



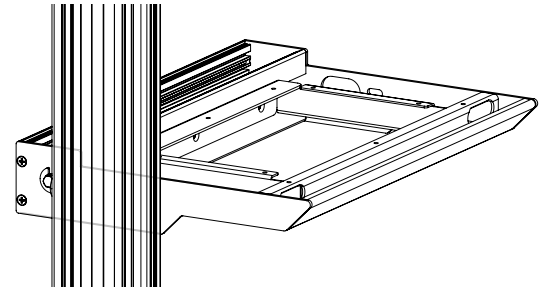
## CHAPTER 11: 19" INSTRUMENT RACKS & MODULES

- |            |   |            |  |
|------------|---|------------|--|
| <b>342</b> | PROFI Multimedia Support and System Racks                                     | <b>370</b> | R-, C- and L-Decade                            |
| <b>344</b> | PROFI 19" Cassette Racks  | <b>371</b> | Load Resistance                                |
| <b>346</b> | 19" Cassette Racks and Carrying Cases   | <b>373</b> | AC Extra Low Voltage 1-/3-phase                |
| <b>348</b> | 19" Bench Racks for Modules   | <b>374</b> | Variable AC Sources 1phase                     |
| <b>349</b> | PROFI 19" Suspended Bench Racks   | <b>376</b> | Variable AC Sources 3phase                     |
| <b>350</b> | 19" Containers  | <b>378</b> | Meter Tester and Motor Tester                  |
| <b>351</b> | PROFI 19" Racks   | <b>379</b> | Motor Tester and Variacs                       |
| <b>353</b> | Carrying Case and Folding Table   | <b>380</b> | Sinus Frequency Converters                     |
| <b>354</b> | Power Cables and Signal Lamps   | <b>382</b> | Fixed DC Supplies and Lab Power Supply Compact |
| <b>356</b> | Blank Panels, - Cassettes and - Insertions                                    | <b>384</b> | Lab Power Supply                               |
| <b>357</b> | Cavity Box and Emergency Stop Button  | <b>386</b> | High Performance DC Supplies                   |
| <b>358</b> | Mains Panels (1phase / 3phase)  | <b>387</b> | Function Generator and Amplifiers              |
| <b>361</b> | Central Mains Module and Central Power Distribution for Classroom Application | <b>390</b> | Digital Multimeter                             |
| <b>362</b> | Central Control for Classroom Application                                     | <b>392</b> | Oscilloscope                                   |
| <b>363</b> | Socket Panels   | <b>393</b> | Standard Signal Generator and Thermometer      |
| <b>364</b> | Isolating Transformers and 3phase Sockets                                     | <b>394</b> | Digital Manometer and Pressure Calibrator      |
| <b>365</b> | Measuring Module with Multifunctional Display                                 | <b>395</b> | Appliance Tester to VDE 0701/0702              |
| <b>366</b> | Test Speaker, Continuity Tester, Pneumatic                                    | <b>396</b> | HV Tester and 19" Universal Tester             |
| <b>367</b> | Interfaces and Keystone Modules   | <b>397</b> | Subrack for Cassettes & EP/MP Modules          |
| <b>368</b> | Soldering - / Desoldering Stations  | <b>398</b> | PROFI 19" Regaleinschub                        |

## PROFI MULTIMEDIA SUPPORT

Heavy duty support with rear sided compact terminal provides sockets and jacks directly in shelves or system rack.

- Rear side with compact terminal for the acceptance of KK modules.
- Surrounding heavy duty frame prepared for hidden cable run into the PROFI extensions.
- Ergonomical tilted front brace for the acceptance of the LED workstation lamp.
- Durable conductive powder coating in light grey or anthracite.
- Dimensions: 390 x 75/40mm (DxH).



### Your advantage with the Multimedia Support and System Rack:

- Modular equipable compact terminal: allows configurations across more systems.
- Completely suspended due to integrated heavy duty frame.
- Front brace prepared for LED workstation lamp.



#### PROFI Multimedia Support 424.0 BB. 8 F 0

##### BB Width and Equipment (MULTI and ENERGY)

05	500mm (39cm / 26cm)	13	1295mm (118cm / 105cm)
06	603mm (49cm / 36cm)	15	1500mm (139cm / 126cm)
08	800mm (69cm / 56cm)	16	1600mm (149cm / 136cm)
09	900mm (79cm / 66cm)	18	1800mm (169cm / 156cm)
10	1000mm (89cm / 76cm)	20	2000mm (189cm / 176cm)
12	1200mm (109cm / 96cm)	23	2303mm (219cm / 206cm)

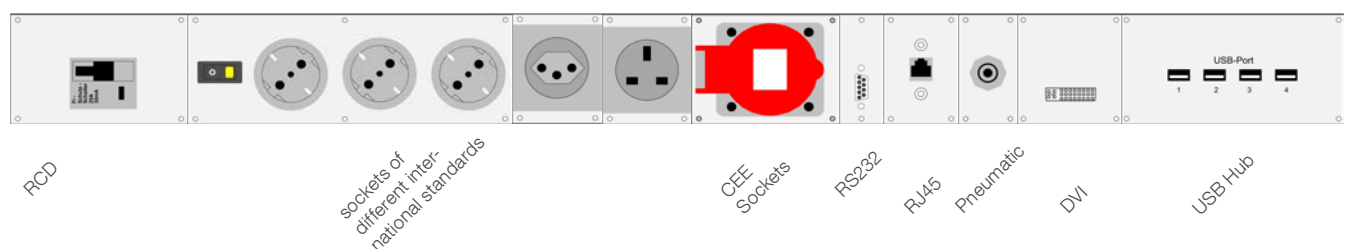
##### F Extension

0	SINGLE / MULTI
1	ENERGY

### Modular Equipment for Multimedia Support:

The rear side of the Multimedia Support holds a straight Compact Terminal and will be modular equipped with the wide spectrum of KK modules.

Example:



► See details to KK modules in chapter 13

## SYSTEM RACK FOR MULTIMEDIA SUPPORT

The System Rack is placed on top of the Multimedia Support and allows the integration of modules from different systems. The modules are supplied from the Multimedia Support.

- Body made of 19mm melamine resin covered chip-board in light grey.
- Recessed bottom of the rack allows cable access to the Multimedia Support.
- Variably positioned intermediate walls for system separation or shelf compartment.
- Durable powder coated and removable sheet steel rear panel with ventilaton slots.
- Individually prepared for module integration (EP / MP or 19" technology).
- Depth: 470mm.




### H Height



### F Fussausschnitt

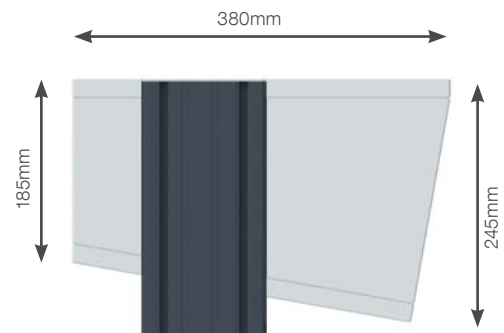


System Rack for Multimedia Support 42 **A** **H** **BB** **8** **F** **Z**

<b>A</b> Version	<b>H</b> Height	<b>BB</b> Width	<b>F</b> Cutout	<b>Z</b> Intermediate Wall
<b>0</b> Standard	<b>3</b> 175mm for 3HE / EP	<b>05</b> 500mm <b>13</b> 1295mm	<b>0</b> for SINGLE / MULTI	<b>0</b> none
<b>1</b> ESD 	<b>5</b> 265mm for 5HE / MP	<b>06</b> 603mm <b>15</b> 1500mm	<b>1</b> between SINGLE / MULTI	<b>1</b> Intermediate Wall
	<b>7</b> 355mm for 7HE	<b>08</b> 800mm <b>16</b> 1600mm	<b>4</b> for ENERGY	<b>2</b> Intermediate Wall
		<b>09</b> 900mm <b>18</b> 1800mm	<b>5</b> between ENERGY	<b>3</b> Intermediate Wall
		<b>10</b> 1000mm <b>20</b> 2000mm	<b>6</b> no Cutout	<b>4</b> Intermediate Wall
		<b>12</b> 1200mm <b>23</b> 2303mm		<b>5</b> Intermediate Wall

## PROFI 19" CASSETTE RACK SUPERSTRUCTURE 3HE

- Suspended, light grey bench rack with 19mm melamine resin covered chipboard.
- Bottom with ventilation slots.
- Detachable, sectioned rear panel.
- 19" subrack for 3HE cassettes and 3HE front panels in euro raster (DIN 41494). Right and left side with compensating panels, 19" rails and H15 connectors.
- Ventilation panel made of sheet steel with durable powder coating according to RAL No.
- Central 3phase power distribution and terminal block.



