

Input

i	inrush current limiting	A thermistor is connected in series with the input lines which changes its resistance from high to low when it gets hot. It does not reduce the surge current if the input power is interrupted for a short period of time not allowing the thermistor to cool down. Thermistors are fitted as standard to all mains input models except for 1-phase input of models > 2.5 kW. Thermistors are available up to 45A. For higher input current an electronic inrush current limitation can be offered.
ie	electronic inrush current limiting	An electronic circuit limits the inrush current.
sd	series diode	A series diode protects the module against DC input voltage of wrong polarity. Additional power losses are to be taken into account.
ad	anti parallel diode	To avoid the power losses a diode is provided with opposite polarity in parallel to the input blowing an internal or external fuse if the module is connected to a supply of wrong polarity.
au	auto-ranging	For standard dual AC input models the range of 115 / 230 V AC is to be selected by connecting the input line to different pins on the connector. With auto-ranging the unit senses the input voltage and provides automatically the correct connection.
p	power fail	A logic signal is given if the input voltage (AC or DC) drops below the specified limit. In AC input models the rectified input voltage is sensed so that a power fail alarm can be avoided if at light load mains power returns before the input capacitors are substantially discharged.
r	relay	A relay instead of a logic signal is provided for failure indication.

Output

dd	decoupling diode	For redundant operation the outputs of two or more units are paralleled behind decoupling diodes so that an internal fault of one module does not affect the operation of the others. These diodes cause power losses.
cs	active current sharing	An additional control circuit provides active current sharing via an interconnecting wire between converters that operate in parallel.
csi	current sharing interrupt	csi will effect the removal of the cs signal. Should there be an instance where a unit is not supplying the load, then the effect of its cs signal is removed, and the load voltage is unaffected by this condition (details see page 101).
h1	inhibit, signal referred to input	A terminal connected to the negative input line shuts off the converter. It can also be used in conjunction with a thermal trip which shuts off the unit.
h2	inhibit, signal referred to output	Operation of the unit is inhibited if a voltage signal (5V / 10mA) is applied in reference to the negative line of the (main) output.
rco	reducing current limiting at over temperature	A circuit reduces the current limiting level at higher temperature (to be specified).
d	DC ok, one output	A logic signal is given if the output voltage is below the specified limit.
m	DC ok, all outputs	In multi-output systems a logic signal is provided if the voltage of any output is below the specified limit.
ac	AC ok	A logic signal connected to relay contacts is given if the output voltage of an inverter is below the specified limit.
y	sys-reset	This logic signal is a combination of power fail and DC ok as specified for VME systems.
r	relay	A relay instead of a logic signal is provided for failure indication.

► Configuration of model designation:

Add the designation of options to the model number, e.g. **C 3674-d-r-h1-eu1**.

- **Please note:** The number of options per module may be restricted due to limitation of space inside the module or due to a limited number of connector pins. Potentiometer or interface card may be supplied separately for installation outside of module.

Programming & Monitoring

Programming series 200 – 5800, 6600		
of output voltage from 0 to 100 %	by external signal, 0 – 10 V	eu1
	by external signal, 4 – 20 mA	eu2
	by 270° potentiometer	eu3
	by 10 turn potentiometer	eu4
of output current from 0 to 100 %	by external signal, 0 – 10 V	ei1
	by external signal, 4 – 20 mA	ei2
	by 270° potentiometer	ei3
	by 10 turn potentiometer	ei4
isolating amplifier for programming		iso
programming via interface RS 232 or IEEE 488		

Monitoring series 200 – 5800, 6600		
of output voltage from 0 to 100 %	by external signal, 0 – 10 V	mu1
	by external signal, 4 – 20 mA	mu2
of output current from 0 to 100 %	by external signal, 0 – 10 V	mi1
	by external signal, 4 – 20 mA	mi2
isolating amplifier for monitoring		iso
monitoring via interface RS 232 or IEEE 488		

Charger programming (all series)		
temperature compensated charging voltage (sensor not included)		tc
temperature sensor	not interchangeable due to fixed resistor values	ts1
	interchangeable, IC controlled	ts2
automatic selection of charging characteristic (float / equalize charge) with timer		ch1
additionally: Manual selection of charging characteristic		ch2
additionally: Boost charge operation (manually activated with time delayed return to normal operation)		ch3

