

50/60 Hz Power stages



Description

Power stages are the appropriate addition to our 50/60 Hz welding control systems and an integral element of high-performance welding systems. Various designs are available in terms of input voltage, maximum current and type of cooling. The range is rounded off with 3-phase versions of proven welding thyristors to supplement the 3-phase welding control systems from Harms & Wende.

LE11

The LE11 type is a thyristor output stage in an open chassis design.

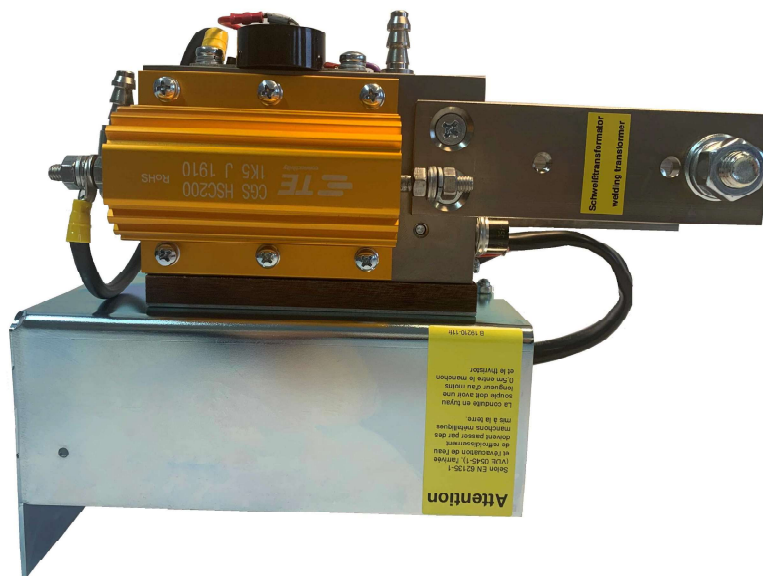
It is characterised by its encapsulated electronics, which are protected against splash water.

The E3 discharge resistor integrated on the cooling surface provides indirect water cooling.

It is designed for installation in enclosed control cabinets or machine stands. It contains two thyristors, not connected in parallel, with water cooling and temperature monitoring.

The LE11 power stage is designed for operating all Harms & Wende 50/60 Hz welding control systems. It has no separate mains voltage supply transformer for synchronising the welding control system. This has to be connected separately.

A particularly low-carbon and thus high-impedance plug-in hose should be used as the coolant connection. This hose is mounted on the heat sink fitting without cable clamps.



Basic designation	Additional designation	Current	Voltage to	Cooling
LE 11	900	900 A	500 V	Water
LE 11	2335	2335 A	500 V	Water
LE 11	3700	3700 A	500 V	Water

LE100 / LE200

Closed power stages

Range of application:

Tyristor power stage for internal cabinet mounting

The power stages for space-saving installation in cabinets with air or water cooling and insulated construction with de-energizing resistor, thyristor control and supply transformer 27 V AC including hand-safe cover.

All-round protection for power thyristors

Sturdy mechanical housings and partially insulated cooling water circuit effectively protect people and equipment from current damage. Unhandy and bulky covers and special hoses with safety length are not necessary. Finger protection, contact protection, tool protection and insulated water cooling system are just a few of the key words that apply to the thyristor power units in this series. Water stays outside!

Thanks to the practical water connection at the rear, there is no need for a hose or pipe connections in the control cabinet when mounted appropriately. The leakage of cooling water into the cabinet is prevented (LE26S1, LE200).

Fig. 11-1



Fig. 11-2 LE26S1-Thyristor power stage



Fig. 11-3 LE100-Thyristor power stage



Fig. 11-4 LE200-Thyristor power stage with cover

LE 100

Basic designation	Additional designation	Current	Voltage to	Cooling
LE100 and LE200	L200	200 A	500 V	Air
LE100 and LE200	580	580 A	500 V	Water
LE100 and LE200	1135	1135 A	500 V	Water

Performance parts in comparison

	LE26 S1	LE100	LE200
Isolated cooling water circuit	Yes		
De-excitation resistor	Yes		
Finger protection / cover	Yes	Hand back safe	
Water cooling outside the cabinet	Yes	No	Yes
Standard nominal voltage	400 V		
Possible nominal voltages	230 / 415 / 440 / 500 V	415 / 440 / 500 V	
Supply voltage for welding controller	27 V		
Suitable for welding control	SinusACx, GeniusACS		

LE26, LE26S1

LE26 and LE6S1 are welding thyristors with extended protection.