PROFI 19" Cassette Rack Superstructure 3HE 421. **BB** **A** **F** 01

### **BB** Width / Equipment

<b>08</b>	800mm / 133TE	<b>16</b>	1600mm / 294TE
<b>09</b>	900mm / 154TE	<b>18</b>	1800mm / 336TE
<b>10</b>	1000mm / 175TE	<b>20</b>	2000mm / 371TE
<b>12</b>	1200mm / 224TE	<b>23</b>	2303mm / 434TE
<b>13</b>	1295mm / 231TE	<b>50</b>	Corner 1213 x 1213 / 210TE
<b>15</b>	1500mm / 273TE		

### **A** Version

**0** Standard

**1** ESD 

### **F** Extension

**9** for SINGLE / MULTI

**7** for ENERGY






19" CASSETTE BENCH RACK 3HE

- Light grey body made of 19mm thick melamine resin covered chipboard in light grey. Sides with cutouts for PROFI extensions.
- Detachable, durable powder coated perforated rear panel with two cable glands.
- 19" subracks for 3HE cassettes and 3HE modules in euro raster (DIN 4494). Right and left side with compensating panels, 19" rails and H15 connectors.
- Ventilation panel made of sheet steel with durable powder coating according to RAL No.
- Central 3phase power distribution and terminal block.
- Height: 260mm, depth: 340 / 370mm.
- Other sockets on demand!



19" Cassette Bench Rack			3HE	421. <div>BB</div> <div>A</div> <div>F</div> J1					
<div>BB</div>	Width / Equipment / Nos of Sockets			<div>A</div>	Version	<div>F</div>	Extensions		
06	600mm / 105TE / 2x Type F		18	1800mm / 336TE / 6x Type F		5	Standard	9	for SINGLE / MULTI
08	800mm / 133TE / 2x Type F		20	2000mm / 371TE / 6x Type F		6	ESD 	7	for ENERGY
09	900mm / 154TE / 2x Type F		23	2303mm / 434TE / 6x Type F				1	no Cutout
10	1000mm / 175TE / 2x Type F		50	Corner 1213 x 1213 / 217TE					
12	1200mm / 224TE / 4x Type F		51	Corner 835 x 835 / 105TE					
13	1295mm / 231TE / 4x Type F		52	Corner 935 x 935 / 133TE					
15	1500mm / 273TE / 4x Type F		53	Corner 1035 x 1035 / 161TE					
16	1600mm / 294TE / 4x Type F								




## 19" CASSETTE RACK STRAIGHT 3HE

- Light grey 19mm melamine resin covered chipboard. Sides with cutouts for PROFI extensions.
- Detachable, durable powder coated perforated rear panel with two cable glands.
- 19" subracks for 3HE cassettes and 3HE modules in euro raster (DIN 4494). Right and left sided with compensating panels, 19" rails and H15 connectors.
- Ventilation panel made of sheet steel with durable powder coating according to RAL No.
- Central 3phase power distribution and terminal block.
- Height: 175mm, depth: 380mm.



19" Cassette Rack Straig 3HE

218. **BB** **A** **F** 01

BB	Width / Equipment (between SINGLE/ MULTI)			A	Version	F	Extensions
06	600mm / 105TE (91TE)	18	1800mm / 336TE (322TE)	5	Standard	2	no Extensions
08	800mm / 133TE (119TE)	20	2000mm / 371TE (357TE)	6	ESD 	0	between SINGLE/ MULTI
09	900mm / 154TE (140TE)	23	2303mm / 434TE (420TE)				
10	1000mm / 182TE (161TE)	50	Corner 1213 x 1213 (217TE )				
12	1200mm / 224TE (210TE)	51	Corner 835 x 835 (105TE)				
13	1295mm / 231TE (217TE)	52	Corner 935 x 935 (133TE)				
15	1500mm / 273TE (259TE)	53	Corner 1035 x 1035 (161TE)				
16	1600mm / 294TE (280TE)						

## CARRYING CASE FOR 19" CASSETTES

- Front - and rear side are made of aluminium extrusion and sheet steel sides with recessed handle.
- 19" subracks for 3HE cassettes and 3HE modules in euro raster (DIN 4494). Right and left sided with compensating panels, 19" rails and H15 connectors.
- Completely wired with 2m power cable and CEE plug (others on demand).
- Height: 132mm, depth: 389mm.

Carrying Case for 19" Cassettes 394.3 **BB**.101

3HE

### **BB** Width / Equipment

<b>42</b>	241mm / 42TE
<b>63</b>	342mm / 63TE
<b>84</b>	449mm / 84TE

# HIGH TECHNOLOGICAL DENSITY FOR MOTOR - OR METER TESTING

19" technology is the perfect solution for high power applications such as used for motor - or meter testing. The 7HE racks offer sufficient space for big transformers and meters with large displays or frequency converters. Besides its spacious body, the 19" rack is designed for perfect air circulation to keep the test equipment cool.



## 19" EASY BENCH RACK FOR 19" PANELS

- Light grey body made of 19mm thick melamine resin covered chipboard.
- Detachable, perforated sheet steel panel, durable powder coated with 2 cable glands.
- Sections for 19" panels with raster profile, cage nuts and 19" rails.
- Right and left side prepared for modules.
- Central 3phase power distribution in each section with integrated sockets Type F (others on demand), hera connectors and terminal block.
- Depth: 470mm.



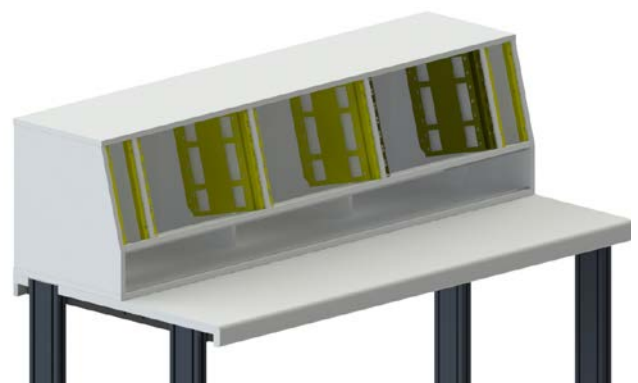
### PROFI 19" EASY Bench Rack

420. **BB** **H** **F** **0** **A**

<b>BB</b> Width / Equipment	<b>H</b> Height	<b>F</b> Cutout	<b>A</b> Version
<b>13</b> 1295mm / 2x Modules + 2x HE Sections	<b>4</b> 4HE / 215mm	<b>0</b> no Cutout	<b>0</b> Standard
<b>15</b> 1500mm / 2x Modules + 2x HE Sections + Shelf	<b>7</b> 7HE / 355mm	<b>1</b> for SINGLE / MULTI	<b>5</b> ESD 
<b>16</b> 1600mm / 3x HE Sections		<b>2</b> for ENERGY	
<b>18</b> 1800mm / 2x Modules + 3x HE Sections			
<b>20</b> 2000mm / 2x Modules + 3x HE Sections + Shelf			
<b>23</b> 2303mm / 2x Modules + 4x HE Sections			
<b>50</b> Corner 1213 x 1213 / 2x HE Sections			

## 19" BENCH RACK FOR HE AND EP

- Light grey body with tilted front, made of 19mm melamine resin covered chipboard.
- Parallaxfree 19" section 7HE with raster profile, cage nuts and 19" rails.
- Right and left side prepared for modules.
- Lower compartment prepared for EP modules (3HE).
- Detachable, perforated sheet steel panel, durable powder coated with 2 cable glands.
- Central 3phase power distribution in each section with integrated sockets Type F (others on demand), hera connectors and terminal block.
- Depth: 470 / 410mm, height: 510mm.



