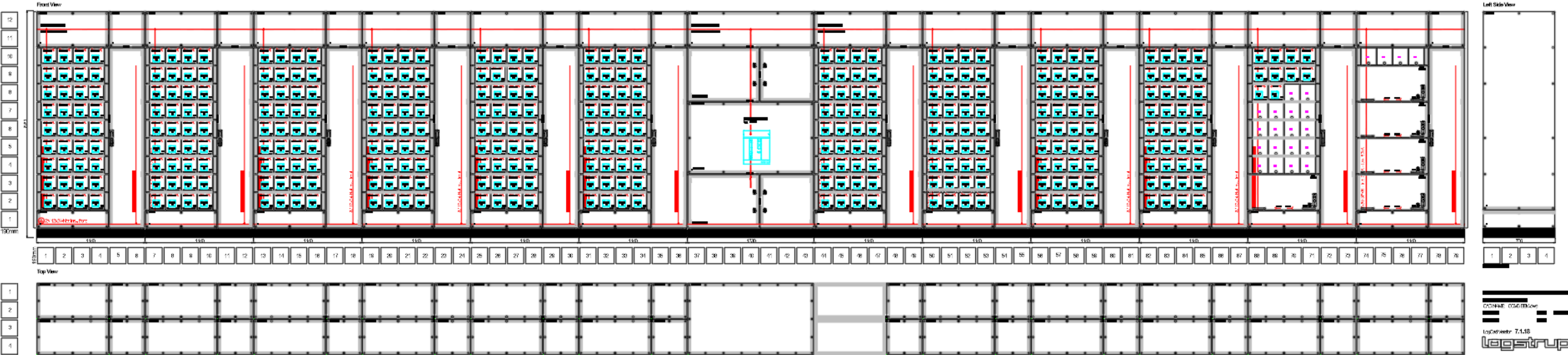
Nuestro equipo está conformado por técnicos capacitados directamente en la sede central de Logstrup en Dinamarca, lo que asegura un profundo conocimiento técnico y un acompañamiento especializado en cada etapa del proyecto.

Gracias al software exclusivo de Logstrup, podemos ofrecer de manera ágil tanto el diseño del layout del tablero como su cotización, permitiendo optimizar tiempos de respuesta y adaptación a las necesidades específicas de cada cliente.

Con NÖLLMANN, su proyecto cuenta con respaldo, experiencia y precisión internacional.



- PLANTA NÖLLMANN -
PARQUE INDUSTRIAL DE LOS TRONCOS / TIGRE





Page 1 of 3
Certificate No: LR21396983TA
Issue Date: 03/11/2021
Expiry Date: 20/07/2026

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	A/S LØGSTRUP STEEL
Address	Egeskovvej 16-18, Kvistgård, 3490, Denmark
Place of Production	A/S LØGSTRUP STEEL Egeskovvej 16-18, Kvistgård, 3490, Denmark
Type	Switchboard Accessories
Description	Low Voltage Modular Switchgear and Control Gear Assembly TYPE Logstrup Modular System
Trade Name	Løgstrup Modular System
Application	Marine, Industrial and Offshore applications
Specified Standard	Manufacturers Standard IEC61439-1: 2020 IEC61439-2: 2020

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

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Thorsten Wolff
Senior Specialist to Lloyd's Register EMEA
A member of the Lloyd's Register group

KEMA Quality

TEST CERTIFICATE

Issued to: A/S Logstrup - Steel
Egeskovvej 16-18
DK-3490, Kvistgård
Denmark

For the product: Low-voltage switchgear and controlgear assembly

Trade name: Logstrup Modular System

Type/Model: 6500A LV switchboard, IP31, Form 4B

Ratings: I_u 8500 A, U_i 440 V,
I_w 185 kA ~ 1 s (horizontal main busbar system)
I_u max. 100 kA ~ 1 s (outgoing units with ACBs),
I_u 100 kA at 440 V
For more details see annex

Manufactured by: Logstrup, Ireland Ltd.
Dunmore Road, Tuam
County Galway
Ireland

Subject: Design verification

Requirements: IEC 61439-2:2011
Clauses 10.5.3, 10.10.2.3.7, 10.11

Remarks: -

This Test Certificate is granted on account of an examination by DEKRA, the results of which are laid down in report no. 2181034.01-INC, dated 5 August 2015.

The examination has been carried out on one single specimen of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by DEKRA is not the responsibility of DEKRA.