Programming / Monitoring – series 6400		
programming of output voltage and current from 0 to 100% including isolation	by external signal, 0 – 10 V	e1
	by external signal, 4 – 20 mA	e2
programming of output voltage from 0 to 100 %	by 270° potentiometer	eu3
	by 10 turn potentiometer	eu4
programming of output current from 0 to 100 %	by 270° potentiometer	ei3
	by 10 turn potentiometer	ei4
monitoring of output voltage and current from 0 to 100 % including isolation	by external signal, 0 – 10 V	m1
	by external signal, 4 – 20 mA	m2
remote on/off, programming and monitoring of output voltage and current from 0 to 100 % including isolation	by external signal, 0 – 10 V	em1
	by external signal, 4 – 20 mA	em2
	via interface RS 232 and IEEE 488	em3
improved tolerance	between reference (external signal) and measured value / between measured value and displayed signal: voltage 0.2 % and current 0.5 %	tol

Environment

t tropical protection

The unit is given additional protection by a heavy coat of varnish on the printed circuit board(s) and on components.

c extended temperature range

The circuit is designed and tested for operation at an ambient temperature as low as -40°C .

ms increased mechanical strength

Screws are secured by Loctite and heavy components are fastened by ties and / or glue. Modules with the „ms“ option meet the standard EN 61373 regarding shock and vibration.

Mechanics



w wall mount

Modules, which have the wall mount option, are typically fixed to a structure or within a cabinet. Depending on the size of the module, this may be done with a flat or angled plate (see photo). The load connections are typically a terminal block. Should the application not require a pluggable module / rack solution, wall mounting presents an alternative for the customer to choose from.



cha chassis mount

Module is designed for installation to a structure or within a cabinet. Screw type mating connectors are supplied with the module. Due to the limited number of connector pins this option is not available for modules with dual AC input or for multi-output converters with output 4 supplying more than 10 A.



din DIN rail mount

Module is designed for DIN rail mounting to a structure or within a cabinet. Screw type mating connectors are supplied with the module. Due to the limited number of connector pins this option is not available for modules with dual AC input or for multi-output converters with output 4 supplying more than 10 A.

► Configuration of model designation:

Add the designation of options to the model number, e.g. **C 4758-p-r-t-w**.

- **Please note:** The number of options per module may be restricted due to limitation of space inside the module or due to a limited number of connector pins.

19" Sub-Racks

As standard, all of the modules are designed and manufactured for insertion into 19" sub-racks. Higher power modules are already constructed in 19" format.

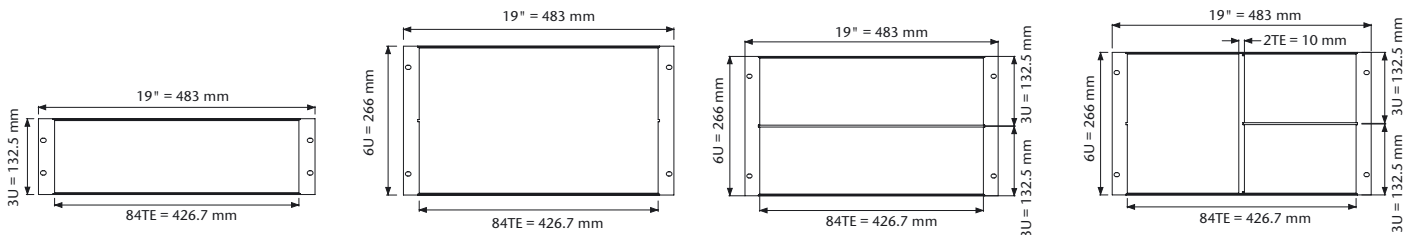
19" sub-racks can be configured as 3U or 6U allowing any mix of units and can be upgraded in accordance to the customers' requirements, e.g.

- mating connectors wired to a terminal block
- fuses or circuit breakers
- hot swappable configuration upon request
- analog or digital meters
- switches
- fans
- filters
- decoupling diodes
- provisions for keying the modules to ensure module / slot designation

Alternatively, the racks can be provided in 23" format.



Constructions of 19" Sub-Racks



Enclosures

wall-mounted enclosure designation	weight (empty) [kg]	height	width	depth
		dimensions [mm]		
R2	9	300	380	210
R3	12	380		
R4	17	600	600	350
R4+	26			
R4T	22	380	600	350
R5	31	600		
R5+	38	760	600	350

floor-mounted enclosure designation	weight (empty) [kg]	height*	width	depth
		dimensions [mm]		
R6	66	1200	600	400
R6+	80		800	
R7	127	1800	600	400
R7+	150		800	
R8	147	2000	600	500
R8+	175		800	
R9	250		1200	600

*) The height of the base frame, elevated roof and suspension eyes is to be added, if needed.