>> see chapter 10 for EP modules

### 19" Bench Rack for HE and EP

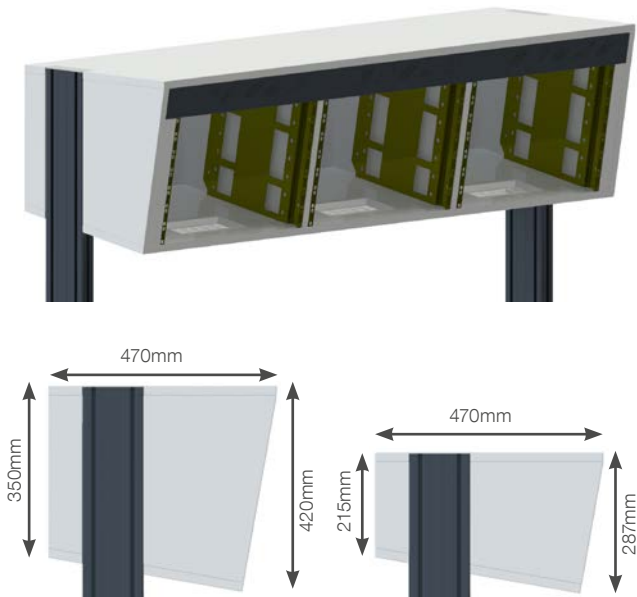
420. **BB0.50** **A**



<b>BB</b> Width / Equipment	<b>A</b> Version
<b>13</b> 1295mm / 2x Module + 2x 7HE + 4,5EP	<b>0</b> Standard
<b>15</b> 1500mm / 2x Module + 2x 7HE + Rest + 5EP	<b>5</b> ESD 
<b>16</b> 1600mm / 3x 7HE + 5EP	
<b>18</b> 1800mm / 2x Module + 3x 7HE + 6EP	
<b>20</b> 2000mm / 2x Module + 3x 7HE + Rest + 7EP	
<b>23</b> 2303mm / 2x Module + 3x 7HE + 8EP	



PROFI 19" **BENCH RACK SUPERSTRUCTURE** 4HE AND 7HE

- Suspended, light grey bench rack with tilted front, made of 19mm thick melamine resin covered chipboard.
- Sides with cutouts for PROFI extensions.
- Bottom with ventilation slots.
- Detachable, sectioned wooden rear panel.
- 19" HE sections with raster profile, cage nuts and 19" rails.
- Right and left side prepared for modules.
- Central 3phase power distribution in each section with integrated sockets Type F (others on demand), hera connectors and terminal block.
- Ventilation panel made of durable powder coated sheet steel according to RAL No.



PROFI 19" Bench Rack Superstructure 420. <b>BB</b> <b>A</b> <b>F</b> 1			
<b>BB</b> Width / Equipment		<b>A</b> Version	<b>F</b> Cutout
13	1295mm / 2x Modules + 2x HE Sections	0 7HE / Standard	3 for ENERGY
15	1500mm / 2x Modules + 2x HE Sections + Rest	1 7HE / ESD 	9 for SINGLE / MULTI
16	1600mm / 3x HE Panels (only SINGLE/ MULTI)	4 4HE / Standard	
18	1800mm / 2x Modules + 3x HE Panels	5 4HE / ESD 	
20	2000mm / 2x Modules + 3x HE Panels + Rest		
23	2303mm / 2x Modules + 4x HE Panels		
50	Corner 1213 x 1213 / 2x HE Panels		



## 19" CONTAINER RACK

- Rack made of 19mm thick melamine resin covered chipboard in light grey.
- Optionally with service flap at the side.
- Firmly installed rear panel, upper and lower side with cable access, which can optionally be equipped with ventilation grills.
- Front side with recessed 19" section with raster profile, cage nuts and 19" rails.
- Central power supply with sockets type F (others on demand) at the rear side.
- Width: 543mm.

### for 19" Modules:

- With 19" guiding rails.
- Rear side with socket strip.

### for Room Power and Control (S. 361-362):

- Big and easily accessible service flap for on-site wiring and service.
- The pedestal containers have cable access from floor.
- C rail for strain-relieve.
- Assembly plate at the side for contactors, cable ducts, and terminal clamp.

### G Container



**HR:** 19" suspended rack with fixing holes in top plate



**PR:** 19" pedestal rack with base and leveling feet



**MR:** 19" mobile rack with 70mm twin casters

19" Container Rack 47 **G** **T** **HH.0** **R** **A**

<b>G</b> Container	<b>T</b> Depth	<b>HH</b> Equipment / Height	<b>R</b> Service Flap	<b>A</b> Version
<b>2</b> Suspended	<b>5</b> 580mm	<b>02</b> 2HE / SR: 130mm	<b>0</b> left	<b>0</b> 19" Standard
<b>3</b> Pedestal	<b>6</b> 680mm	<b>04</b> 4HE / SR: 220mm	<b>1</b> right	<b>1</b> Rack for Accessory page 352
<b>4</b> Mobile	<b>7</b> 780mm	<b>07</b> 7HE / SR: 351mm	<b>3</b> none	<b>2</b> Power Distribution and Control
		<b>12</b> 12HE / SR: 573 / MR: 655		<b>5</b> 19" ESD 
		<b>14</b> 14HE / PR: 710 / MR: 780		
		<b>15</b> 15HE / PR: 750mm		
		<b>21</b> 21HE / PR: 1050mm		

## DOOR FOR 19" CONTAINER RACK

- Wooden door made of 19mm melamine resin covered chipboard, sides ergonomically bevelled, with 2mm PP plastic edge.
- Glass door made of 6mm tempered safety glass.
- Metal hinges, opening 90°.
- Metal segment handles and lock with two keys (master-key-system).

### T Door



Wooden Door



Glass Door

Door for 19" Container Rack 475 **T** **HH.00** **A**

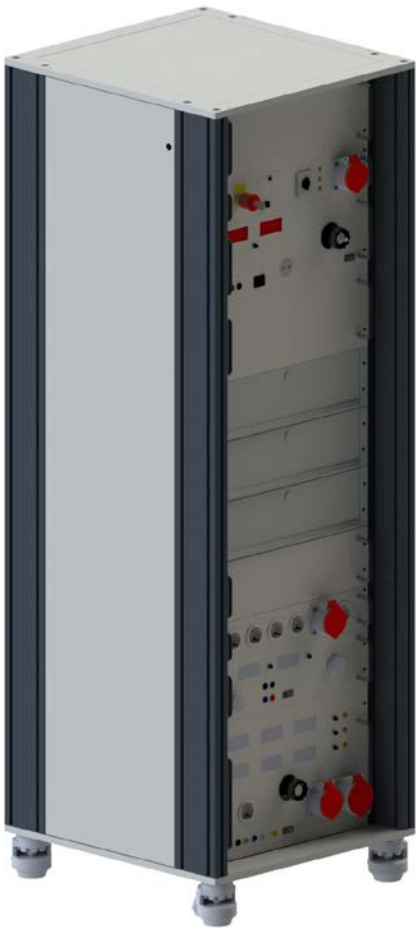
T Door		HH Height		A Version			
0	Wood	02	2HE / 130mm	12	12HE / 580mm	0	Standard
5	Safety Glass	04	4HE / 220mm	14	14HE / 670mm	5	ESD 
		07	7HE / 355mm	21	21HE / 985mm		

PROFI 19" RACK

- Highly sturdy rack, same design and technology as PROFI workstations.
- Corners made of SINGLE profile, durable powder coated according to RAL Code.
- Front with recessed 19" instrument front, with raster profile and cage nuts.
- Top and bottom made of massive steel plate, durable light grey powder coated.
- Optionally with 4 heavy duty casters (load capacity 300kg) in various diameters or with 4 heavy duty leveling feet.
- Rear side with lockable sheet steel door, durable light grey powder coated. Lower side with cable outlets.
- Detachable sheet steel side panels, durable light grey powder coated.
- Width: 610mm.

Optionally with lockable safety glass front door:

- Massive transparent perspex door (frameless).
- Solid hinges (right of left side).
- Bolt-lock with key.



PROFI 19" Rack 470. T HH.902				
T	Depth	HH	Height	
0	645mm	14	14HE / 670mm	34 34HE / 1570mm
1	800mm	16	16HE / 760mm	38 38HE / 1750mm
2	900mm	20	20HE / 840mm	43 43HE / 1970mm
3	1000mm	25	25HE / 1160mm	47 47HE / 2150mm
		29	29HE / 1340mm	
Front Door for PROFI 19" Rack 471.0 HH.001				

Feet or Casters	
471.000.100	Set of Leveling Feet (height 20mm)
471.000.000	Set of Casters Ø: 75mm (H: 90mm)
471.000.050	Set of ESD Casters
471.000.200	Set of Casters Ø: 100mm (H: 120mm)
471.000.250	Set of ESD Casters
471.000.300	Set of Lifting Casters Foot, Heavy Duty Polyamid Caster 63mm, load capacity 500kg, (H: 104mm)



## 19" SLIDING RAILS

- Two hardwearing 19" rails made of chromated sheet steel.
- Incl. assembly set.

Set of Sliding Rails (pair)			
471.000.150	for depth: 645mm	471.002.150	for depth: 900mm
471.001.150	for depth: 800mm	471.003.150	for depth: 1000mm



## 19" SHELF BOARD 1HE

- Sheet steel shelf board, durable light grey powder coated.
- Front folded 7mm to the bottom and rear folded 7mm to the top.
- Incl. assembly set.