Thyristor power unit for welding cases and central cabinets, appropriate for the Ratia73, Ratia43, FiliusACS and MPS10 welding control systems. For space-saving installation in cabinets with water cooling and insulated design with discharge resistor, thyristor actuation and 27 VAC supply transformer with hand-safe cover.

All-round protection with power thyristors

Man and the system are effectively protected against the effects of current thanks to stable mechanical housings and a partially insulated coolant circuit. Unwieldy and bulky covers and special hoses with safety lengths are not necessary (LE26, LE200). Finger protection, contact protection, tool protection and insulated water cooling system are just a few of the key words applicable to this series' thyristor power units.

Water remains outside!

Thanks to the practical water connection on the rear side, hoses or pipe connections in the control cabinet can be omitted entirely when assembly is carried out accordingly. Coolant is prevented from escaping into the cabinet (LE26, LE200).

The standard connection voltages are: 400 V, 415 V, 440 V, 500 V.



Fig. 11-5 LE26 thyristor power stage

Basic designation	Additional designation	Current	Voltage to	Cooling
LE26S1	580	580 A	500 V	Water

LE7/1

Appropriate for the Ratia73/43, FiliusACS, SiniusAC1 and MPS10 series welding control systems.

For installation in a housing, e.g. on the base plate, with water cooling with type E2 discharge resistor and 27 VAC supply transformer.

Standard connection voltages: 230 V, 400 V, 415 V, 440 V, 500 V.

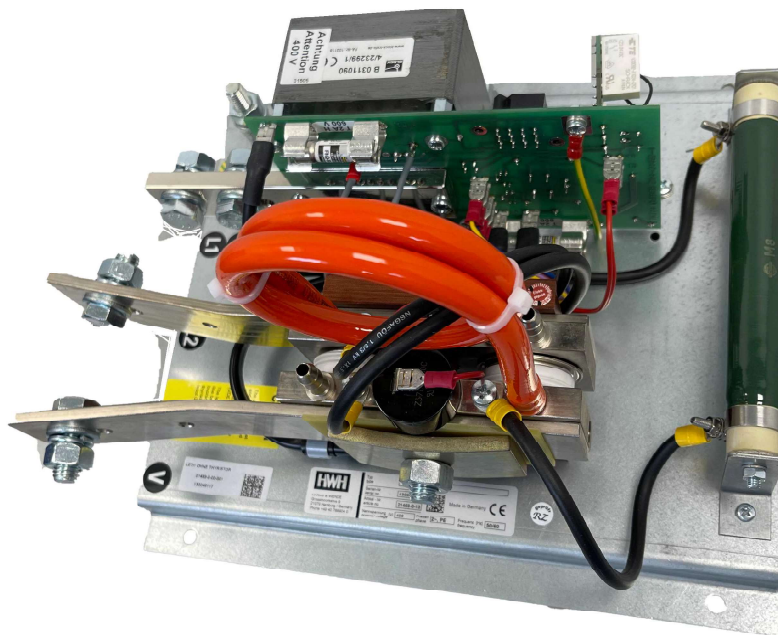


Fig. 11-6 LE7/1

Basic designation	Additional designation	Current	Voltage to	Cooling
LE 7/1	900	900 A	500 V	Water
LE 7/1	2335	2335 A	500 V	Water
LE 7/1	3700	3700 A	500 V	Water

LE10/3

Appropriate for the 3-phase welding control systems Ratia73/43 and SiniusAC3. For installation in a housing, e.g. on the base plate, with water cooling, type E2 discharge resistors and 27 VAC supply transformer.

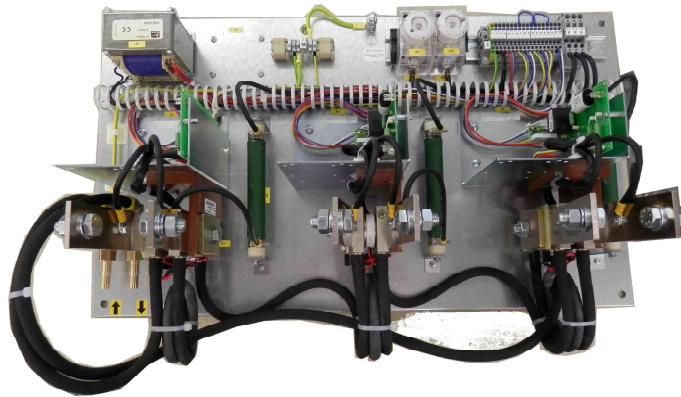


Fig. 11-7 LE10/3

Basic designation	Additional designation	Current	Voltage to	Cooling	Activation
LE 10/3	900	900 A	500 V	Water	Star or triangle
LE 10/3	2335	2335 A	500 V	Water	Star or triangle
LE 10/3	3700	3700 A	500 V	Water	Star or triangle

