

SHARYS ELITE

from 7.5 to 600 A
DC power systems

The **SHARYS** series has been designed with the objective of making reliable DC products:

A modular and flexible range

- Expandable according to future requirements.

High efficiency

- Low energy consumption, low heat dissipation.

High reliability

- Reduced maintenance costs.
- Intelligent cooling of the components.
- Limited thermal stress and longer life of the components.
- Microprocessor control.

Easy, user friendly operation

- Remote management of the equipment.
- Easy control and monitoring.

Easy and quick installation of removable hot swap modules (without shutting down the system)

- Reduced installation costs.
- Replacement of modules without any power interruption.
- Reduced maintenance costs.

SHARYS ELITE systems can be fitted with up to 14 **SHARYS** rectifier modules with a maximum output of 600 A.

The 19" rack format as well as Hot-swap plug-in modules allow for quick and easy installation and maintenance.

- Digital control and monitoring of the rectifier modules.
- Protected battery output.
- Connections on the top.
- Possibility of installing batteries inside.
- Communication via SNMP, Internet (with **NET VISION** external option) or via RS232/485, external modem (with **TLC VISION** option).
- Dry contacts (optional interface).



Your protection for

- > Telecommunications Centres
- > Internet Service Providers
- > Data networking
- > Industries



SHARYS Rectifier modules

SHARYS rectifier modules use double conversion switching technology. The combination of SMD technology, of digital microprocessor control and of IGBT components result in a highly reliable and efficient rectifier.

- Switch mode double conversion technology.
- Microprocessor control with CAN-BUS protocol communication.
- Wide temperature and input mains voltage tolerances.
- Power factor ≈ 1 .
- High efficiency.
- Parallel connection with active load sharing.
- Selective disconnection of a faulty module.
- Plug-in "hot-swap".

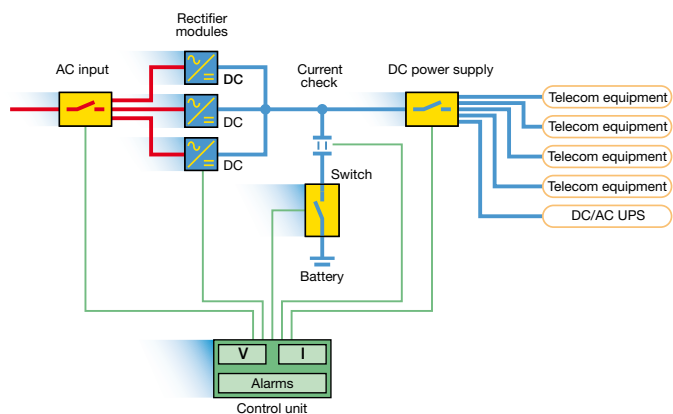


SHARYS 001 B 1 CAT

Codification

Item Code	Description
SH400W48	SHARYS 400
SH800W48	SHARYS 800
SH1600W48	SHARYS 1600
SH2700W48	SHARYS 2700

Parallel connection of SHARYS rectifier modules



TLC 011 A GB

Technical data

RECTIFIER MODULE	SHARYS 400	SHARYS 800	SHARYS 1600	SHARYS 2700
Input voltage	230 V AC +20% -40% ⁽¹⁾			
Input frequency	from 47.5 to 63 Hz			
Input power factor	≥ 0.99 (nominal conditions)			
Input current distortion	compliant with IEC61000-3-2 (EN60555-2)			
Output voltage	48 V DC (45-58 V DC)			
Max. output power	400 W	800 W	1600 W	2700 W
Nominal output current 53.3 V	7.5 A	15 A	30 A	50 A
Efficiency (typical)	≥ 0.90	≥ 0.90	≥ 0.91	≥ 0.92
Output ripple in all conditions and without batteries	< 50 mVrms, < 100 mVpp, < 1 mVps			
Cooling	fan cooling with intelligent fan speed control			
Front panel colour	RAL7012			
Dimensions W x D x H ⁽²⁾ (mm)	70 x 295	70 x 295	85 x 365	85 x 445
Weight (kg)	3.7	3.7	5	6.7
Working temperature	-5 °C to +45 °C			
without de-rating	-5 °C to +45 °C			
with de-rating	+45 °C to +55 °C			
Relative humidity	10% to 90%			
EMC Emission	complies with EN50081-2			
EMC Immunity	complies with EN61000-4-6 (EN50082-2), EN61000-4-3			

⁽¹⁾ from -20% to -40% linear de-rating from 100% to 60% of max power.