19" Shelf Board 1HE			
471.000.500	for depth: 645mm	471.002.500	for depth: 900mm
471.001.500	for depth: 800mm	471.003.500	for depth: 1000mm



## 19" EXTENDABLE SHEET STEEL SHELF BOARD

- Sheet steel shelf board, durable light grey powder coated. Width: 440mm; height: 52mm (not in HE raster).
- Lower side with telescopic rail 45kg 610mm extension: 610mm.
- Front with metal handle.

19" Extendable Sheet Steel Shelf Board			
341.009.000	for depth 800, 900 und 1000 (extension: 610mm)		
341.009.010	for depth: 645mm (extension: 457mm)		



## 19" DRAWER

- 19" sheet steel housing with telescopic full extension, load capacity: 60kg.
- Housing dimensions: 410mm x 372mm (WxD), height: 65mm (at 2/3/4HE) and 167mm (at 5/6/7HE).
- Aluminium front with lock and metal handle.
- Durable light grey powder coating.

19" Drawer			
341.009.200	2HE	341.009.500	5HE
341.009.300	3HE	341.009.600	6HE
341.009.400	4HE	341.009.700	7HE





19" KEYBOARD DRAWER 1HE

- Light grey 19" keyboard drawer 1HE made of metal.
- Keyboard extension on ball bearings with metal handle.
- Safety lock with 2 keys.
- German industrial keyboard with standard sized buttons, windows function keys, integrated touchpad or trackball (US keybord on demand).
- 2m connecting cable.

19" Keyboard Drawer 1HE	
377.070.200	with Touchpad
377.070.250	with Trackball



CARRYING CASE FOR 19" PANELS

- Durable powder coated sheet steel housing with foldable handles (3HE without handles), reinforced sides, bottom and rear panel with ventilation slots.
- Incl. sliding rails and power cord.
- Depth: 490mm.


Carrying Case for 19" Panels			
394.003.500	3HE	394.007.500	7HE
394.004.500	4HE	394.010.500	10HE
394.006.500	6HE		



FOLDING TABLE FOR PROFI RACK

- Light grey 19mm thick melamine resin covered chip-board in light grey with 3mm PP plastic edge. Width: 400mm.
- Hardwearing folding mechanism for fixation to the PROFI profiles; white finish (standard) or anodized (ESD).
- Beam length: 300mm.
- Max. distributed load: 100kg.
- ESD version with surface - and volume conductive multilayer chipboard (according to DIN EN 61340). Conductive connection between folding mechanism and PROFI rack.



Folding Table for PROFI Rack				479. T 0 P .00 A	
T Depth		P Table Top		A Version	
0	645mm	0	19mm	0	Standard
1	800mm	3	30mm	5	ESD 
2	900mm				
3	1000mm				

## POWER CABLES

Flexible power cables for the connection to the bench racks.



Power Cable			
291.001.100	5m (3x 1,5mm <sup>2</sup> ) with Open End	291.001.300	5m (5x 2,5mm <sup>2</sup> ) with CEE Plug 16A red
291.001.140	Type F Plug for Self Assembly (Euro)	291.001.350	5m (5x 6mm <sup>2</sup> ) with CEE Plug 32A red
291.001.144	Type J Plug T12 for Self Assembly (Swiss)	291.001.400	5m (3x 1,5mm <sup>2</sup> ) with CEE Plug 3poles blue
291.001.147	Type G Plug for Self Assembly (British)	291.001.500	5m Emergency Stop Cable (2x 1,5mm <sup>2</sup> ), Open End
291.001.257	5m (3x 1,5mm <sup>2</sup> ) 10A with Type J Plug	291.001.550	3m Emergency Stop Cable (2x 1,5mm <sup>2</sup> ), Open End
291.001.200	3m (3x 1,5mm <sup>2</sup> ) with Type F Plug	291.001.603	3m Patch Cable, grey with RJ45 CAT6
291.001.250	5m (3x 1,5mm <sup>2</sup> ) with Type F Plug	291.001.605	5m Patch Cable, grey with RJ45 CAT6
291.001.150	5m (5x 2,5mm <sup>2</sup> ) with Open End	291.001.610	10m Patch Cable, grey with RJ45 CAT6
291.001.256	5m (3x 1,5mm <sup>2</sup> ) with Type G Plug	291.001.045	0,4m EP/ MP Plug with Type F Plug
291.001.258	4m Power Cord with NEMA 5-15 Plug (US)		

## SIGNAL LAMP

The signal lamp is mounted on top of a bench rack or extension. It indicates the actual mode of an electrical test bench and is a recommended safety feature for many applications. The signal must be visible from all sides, it indicates e.g. off / extra safe voltage / mains voltage.

- Signal lamp with foot, diameter: 70 / 40mm.
- Red, green and / or yellow signal element 230V.
- Assembled on bench rack or extension and connected to mains supply.
- Incl. power cord and wiring.



on PROFI extension  
with 1x LE 40mm



side of the extension  
2x LE 70mm



on top of bench rack  
or ENERGY extension  
3x LE 40mm

Signal Lamp 331.03 <b>A</b> <b>L</b> <b>B</b> <b>D</b>			
<b>A</b> Signal Elements	<b>L</b> Lamp	<b>B</b> Fixation	<b>D</b> Diameter
<b>1</b> 1x LE (red)	<b>1</b> Filament 5W	<b>0</b> bench rack / ENERGY extension	<b>0</b> 70mm Standard
<b>2</b> 2x LE (red / green)	<b>3</b> LED Continuous	<b>1</b> PROFI extension	<b>1</b> 40mm Slim
<b>3</b> 3x LE (red / green / yellow)		<b>2</b> at the side of an extension	

# WIDE RANGE OF APPLICATIONS: FROM TESTING TO METROLOGY

The 19" system offers a wide range of instruments and sources with high quality safety features for countless applications. With respect to the individual requirements a workstation can be equipped with instruments of medium industrial standard or with calibrated instruments of highest accuracy. Check out the variety on following pages.



**19" Cassette**

Width:  
TE = 5,08mm

Height:  
3HE (128mm)

Depth:  
290mm



**19" Insertion**

Width:  
19" = 483mm

Height:  
HE (44,45mm)

Depth:  
360mm

## 19" TE BLANK PANEL AND BLANK CASSETTE

- Aluminium front panel, durable light grey powder coated with fixing bolts.
- Abrasion proofed silkscreen printing.
- Width: in 7x TE raster (TE = 5,08mm).
- Height: 3HE (128mm).

### Cassette features:

- Side panels made of anodized aluminium with slots for the acceptance of breadboards in standardized euro format.
- Rear side made of aluminium with H15 connector.
- Depth: 290mm.



Blank Panel / Blank Cassette			340.0 HH, A 02
HH Height			A Version
07 7TE (only blank panel)	28 28TE	49 49TE	1 Blank Panel
14 14TE (only blank panel)	35 35TE	56 56TE	2 Blank Cassette
21 21TE	42 42TE	63 63TE	
		84 84TE	

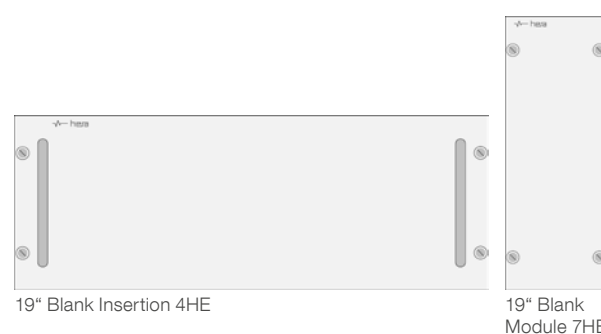
## 19" HE BLANK PANEL, BLANK MODULE AND BLANK INSERTION

- Aluminium front panel light grey powder coated with fixing bolts.
- Abrasion proofed silkscreen printing.
- Width: 19" (483mm); module: 115mm.
- Height: in HE raster (HE = 44,45mm).

### Insertion features:

- 2 metal handles.
- Chassis with perforated side panels, fixing panel and cover with ventilation slots.
- Rear panel with 1m power cord and PE plug.
- Depth: 360mm.

19" HE	Blank Panel	Blank Module	Blank Insertion
1HE	340.001.302		
2HE	340.002.302		
3HE	340.003.302		340.003.402
4HE	340.004.302	331.000.402	340.004.402
5HE	340.005.302		
6HE	340.006.302		340.006.402
7HE	340.007.302	331.000.302	340.007.402
1HE with Ventilation Slots	340.021.302		



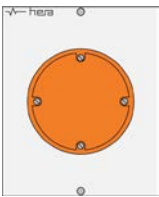


19" PANEL WITH **CAVITY BOX**

- Cavity box for the flexible equipment with flush-mounted installation material.