Anhem, 5 August 2015

Number: 2181034.100
DEKRA Certification B.V.

H.R.M. Barnds
Certification Manager

© Integral publication of this certificate and adjoining reports is allowed

DEKRA Certification B.V. Member 1051, 6825 MJ Anhem, P.O. Box 5185, 6802 ED Anhem, The Netherlands
T +31 88 98 83000 F +31 88 98 83100 www.dekra-certification.com Company registration 09095396

DEKRA

Intertek

Certificate No. 18625

ASTA Certificate
of Selected Verification Tests

Laboratory Ref. No: 1170-21200210048

APPARATUS: 2500 A / 400 V / 800 V / 18 kV (U_i/U_u/U_u), 50 Hz extendable power switchgear and controlgear assembly consisting of: a three-phase and neutral main busbar system, a three-phase and neutral distribution busbar system, a protective busbar, an incoming circuit with ACB and six outgoing circuits (withstandable units) with MCCB

DESIGNATION: Logstrup Modular System

MANUFACTURER: A/S Logstrup-Steel
Egeskovvej 16-18, 3490 Kvistgård, Denmark

TESTED BY: Institut „Prüfwerk für elektrische Hochleistungstechnik“ GmbH
Landesberger Allee 378A, 12081 Berlin, Germany

RST Rail System Testing GmbH
Environmental Lab, 19761 Heringsdorf, Germany

DATE(S) OF TESTS: 25 June to 06 July 2012

The apparatus, constructed in accordance with the description, drawings and photographs incorporated in this certificate has been subjected to the series of proving tests in accordance with IEC 61439-2: Edition 2.0 2011-08

Verifications with reference to the tests listed in Annex D of IEC 61439-1:

1: strength of material and parts
2: degree of protection of enclosures
3: clearance
4: creepage distances
10: temperature-rise limits
12: electromagnetic compatibility (EMC)
13: mechanical operation

Refer to pages 1 and 2 for ratings

The results are shown in the record of Proving Tests attached hereto. The values obtained and the general performance are considered to comply with the above (Standard(s)) and to justify the ratings assigned by the manufacturer as shown in the ratings page(s). This certificate applies only to the apparatus tested. Responsibility for conformity of any other designations rests with the Manufacturer.

This Certificate comprises this front sheet, 2 ratings pages plus 70 other pages as detailed on page 4.

Only integral reproductions of this whole certificate or reproductions of this page accompanied by pages are permitted.

Issued by Intertek, Hilton House, Corporation Street, Rugby, CV21 2DN England.
Contact: asta@intertek.com Tel: +44 (0)1793 579425


R. B. Jones
21 November 2012
ASTA Observer
Rostislav Kucharskiy
Certification Manager

UKAS
CERTIFIED
010

Intertek

Certificate No. 18626

ASTA Certificate
of Selected Verification Tests

Laboratory Ref. No: 1170-2120428.0339

APPARATUS: 2500 A / 400 V / 800 V / 18 kV (U_i/U_u/U_u), 50 Hz extendable power switchgear and controlgear assembly consisting of: a three-phase and neutral main busbar system, a three-phase and neutral distribution busbar system, a protective busbar, an incoming circuit with ACB and six outgoing circuits (withstandable units) with MCCB

DESIGNATION: Logstrup Modular System

MANUFACTURER: A/S Logstrup-Steel
Egeskovvej 16-18, 3490 Kvistgård, Denmark

TESTED BY: Institut „Prüfwerk für elektrische Hochleistungstechnik“ GmbH
Landesberger Allee 378A, 12081 Berlin, Germany

RST Rail System Testing GmbH
Environmental Lab, 19761 Heringsdorf, Germany

DATE(S) OF TESTS: 25 June to 06 July 2012

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13: mechanical operation

Refer to pages 1 and 2 for ratings

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This Certificate comprises this front sheet, 2 ratings pages plus 49 other pages as detailed on page 4.

Only integral reproductions of this whole certificate or reproductions of this page accompanied by pages are permitted.

