

SHARYS MICRO and MINI

from 7.5 to 200 A

supplying your applications with DC power

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 MICRO



SHARYS MINI

- Your protection for
- > Data networking
 - > Transmission systems
 - > Telecommunications
 - > 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".

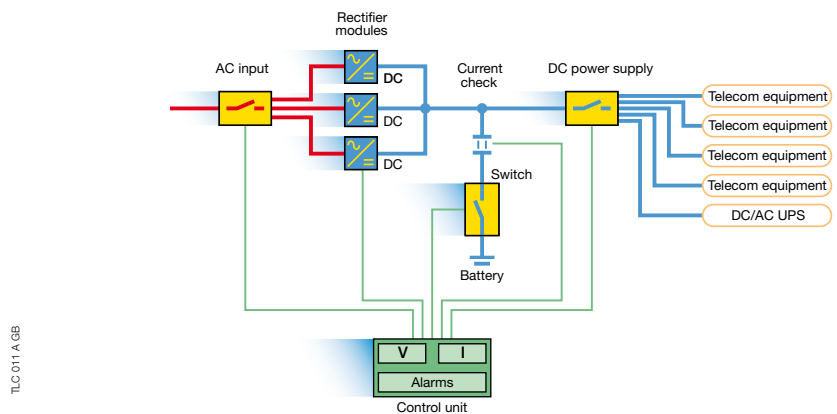


SHARYS 001 B 1 CAT

Codification

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

Parallel connection of SHARYS rectifier modules



TLC011A 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 (mm) ⁽²⁾	70 x 295	70 x 295	85 x 365	85 x 445
Weight (kg)	3.7	3.7	5	6.7
Working temperature without de-rating	-5 °C to $+45$ °C			
Working temperature 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 control module

The **SHARYS PLUS** enhanced monitoring and controller module provides comprehensive information on the **SHARYS** power system and the rectifiers.

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, external 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
Front panel colour	RAL7012
Dimensions W x D x H (mm)	70 x 355 x 262 (6U)
Weight (kg)	2.7
Compliant with	EN50081-2, EN61000-4-6, EN60950

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

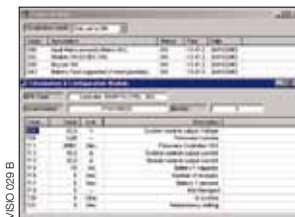
- Point to point connection.
- Possibility of monitoring the whole power system and each single rectifier module.
- Possibility of transmitting remote commands i.e. battery test, rectifier on/off.
- Automatic notification call of faults.
- Event log file download.

Communication to system/rectifier through modem



VISION 028 B

Measurement state, alarms...



VISION 029 B

Direct communications (RS232) to system/rectifiers



VISION 030 A

SHARYS MICRO, DC power system from 7.5 to 100 A

SHARYS MICRO are direct-current (48 V DC) power systems designed for installation in 19" cabinets.

It can house the **SHARYS PLUS** controller and at most two **SHARYS** rectifier modules working in parallel. Internally the system integrates all the input and output sectioning and protection.

- 19" 6U subrack.
- Protected battery output.
- Four protected load outputs.
- Rear connection.
- DC distribution (fuse or circuit breaker).

Communication options

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

SHARY 003 B 2 CAT



SHARYS MINI, DC power system from 7.5 to 200 A

SHARYS MINI are direct current (48 V DC) power systems designed for installation in 19" cabinets.

They can house the **SHARYS PLUS** controller and 4 or 5 **SHARYS** rectifier modules (depending on the model) working in parallel. Internally the system integrates all the input and output sectioning and protecting members.

- 19" 12U subrack.
- Protected battery output.
- Fitting for DC distribution.
- Rear connection.

Communication options

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

SHARY 004 B 2 CAT



Codification

SHARYS MICRO

Item Code	I output	No. of rectifiers	Rectifier type
SH-MC30/800	30 A	max. 2	SHARYS 400/800
SH-MC60/1600	60 A	max. 2	SHARYS 1600
SH-MC100/2700	100 A	max. 2	SHARYS 2700

SHARYS MINI

Item Code	I output	No. of rectifiers	Rectifier type
SH-MN75/800	75 A	max. 5	SHARYS 400/800
SH-MN120/1600	120 A	max. 4	SHARYS 1600
SH-MN200/2700	200 A	max. 4	SHARYS 2700

Technical data

SUB-RACK TYPE	SHARYS MICRO				SHARYS MINI			
	MC 30	MC 60	MC 100		MN 75	MN 120	MN 200	
RECTIFIER TYPE	400	800	1600	2700	400	800	1600	2700
Input voltage	230 V AC +20% -40% ⁽¹⁾				400 V AC three-phase + N - 230 V AC +20% -40% ⁽¹⁾			
Input frequency	from 47.5 to 63 Hz							
Input power factor	≥ 0.99 (nominal conditions)							
AC distribution toward rectifier	fuse (size 10 x 38) 1 pole							
Output voltage	48 V DC (45 - 58 V DC)							
Nominal output current at 53.3 V ⁽²⁾	15 A	30 A	60 A	100 A	37.5 A	75 A	120 A	200 A
Maximum output power ⁽²⁾	800 W	1600 W	3200 W	5400 W	2000 W	4000 W	6400 W	10800 W
Efficiency (typical)	≥ 0.90	≥ 0.90	≥ 0.91	≥ 0.92	≥ 0.90	≥ 0.90	≥ 0.91	≥ 0.92
Options	battery Low Voltage Disconnect, DC distribution (fuse or circuit-breaker), dry contacts, thermal probe, floating voltage adjusted according to temperature, protection for the second battery, communication on an Ethernet network through NET VISION/TLC VISION							
Colour	RAL7012							
Dimensions W x D x H (mm)	19" x 500 x 262 (6U)				19" x 500 x 524 (12U)			
Weight (kg)	20 (without modules)				25 (without modules)			
Working temperature without de-rating with de-rating	-5 °C to + 45 °C +45 °C to + 55 °C							
IP rating	IP 20 (with modules inserted)							

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

(2) with complete rectifier configuration.