340.220.102	Cavity Box 21TE
-------------	-----------------

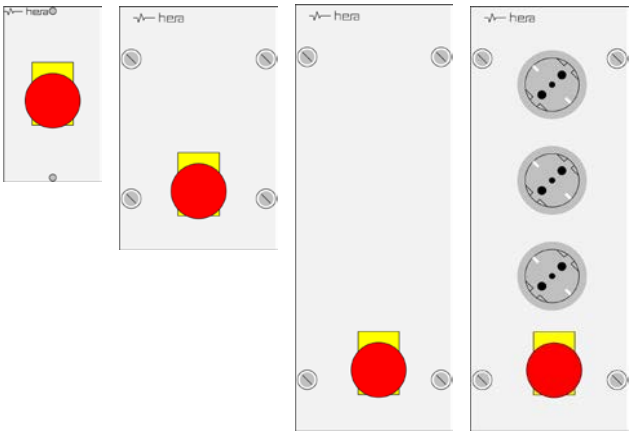
Suitable Installation Sockets and Jacks	
333.220.500	Blank Cover 1fold
333.220.502	Blank Cover 2fold
333.220.510	TV-Antenna-Jack 2 holes
333.220.520	SAT-Antenna-Jack 3-3 holes
333.220.530	Double-UAE-Jack RJ45
333.220.540	TAE Jack 6F
333.220.550	red PE Socket Type F with Label
333.220.560	PE Socket with 2x USB Charging Jack 2,4A



19" PANEL WITH **EMERGENCY OFF BUTTON**

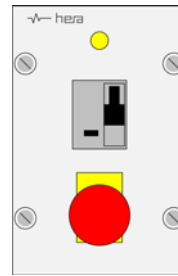
- 19" aluminium front panel, durable light grey powder coated with abrasion proofed silkscreen printing and fixing bolts.
- Mushroom type emergency off button with NC contact, unwired.

Emergency Off Button		
	Rotation Release	Key Release
14TE	331.006.102	331.016.102
21TE with Protec- tive Collar	331.006.202	331.016.202
7HE	331.006.302	331.016.302
4HE	331.006.402	331.016.402
7HE with 3x PE Socket	331.007.302	331.017.302

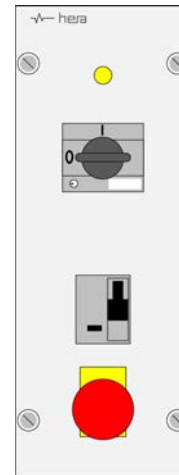


## 19" Mains Panel 16A

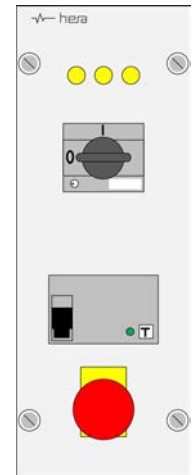
- Central protection of the instrument rack.
- Voltage control lamps.
- Motor circuit breaker 12,5-16A with undervoltage release.
- RCD 25A / 30mA type A or sensitive to all kind of currents, type B (for educational laboratories according to VDE 0100-723).
- Emergency off button with rotation - or key release, yellow signal ring and NC contact.
- The 2HE version comes with PE socket in 1phase and CEE socket in 3phase.
- Completely wired with input terminal and output coupler.



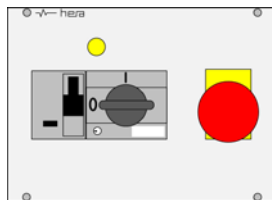
331.460.102  
Mains Module 4HE



331.165.102  
Mains Module 7HE



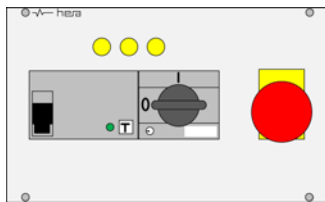
331.177.102  
Mains Module 7HE



331.065.102 Mains Cassette 35TE



331.265.102 Mains Insertion 2HE



331.077.102 Mains Cassette 42TE



331.277.102 Mains Insertion 2HE

### Mains Panel 16A

331. **S** **P** **T** **N** 02

#### **S** System

- 0 19" Cassette Panel 21-42TE
- 1 19" Mains Module 7HE
- 2 19" Mains Panel 2HE
- 4 19" Mains Module 4HE

#### **P** Phases

- 6 1phase 230V
- 7 3phase 400V

#### **T** RCD

- 0 none
- 5 Type A
- 7 Type B

#### **N** Emergency Off

- 0 none
- 1 Emergency Off
- 2 Emergency Off with Key
- 3 Black Emergency Stop with Key

331.xxx.xx8

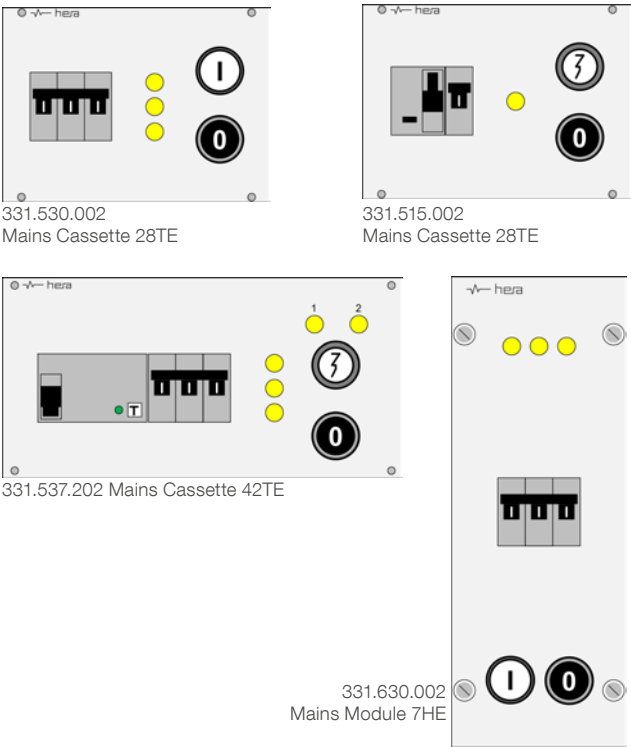
Mains Panels 120V Versions



19" MAINS PANEL WITH CONTACTOR

The mains panels are equipped with pushbutton and contactor.

- RCD 25A / 30mA type A or sensitive to all kind of currents, type B (for educational laboratories according to VDE 0100-723).
- Automatic circuit breaker B16.
- Voltage control lamps.
- 1- or 2-level-activation with on / off button, contactor and status indication.
- Completely wired with input terminal and output coupler.

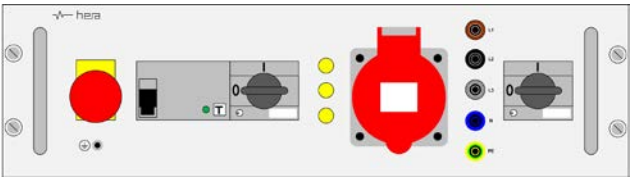


Mains Module with Contactor 331. S P T F 02			
S System	P Phase	T RCD	F Activation
5 19" Cassette 21-56TE	1 1phase with CB B16	0 none	0 1-level with On / Off Button
6 19" Module 7HE	3 3phase with CB B16	5 Type A	1 1-level with Key-On / Off Button
	2 1phase with MCB and UVR	7 Type B	2 2-level with Key-On / Off Button
	4 3phase wit MCB and UVR		
331.xxx.xx8 Mains Panels 120V Versions			

19" MAINS PANEL 32A

- Voltage control lamps.
- Motor circuit breaker 32A with undervoltage release.
- RCD 40A / 30mA, type A or sensitive to all kinds of currents, type B.
- Mushroom type button with NC contacts.
- CEE socket 32A.
- 5x safety jacks.
- 16A output protection with motor circuit breaker.
- Completely wired with input terminal and output coupler.

Mains Panel 32A 331.37 T N 02	
T RCD	N Emergency Off
0 none	0 none
5 Type A	1 Emergenc Off
7 Type B	2 Emergency Off with Key
	3 Black Emergency Stop with Key



# SAFETY AND POWER DISTRIBUTION FOR EDUCATIONAL LABS

As an instructor you are bearing great responsibilities. For that reason it is very important to have your lab always safely under control. In following pages you will find multiple solutions for practical central protection and power distribution. For controlling the student workstations you can choose between directly entering a key code at the distribution rack or control by LAN or WLAN.