Issued by Intertek, Hilton House, Corporation Street, Rugby, CV21 2DN England.
Contact: asta@intertek.com Tel: +44 (0)1793 579425


R. B. Jones
21 November 2012
ASTA Observer
Rostislav Kucharskiy
Certification Manager

UKAS
CERTIFIED
010



CERTIFICATE
of Selected Verification Tests

NO. 117021200220049

A/S Logstrup - Steel
Egeskovvej 16-18
3490 Kvistgård
DENMARK

A/S Logstrup - Steel

Power switchgear and control assembly

Logstrup Modular System

Test sample

Rated voltage U_i 400 V
Rated operational voltage U_u 400 V
Rated insulation voltage U_i 1000 V
Rated impulse withstand voltage U_{imp} 8 kV
Rated current of the assembly I_u 3000 A
Rated frequency f_u 50 Hz
Degree of protection IP21
Form of internal separation Form 4b

IEC 61439-2: 2011 08

Verification of:
• strength of materials and parts
• degree of protection of enclosures
• clearances and creepage distances
• dielectric properties
• temperature rise limits (10.10.2.3.7)
• electromagnetic compatibility
• mechanical operation

11 January to 16 February 2012

The ratings of the test object related to the scope of tests have been proved. The design verification test has been PASSED within the scope stated.

RONALD BORCHERT
Senior engineer
Berlin, 16 May 2012

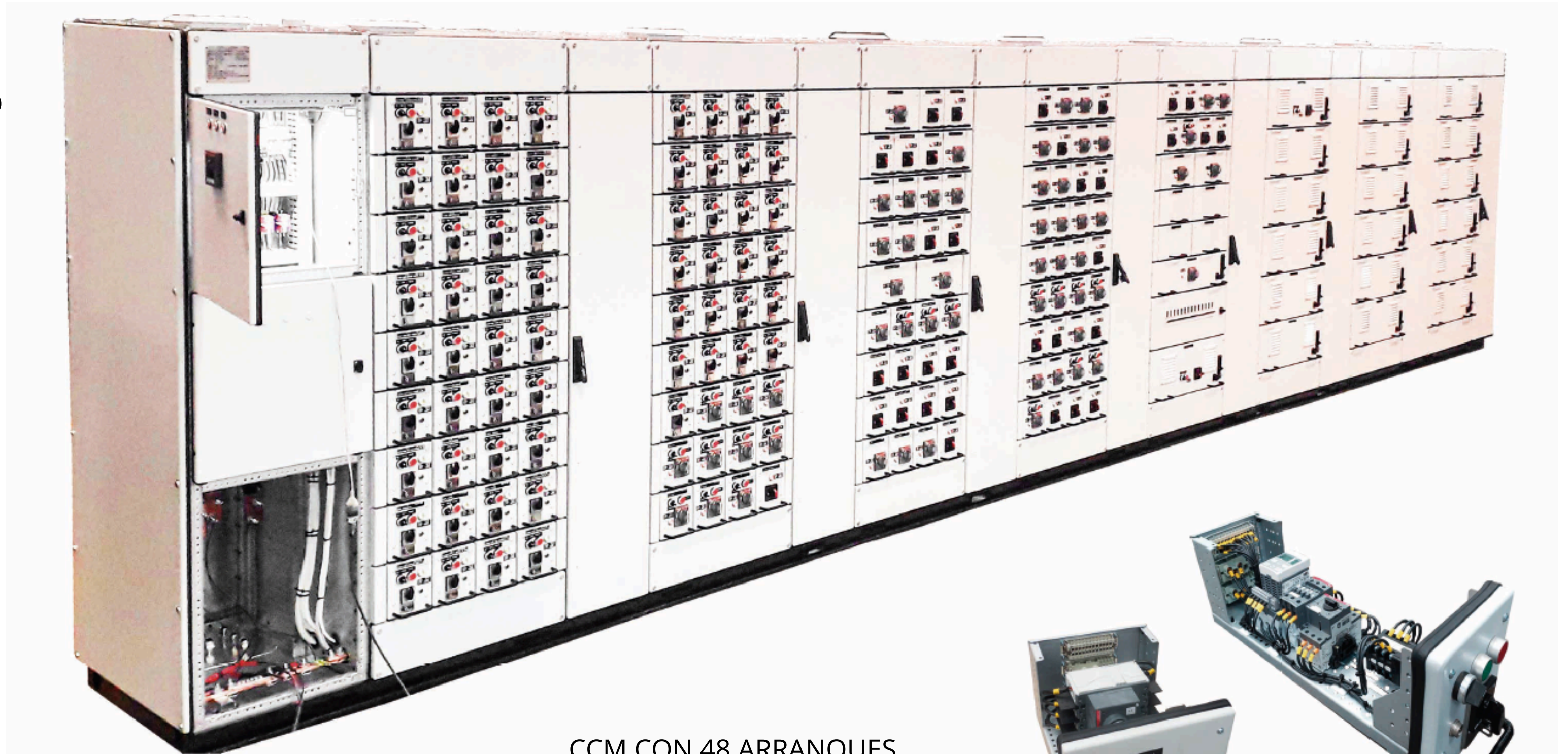
CHRISTIAN JURASCHEK
Test engineer in charge

