

- Maximum admissible short circuit current of 16 kA.
- Rated current: 350A/20°C ambient, 315A/45°C ambient

- Cable reel operation: PCU (Pendant Control Unit), 25m flex cable fitted with plug
- Reel drive system: electric motor with gearbox and chain drive to spiral
- Power consumption: approx. 7kW at 3x450V/60Hz
- Auto tension system provided by integrated torque measurement device

Dimensions (L x D x H) :	2100 x 2595 x 2750mm
Drum diameter outside :	2700mm
Drum diameter inside :	800mm
Weight :	approx. 5t
Colour :	RAL 5003

d. Built-in components:

- 1 x fire detection system, 2 smoke detectors, class certified
- 2 x fire extinguisher
- 2 x 24V emergency lighting (battery powered)
- 2 x service sockets 230V
- 1 x air conditioning system
- 1 x AMPCon-RS, 6.6kV receiving SWB
- 1 x AMPCon-CRL with >55m usable length shore cable
- 1 x AMPCon-MCU monitoring & control unit

e. AMPCon-TR, step-down Transformer

- Step down from 6.6kV shore power to 440V ship's power
- Special design with water cooled transformers (recommended) for transformer installed inside the container
- Air conditioned transformer compartment
- Container / transformer to be connected to ship's f/w cooling system
- Temperature alarms

f. AMPCon-RS, HV Receiving Switchboard, maker: **ABB**

- Requirement: IEC62271-200 (Arc tested)
- Voltage rating: 12kV / 60Hz
- HV test rating: 28kV (60s)
- Impulse withstands voltage: 75kV
- Rated main busbar current: 630A
- Rated short time withstand current: 16kA(3s)
- Peak current: 40kA
- Internal ARC withstand current: >12,5kA (1s)
- Reference standards: IEC 62271-1, IEC/EN 62271-200
- Protection degree: IP 31 enclosure
- Structure: metal-clad
- Maintenance: front & rear
- Cable inlet: bottom
- Rated shock: tbd

g. AMPCon-MCU, Monitoring & Control Unit

- Control facilities for applicable operations between ship and shore
- Connection to the shore power station and functions to transfer the power from shore to ship's grid
- Functionality of all controls of secondary equipment inside the AMPCon40 container (cable reel, ventilation, air conditioning, fire alarm, etc.)
- Automatically high voltage switch off in case of failure
- Emergency push buttons; 2 x rotating lights for "HV IN USE" inside and outside the container
- 10 x potential free contacts to the ship's AMS system (Alarm & Monitoring System)
- Operator interface
- VGA display (touch screen) for alarm and system status indication

MCU major components:

- Cable reel control
- Power supply for cable reel drive motor
- Cable length indication
- Tension control
- Motor protection
- FO converter for shore interface according to IEC 80005-2 requirements (if applicable)
- Alarm and Monitoring facilities (I/O, etc.)
- PLC
- Common AMP system alarms in accordance to owners requirement (max. 10 alarm, more on request)
- CR, slip ring, motor supervision
- Bus coupler for data transfer

h. AMPCon40-RC, Roller Conveyor system

Roller conveyor system for Pt & Stb operation used to be fitted on board from Pt to Stb with reasonable cable pulling support

i. FAT (Factory Acceptance Test)

Lethe GmbH will provide the FAT at Lethe's works in Germany with owner participation.

The test details and procedures will be sent to the owner in advance for check and comments.

It is owner's decision to invite class supervisor for participation, after finishing the test, AMPCon40 is commissioned and ready to be connected to the ship's cabling / network system

j. Commissioning at California Ports (Port of Long Beach (POLB), Port of L.A. (POLA), Port of Oakland

- Commissioning / full load function test will be carried out after finishing ships installation and HV-M SWB modification
- AMPCon40 on board, completely connected to the ships AMP cable installation

Scope of final test

- Participation of 1 Engineer (5 w/days) for test procedure, supervision, load test and on board crew training of AMPCon40 controls

k. Ship's installation / retrofit

Together with our co-operation partner **ABB** we are offering a taylor made turn-key solution for all installation works on board the vessel, the scope of works to be discussed with the customers to find the optimum most economical way of doing the installation works:

- Ship retrofit work including AMP equipment
- System responsibility
- Installation, engineering and supervision
- Cable installations
- Hot works / penetrations
- Commissioning as US ports
- HV cable & control cable installation check
- HV cable termination work to be checked
- HV cable test according IEC
- AMP power synchronisation, auto and manual procedure to port requirements (port check list)