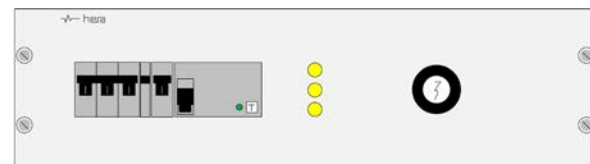
## 19" MAINS MODULE FOR INSTRUCTOR BENCH

Installed in a 19" rack of the instructor bench. Applicable as central protection of the complete lab. Either a central power distribution or workstations with individual mains panels are connected downstream. Following components are available:

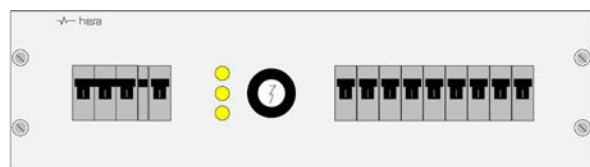
- Circuit breaker 40A or 63A with undervoltage release, for central on /off and for the connection of all emergency stop contacts.
- Circuit breaker B6 for workstation protection.
- Key switch for mains module activation.
- 3x phase control lamps (L1, L2 and L3).
- Optionally with RCD 300mA, type B.
- Optionally with 9x circuit breaker B16 for 1phase protection (8x student + 1x instructor).
- Terminal for power input and output terminal for all training stations.



332.091.106: 19" Mains Module with Circuit Breaker 63A 3HE



332.091.204: 19" Mains Module with Circuit Breaker 40A and RCD 3HE



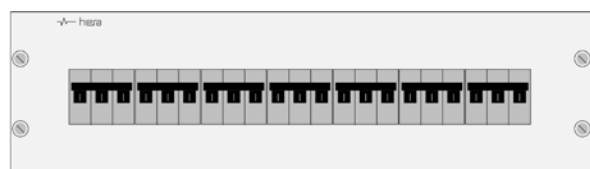
332.091.304: 19" Mains Module with Circuit Breaker 40A and 9x Circuit Breaker B6 for student workstations 3HE

19" Mains Module for Instructor Bench 3HE	
332.091.104	Circuit Breaker 40A no RCD
332.091.106	Circuit Breaker 63A no RCD
332.091.204	Circuit Breaker 40A with RCD 300mA
332.091.206	Circuit Breaker 63A with RCD 300mA
332.091.304	Circuit Breaker 40A no RCD, 9x Circuit Breaker B6

## 19" POWER DISTRIBUTION FOR TRAINING BENCHES

Installed in a 19" rack of the instructor bench. It is centrally located in the instructor bench and protects the individual training stations. Following components are available:

- Automatic circuit breaker B16 1- or 3poles for individual workstation protection.
- Optionally with RCD 30mA, sensitive for all kind of currents, type B.
- Terminal for power input and output terminal for all training stations.

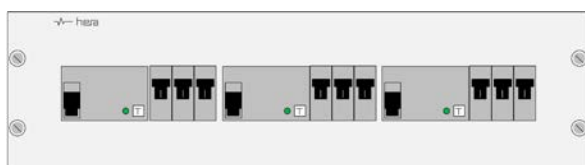


332.092.303: 19" Power Distribution for 7x 3phase (7x CB B16 3phase) 3HE



332.092.203: 19" Power Distribution for 7x 1phase + RCD (7x CB B16 + RCD 2poles 30mA) 3HE

19" Power Distribution for Training Benches	
332.092.101	for 9x 1phase (9x CB B16) 3HE
332.092.103	for 13x 1phase (13x CB B16) 3HE
332.092.105	for 17x 1phase (17x CB B16) 3HE
332.092.107	for 21x 1phase (21x CB B16) 3HE
332.092.203	for 7x 1phase + RCD (7x CB B16 + RCD 2pole 30mA) 3HE
332.092.205	for 9x 1phase + RCD (3x RCD 4pole + 9x CB B16) 3HE
332.092.303	for 7x 3phase (7x CB 3xB16) 3HE
332.092.305	for 13x 3phase (13x CB 3xB16) 6HE
332.092.403	for 6x 3phase + RCD (6x CB 3xB16 + FI 4pole 30mA) 6HE
332.092.405	for 6x 3phase + RCD (3x RCD 4pole + 6x CB 3xB16) 6HE



332.092.205: 19" Power Distribution for 9x 1phase with RCD (3x RCD 4poles + 9x CB B16) 3HE



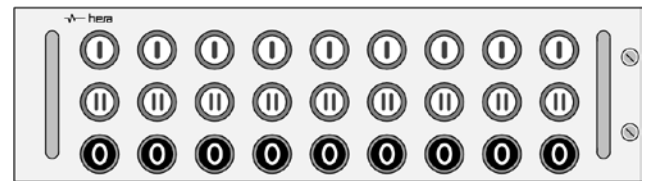
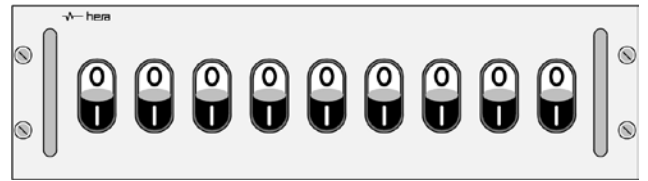
332.092.405: 19" Power Distribution for 6x 3phase with RCD (3x RCD 4poles + 6x CB B16 3phase) 6HE

## 19" CENTRAL CONTROL (PUSH-BUTTON-CONTACTOR)

Installed in a 19" rack of the instructor bench for the central control of the training stations. The training stations must be equipped with mains panel with contactor for activation.

- On / Off buttons with control lamp for 1-level activation per channel (student bench).
- 2x On button with control lamp, 1x off button for 2-level enabling per channel (student bench).
- Terminal for the connection to customers control cables. 1-level mind. 4 wires per channel, 2-level min. 6 wires per channel

19" Central Control (Pushbutton - Contactor)	
332.093.101	for 4x 1-level Channels
332.093.103	for 9x 1-level Channels
332.093.201	for 4x 2-level Channels
332.093.203	for 9x 2-level Channels



## 19" CENTRAL CONTROL (LOGO)

Installed in a 19" rack of the instructor bench for the central control of the training stations. The training stations must be equipped with mains panel with contactor for activation.

- LOGO! 230RCE Industrial control with programmed switching logic (individual / groups):
  - 8x digital inputs
  - 4x relay outputs 230V / 3A
  - Ethernet interface and integrated web server
- LOGO! DM16 230R expansion module:
  - 8x digital inputs
  - 8x relay outputs 230V / 3A
- Operation and observation via touch panel:
  - LOGO!8 + KTP400 Comfort 4"
  - oder
  - LOGO!8 + KTP700 Comfort 7"

19" Central Control LOGO	
332.093.301	Touch Panel 4" with 12x Relay Outputs
332.093.303	Touch Panel 4" with 20x Relay Outputs
332.093.401	Touch Panel 7" with 12x Relay Outputs
332.093.403	Touch Panel 7" with 20x Relay Outputs



## CENTRAL CONTROL RC

Remote control for central control without any wirings. Receiving module in each student bench.

NOTE: only applicable for wooden bench racks!

Central Control RC	
332.090.800	Remote Control with 8 Channels
332.090.850	Remote Control with 32 Channels (8x4 levels)
332.090.920	RC Receiving Module with 2 Channels (Relay Output)
332.090.940	RC Receiving Module with 4 Channels (Relay Output)



332.090.800  
Remote Control



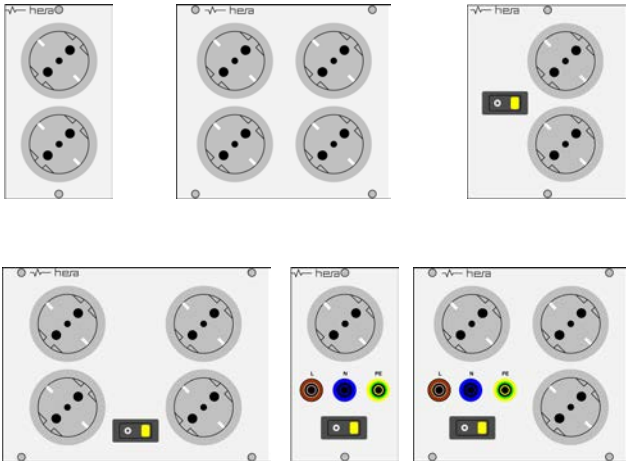
332.090.920  
RC Receiving Module

19" SOCKET PANEL (TE)

19" aluminium front panel light grey powder coated with abrasion proofed silkscreen printing, fixing bolts and H15-connector.

- PE socket (type F), grey, 45° position.
- Depending on the type with /without illuminated 2poles switch and 4mm safety jacks (L, N, PE).
- Other socket types on demand.