IPH
BERLIN

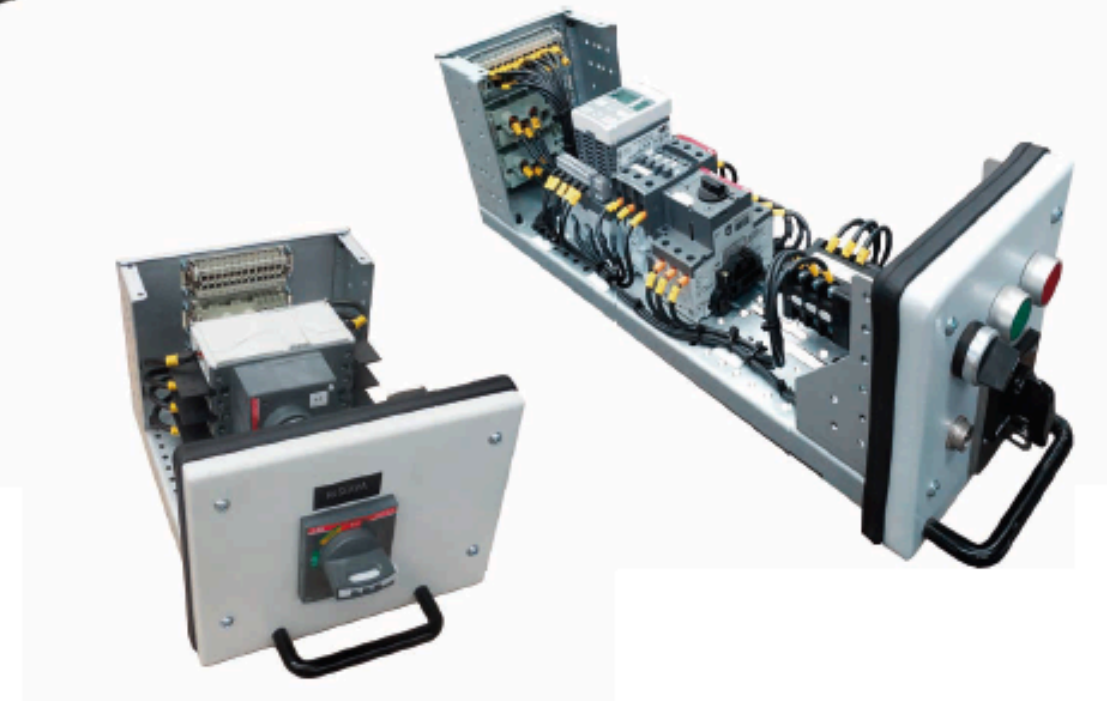
Independent test station accredited by the German Accreditation Body DAkkS, Deutsche Akkreditierungsstelle GmbH, in the field of high-voltage switchgear and their components, cables and conductors as well as in-house surveillance according to EN ISO 9001 for electrical manufacturing technology. Order (IPH Berlin) is a subsidiary of CED S&A, Milan.