⁽²⁾ H = 262 (6U).

SHARYS PLUS control module

The **SHARYS PLUS** control and monitoring module provides comprehensive information on the **SHARYS ELITE** power system and on the rectifier modules.

The 32-digit LCD display and the three LEDs provide easy and fast access to all information.

- Digital control and monitoring of the system and rectifier modules.
- Microprocessor technology with CAN-BUS communication system.
- RS232/485 port for external communication.
- Battery management.
- Plug-in "hot-swap".

Communication options

- Communication via SNMP, Internet with **NET VISION** or via RS232/485, modem with **TLC VISION**.
- Dry contacts.

SHARY 002 B 1 CAT



Codification

Item Code	Description
SH-PLUS	SHARYS PLUS

Technical data

CONTROL MODULE	SHARYS PLUS
Input supply	48 V DC (30 - 60 V DC), 1 A
Communication	RS232/485, JBUS
Main indicators	alarms, measurements, parameters, commands, battery test, history log
Compliant with	EN50081-2, EN61000-4-6, EN60950
Front panel colour	RAL7012
Dimensions W x D x H (mm)	70 x 355 x 262 (6U)
Weight	2.7 kg

Monitoring / management software by RS232-Modem

The **TLC VISION** technical software was designed for round-the-clock monitoring and management (24/7 alert mode) of power systems for telecommunications in the **SHARYS** range.

The **TLC VISION** display all the information available on the power system and on each rectifier module, i.e. alarms, states, measurements, operating parameters, configurations and an extensive series of historic information.

Local supervision through direct connection

The power system is connected directly to a local PC through the RS232 serial port placed on front of SH-PLUS controller.

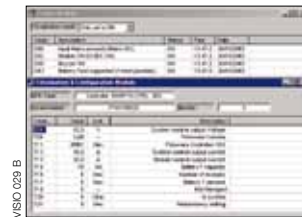
Remote supervision via dedicated line

The power system is connected to remote PC via a dedicated telephone line through a modem interface (opt) + modem.

Features

- Point to point connection.
- Possibility of monitoring the whole power system and each single rectifier module.
- Possibility of transmitting remote commands i.e. battery test, rectifier on/off.
- Automatic notification call of faults.
- Event log file download.

Measurement state, alarms...



VISION 029 B

Communication to system/rectifier through modem



VISION 028 B

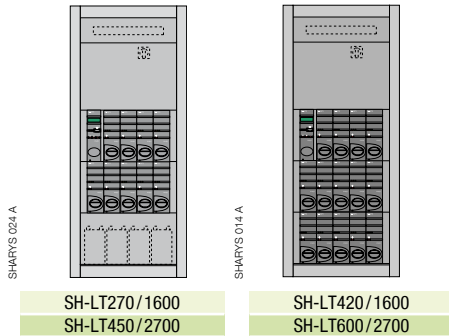
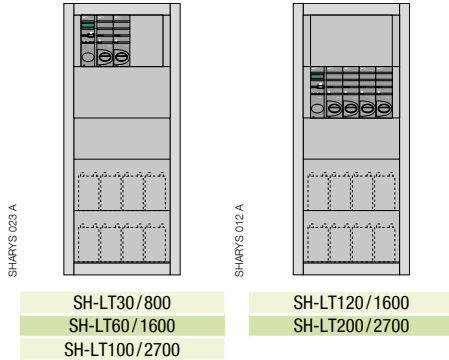
Direct communications (RS232) to system/rectifiers