PE Sockets (TE)		
340.330.202	2x PE Sockets	14TE
340.335.202	4x PE Sockets	28TE
340.330.102	2x PE Sockets with Switch	21TE
340.335.102	4x PE Sockets with Switch	35TE
340.121.102	1x PE Socket with Switch and Jacks	14TE
340.221.102	3x PE Sockets with Switch and Jacks	28TE

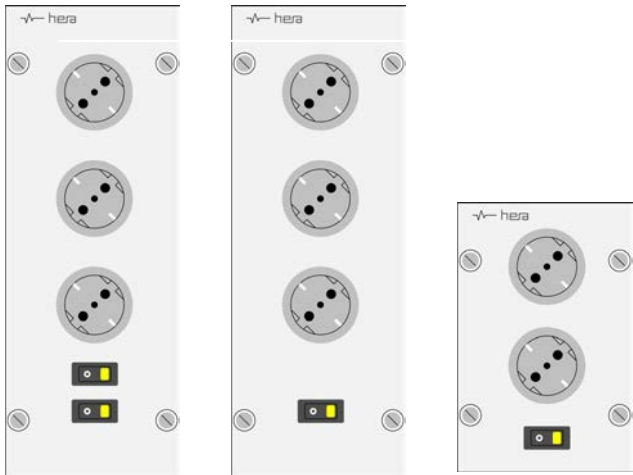


19" SOCKET MODULE

19" aluminium front panel light grey powder coated with abrasion proofed silkscreen printing, fixing bolts and H15-connector.

- PE socket (type F), grey, 45° position.
- Illuminated 2poles switch.
- Other socket types on demand.

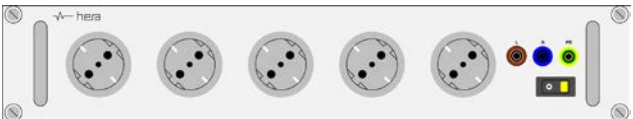
PE Sockets		
331.007.352	3x PE Sockets with extra Switch for Over-head Lamp	7HE
331.021.302	3x PE Sockets	7HE
331.021.402	2x PE Sockets	4HE



19" SOCKET PANEL (HE)

- 5x PE Sockets (type F), grey, 45° position.
- 3x 4mm safety jacks (L, N, PE).
- Illuminated 2poles switch.
- Other socket types on demand.

341.402.102	PE Sockets	2HE
-------------	------------	-----

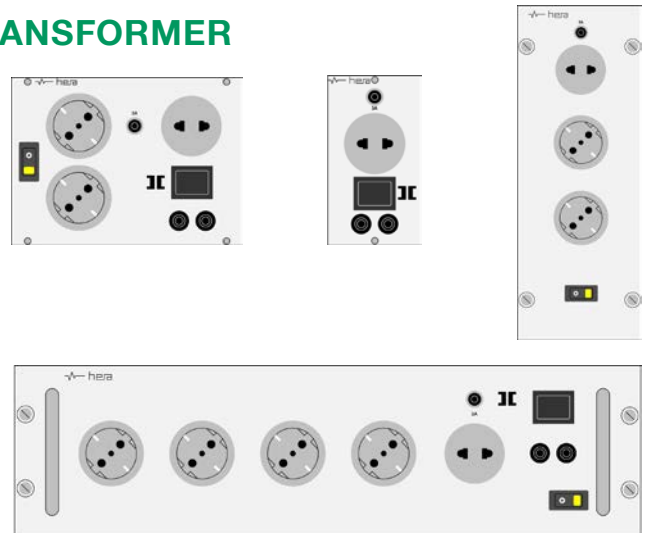


## 19" SOCKET PANEL WITH ISOLATING TRANSFORMER

- Iron core transformer for the supply of floating 230AC voltage.
- Protected by a front side operated thermomagnetic fuse.
- Output on universal socket (Type F, E, NEMA), no protective earth.
- Illuminated 2poles switch for central on/ off.

### Some types with:

- PE sockets (type F), 45° positioned (other types on demand).
- Output selector for socket or 4mm safety jacks.



### Socket Panel with Isolating Transformer

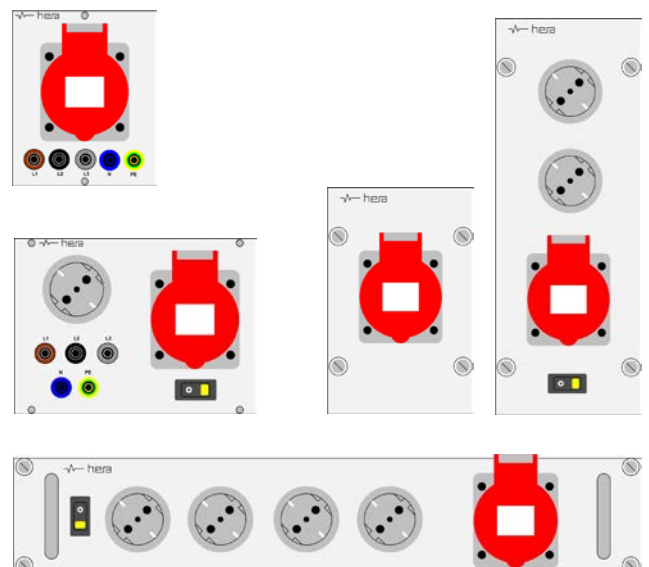
340.535.102	19" Cassette 700VA/ 3A + Selector for Safety Jacks, with 2x Sockets Type F (35TE)
340.535.122	19" Cassette 115VA/ 0,5A + Selector for Safety Jacks (14TE)
331.024.302	19" Module 700VA/ 3A 4HE
331.025.302	19" Module 700VA/ 3A + 2x Sockets Type F (7HE)
341.503.102	19" Panel 700VA/ 3A + Selector for Safety Jacks, with 4x Sockets Type F (3HE)
341.503.202	19" Panel 3700VA/ 16A + Selector for Safety Jacks, with 4x Sockets Type F (4HE)

## 19" CASSETTE AND PANEL WITH CEE SOCKET

- CEE socket 5poles red 400V/16A 6h.
- 4mm safety jacks.
- Sockets (Type F), 45° positioned (others on demand).
- Illuminated 2poles switch with contactor.

### CEE Socket

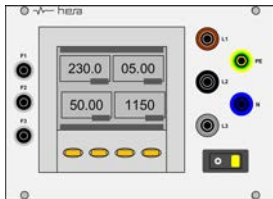
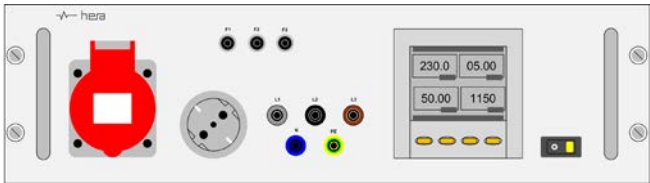
340.242.502	19" Cassette without Switch (21TE)
340.242.302	19" Cassette with Switch + Socket (35TE)
331.202.302	19" Module without Switch (4HE)
331.202.352	19" Module with Switch (4HE)
331.203.302	19" Module without Switch + 2x Socket (7HE)
331.203.352	19" Module with Switch + 2x Socket (7HE)
341.203.302	19" Panel without Switch + 4x Socket (2HE)
341.203.352	19" Panel with Switch + 4x Socket (2HE)





19" PANEL WITH MUTLIMEASURING UNIT

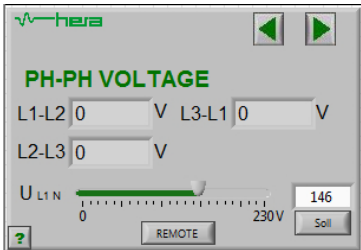
- The panel is for observation of voltage, current and power consumption of connected 3phase and 1phase AC consumers.
- Multifunctional graphical LCD display with four variably programmable displays and four control buttons.
- Optionally with USB interface in the front or LAN interface on the rear side.
- CEE socket straight 400V/ 16A, 6h, 5poles.
- 4mm safety jacks (L1, L2, L3, N and PE).
- Socket Type F in 45° position (others on demand).
- Illuminated 2poles switch with contactor.



Panel with Multimeasuring Unit		34	S	.389.51	R
S	System	R	Version		
0	19" Cassette 35TE	2	no Interface		
1	19" Panel 3HE	7	USB Interface		
		8	LAN Interface		

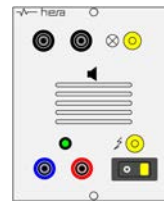
Technical Data of Multimeasuring Unit:

- Instrument 96 x 96mm with graphic LCD display 128 x 80 pixel and 4x control buttons.
- Voltage TRMS (phase -, system - and line-to-line voltages); accuracy:  $\pm 0,2\%$ .
- Phase current TRMS (calculated neutral); accuracy:  $\pm 0,2\%$ .
- Power (effective -, reactive -, apparent power per phase and in total); accuracy:  $\pm 0,5\%$  v. EW.
- Power factor (per phase and in total); accuracy:  $\pm 0,5\%$ .
- Frequency (frequency of measured voltage); accuracy:  $\pm 0,05\%$ .
- HIGH and LOW value of actual voltage, current, power, power factor and frequency.
- Total harmonic distortion of voltages and currents.
- Harmonic analyses of voltage and current up to the 31th harmonic wave.
- Counter for active -, reactive - and apparent energy (partial and total counter with programmable tariff functions).
- Hour counter (programmable counter for total and service hours).