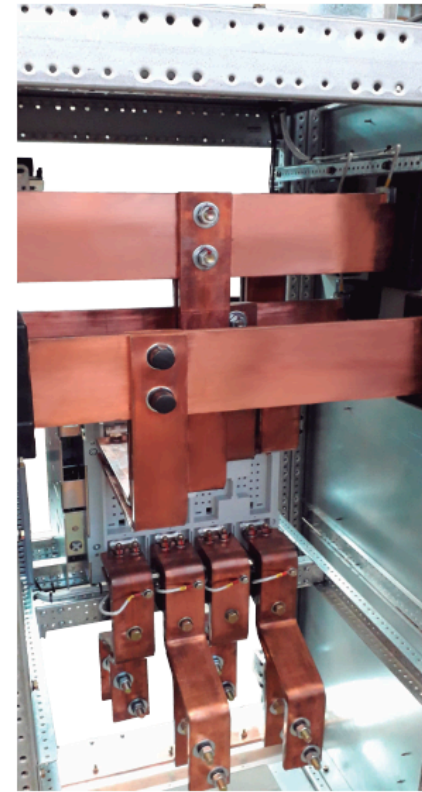
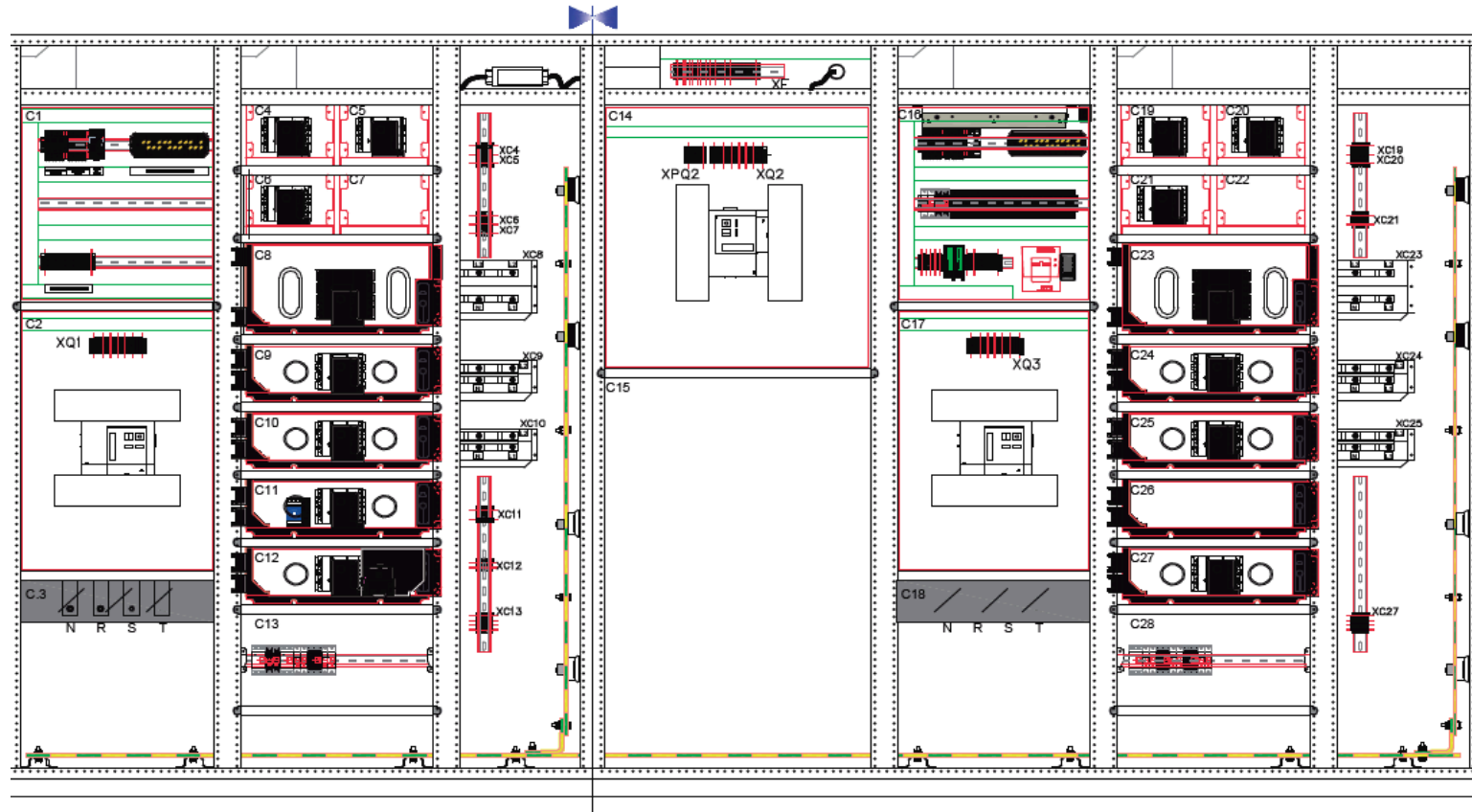
DAkkS
Deutsche
Akkreditierungsstelle
D-PL 12207 02-02