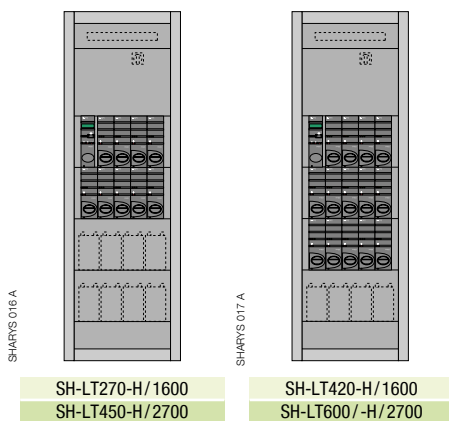
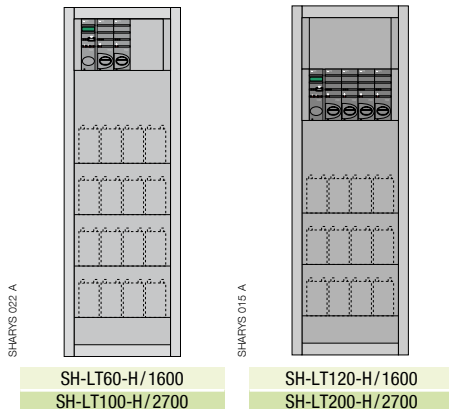
VISION 030 A

Modular solutions from 7.5 A to 600 A

In 1400 mm high cabinets



In 1800 mm high cabinets



Codification

Item Code	I output	No. of rectifiers	Rectifier type
SH-LT30/800	30 A	max. 2	SHARYS 400/800
SH-LT60/1600	60 A	max. 2	SHARYS 1600
SH-LT60-H/1600	60 A	max. 2	SHARYS 1600
SH-LT100/2700	100 A	max. 2	SHARYS 2700
SH-LT100-H/2700	100 A	max. 2	SHARYS 2700
SH-LT120/1600	120 A	max. 4	SHARYS 1600
SH-LT120-H/1600	120 A	max. 4	SHARYS 1600
SH-LT200/2700	200 A	max. 4	SHARYS 2700
SH-LT200-H/2700	200 A	max. 4	SHARYS 2700
SH-LT270/1600	270 A	max. 9	SHARYS 1600
SH-LT270-H/1600	270 A	max. 9	SHARYS 1600
SH-LT420/1600	420 A	max. 14	SHARYS 1600
SH-LT420-H/1600	420 A	max. 14	SHARYS 1600
SH-LT450/2700	450 A	max. 9	SHARYS 2700
SH-LT450-H/2700	450 A	max. 9	SHARYS 2700
SH-LT600/2700	600 A	max. 12+2 ⁽¹⁾	SHARYS 2700
SH-LT600-H/2700	600 A	max. 12+2 ⁽¹⁾	SHARYS 2700

(1) modules for redundancy only.

The item codes "SH-LTxx-H/xx" refer to solutions in 1800 mm high cabinets.

Technical data

WITH RECTIFIER MODULE	SHARYS 400	SHARYS 800	SHARYS 1600	SHARYS 2700
Input voltage	400 V AC three-phase + N (+20% -40% ⁽¹⁾) 230 V AC single-phase (up to 200 A)			
Input frequency	from 47.5 to 63 Hz			
AC distribution toward rectifier	fuse (size 10 x 38) 1 pole			
Output voltage	48 V DC (45 - 58 V DC)			
Output current	see codification table			
Options	battery Low Voltage Disconnect, DC distribution (fuse or MCCB), input mains general breaker, dry contacts, thermal probe, batteries, second battery fuse, battery voltage, temperature compensation, communication on the Ethernet network via NET VISION/ TLC VISION			
Colour	RAL7012			
Dimensions W x D x H (mm)	600 x 600 x 1400 or 1800			
IP rating	IP 20 (with modules inserted)			
Working temperature	-5 °C to +45 °C without de-rating with de-rating +45 °C to +55 °C			

(1) from -20% to -40% linear de-rating from 100% to 60% of max power.