LE20

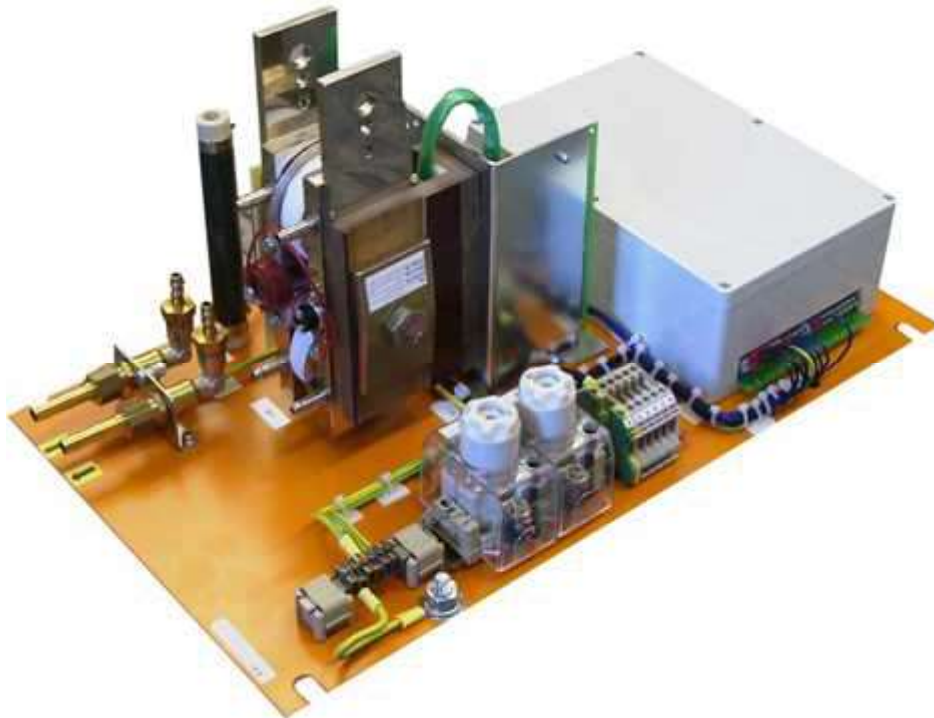
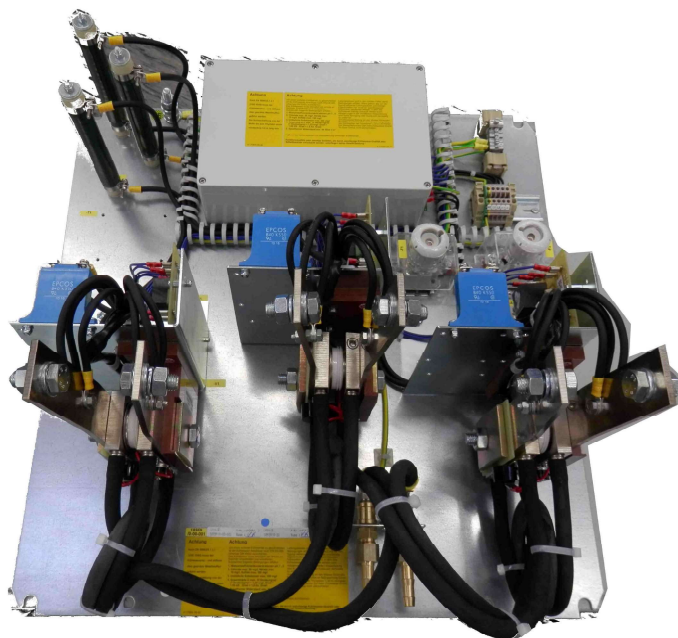


Fig. 11-8 LE20 thyristor power stage

Basic designation	Additional designation	Current	Voltage to	Cooling
LE 20	900	900 A	500 V	Water
LE 20	2335	2335 A	500 V	Water
LE 20	3700	3700 A	500 V	Water

LE20/3Fig. 11-9 *LE20/3 3-phase thyristor power stage*

Basic designation	Additional designation	Current	Voltage to	Cooling
LE 20/3	900	900 A	500 V	Water
LE 20/3	2335	2335 A	500 V	Water
LE 20/3	3700	3700 A	500 V	Water