PLANTA PILOTO
MINERA DE LITIO



CCM CON 48 ARRANQUES
CARROS CON COMUNICACIÓN 63A





CLIENTE: AXIÓN
CCM RIM 8 LOGSTRUP

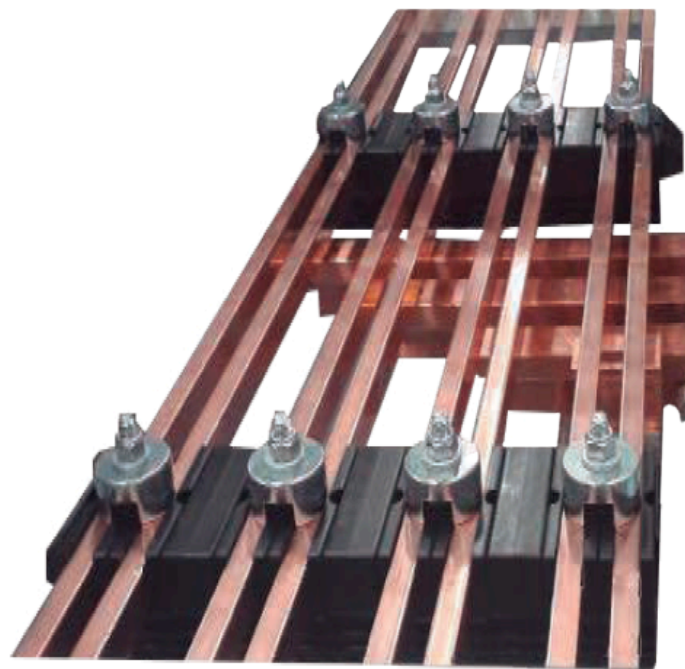
BUS DE BARRAS

El sistema de bus de barras es responsable de la distribución eléctrica principal dentro del conjunto, y es una de los elementos críticos que determinan la confiabilidad y seguridad operativas.

CARACTERISTICAS

Sistema Omega incluyen:

- Ubicación en parte superior o inferior del panel.
- 2, 3 ó 4 barras hasta 8,500 A.
- Protección IP20.
- Barras de distribución hasta 1600 A.
- Protección de arco interno (opcional).



- Tiempo de Inactividad mínimo.
- Mejora o reparación sencilla.
- Hasta 40 unidades por sección.
- Intercambiabilidad de distintos tipos de unidades.
- Fácil re-configuración de unidades en funcionamiento.
- Posibilidad de emplear componentes de distintos fabricantes.
- Compatible ProfiBus y DeviceNet.
- Disponible en una amplia variedad de configuraciones para todas las aplicaciones.

Tablero IoT (Internet of Things) Modelo TDRM

CARACTERISTICAS

Tablero general con 2 entradas (RED-GRUPO) y 42 salidas de termomagnéticas bipolares / tripolares monitoreadas en forma local y remota.

Localmente se puede visualizar a través de una pantalla HMI tanto la entrada como cada una de sus salidas, a su vez cuenta con Web Server incorporado, que permite visualizar el tablero en forma remota como una página web desde un celular, una pc o cualquier dispositivo con acceso a internet.

También puede comunicarse via protocolo SNMP o TCP IP.

Cuenta con un módulo de protección para sobretensiones en caso de perturbaciones electromagnéticas en la red (Provocadas por caídas de rayos o fallas externas).

El mismo posee un sistema de montaje de termomagnéticas el cual permite la extracción en caliente (Ideal para centro de cómputos donde no se deber cortar el suministros a los demás usuarios).

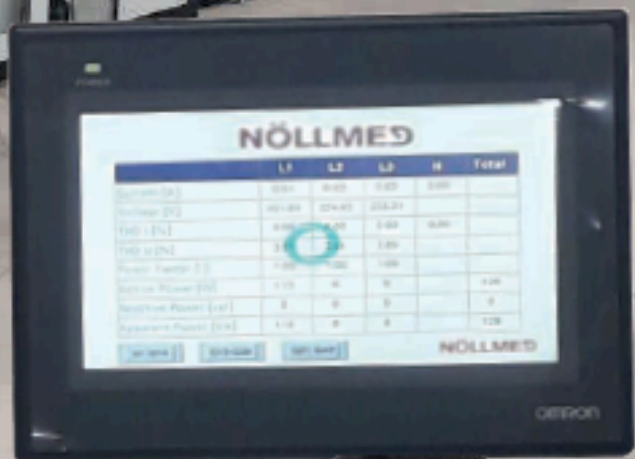
Esto permite el cambio de circuitos trifasicos a monofásicos y el cambio de calibres de termomagnéticas con el tablero energizado corriendo un minimo riesgo electrico.



PROYECTOS REALIZADOS EN NÖLLMANN **NÖLLMED** logstrup



Internet of Things
4.0
INFORMACIÓN EN TIEMPO
REAL
EN CUALQUIER PARTE
DEL MUNDO



NÖLLMED logstrup