## 19" CASSETTE CONTINUITY TESTER

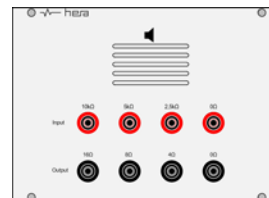
- High ohmic, electronic continuity tester, poled.
- Resistance range: 0...200k $\Omega$  with acoustic signalling (sound alternation with changing resistance).
- External voltage protection and status light.
- Electric continuity tester for low ohmic tests with 24V<sub>AC</sub> with status light.
- Output on 4mm safety jacks.
- Illuminated 2poles switch.



380.020.202 Continuity Tester 21TE

## 19" CASSETTE WITH TEST SPEAKER

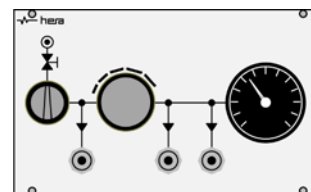
- Test speaker 10Watt / 8 $\Omega$ . (transmission range: 130-20.000Hz).
- Upstream connected transmitter for impedance matching (transmission range: 40-20.000Hz); primary winding: 2k $\Omega$  / 4k $\Omega$  / 8k $\Omega$  / 16k $\Omega$ . secondary: 4 $\Omega$  / 8 $\Omega$  / 16 $\Omega$ .
- Connection at 4mm safety jacks.



380.090.302 Test Speaker 35TE

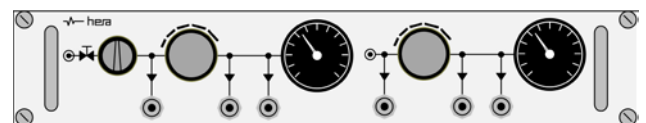
## 19" CASSETTE WITH PRESSURED AIR SUPPLY

- Shut-off valve.
- Self-closing quick release coupler 4/6 (unregulated).
- Pressure regulator with analogue pressure gauge.
- Two self-closing quick release coupler (regulated).
- Completely hoses with open end hose 4/6.



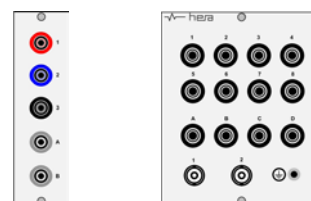
### Pressured Air Supply

388.003.102	0 - 3bar 42TE
388.010.102	0 - 10bar 42TE
388.013.302	0 - 3bar + 0 - 10bar 2HE



## 19" MODULE WITH SELECTIVE POLES

The selective poles are applicable for educational labs with supply loop. Selective poles are unwired and need to be connected on site.



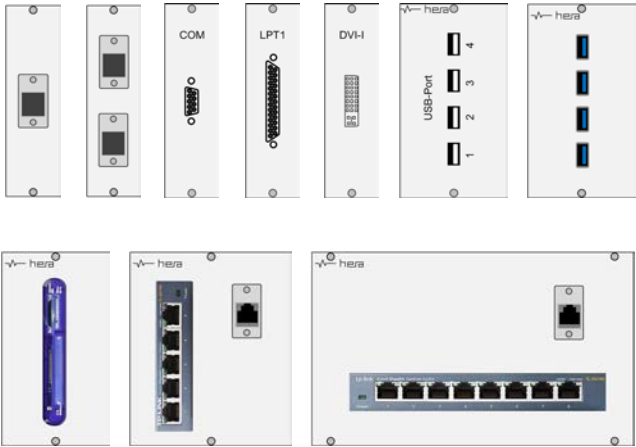
### 19" Module with Selective Poles

380.090.052	5x Safety Jacks 7TE
380.090.102	12x Safety Jacks + 2x BNC Jacks 21TE

19" MODULE WITH INTERFACES

Front panel integrated with interface plug and cable.

19" Modules with Interfaces	
340.614.402	1x Keystone Adapter 7TE
340.614.502	2x Keystone Adapter 7TE
340.615.102	1x Sub-D 9poles Male Connector for COM / RS232 7TE
340.615.302	1x Sub-D 25poles Female Connector for LPT 7TE
340.615.502	1x Sub-D 15poles Female Connector for VGA 7TE
340.615.702	1x DVI-I-Female Connector (Digital Visual Interface) 7TE
340.617.302	Active 4fold USB-Hub 2.0 incl. Power Supply 14TE
340.617.402	Active 4fold USB-Hub 3.0 incl. Power Supply 14TE
340.617.702	Card Reader USB 2.0 14TE
340.618.502	Gigabit Ethernet Switch 5 Port 0,5EP / 0,5MP
340.618.802	Gigabit Ethernet Switch 8 Port 0,75EP / 0,5MP with Keystone Adapter and Power Supply



KEYSTONE MODULE

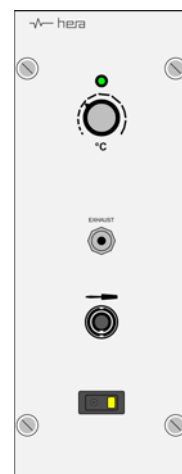
- Individual configuration and flexibly exchangeable.
- Easy snap-in assembly in Keystone adapter.

Keystone Module	
330.800.000	Cover
330.810.100	RJ45 Coupler Cat. 5e
330.810.200	RJ45 Coupler Cat. 6a
330.810.3F0	RJ45 Coupler > LSA (displaced insulation) Cat.6 (F=0: black; 1: red; 2: green; 3: yellow; 4: blue)
330.810.400	RJ45 Coupler > LSA (displ. insul.) Cat.6 shielded
330.820.100	Fibre Optic Module LC Duplex Female > Female
330.820.200	Fibre Optic Module SC Simplex Female > Female
330.830.100	USB 2.0 A-Female > B-Female
330.830.300	USB 3.0 A-Female > B-Female
330.830.500	USB3.0 C Female > Male with Cable
330.830.600	USB Type-A Charging Socket 1a black
330.840.100	HDMI Female > HDMI Female black
330.840.300	mini Displayport Female > Male with Cable
330.850.100	Jack 3,5 mm Socket > Socket gold plated
330.850.2F0	Cinch Female > Cinch Female (0: yellow; 1: red; 2: white)
330.860.100	BNC Female > BNC Female black
330.860.200	F Female > F Female
330.860.300	IEC Female > F Female
330.860.400	IEC Male > F Female



## 19" SOLDERING STATION, ANALOGUE

- Professional Weller soldering station 24V/ 80W with electronic temperature control.
- Potentiometer for stepless adjustable temperature control between 150°C and 450°C with LED temperature indication.
- Antistatic soldering tool (24V/ 80W).
- Stand with sponge.
- Illuminated 2poles switch.
- Connector for soldering fume extraction.

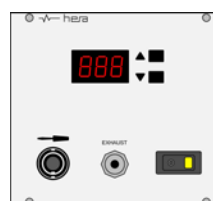


### Soldering Station, Analogue

380.001.102	19" Cassette 21TE
380.253.102	19" Module 7HE

## 19" SOLDERING STATION DIGITAL

- Microprocessor controlled Weller soldering station with automatic soldering tool cognition.
- Stepless adjustable temperature control between 150°C and 450°C with up - and down button.
- 3digit LED digital display for actual - and set temperature.
- Antistatic soldering tool (24V/ 80W).
- Stand with sponge.
- Illuminated 2poles switch.
- Connector for soldering fume extraction.



### Soldering Station, Digital

380.001.602	19" Cassette 28TE
380.253.602	19" Module 7HE

## 19" SOLDERING STATION LCD

Microprocessor controlled Ersa soldering station with 3 preset temperatures and stepless adjustable temperature control.

- Electronic controlled soldering station, 80W.
- Stepless adjustable temperature control between 150°C and 450°C.
- LCD display for actual - and set temperature.
- Antistatic according to MIL-SPEC/ESA.
- Powerful fine soldering tool (9sec. pre-heating).
- Stand with sponge.
- Illuminated 2poles switch.



### Soldering Station LCD

380.001.702	19" Cassette 21TE
380.253.702	19" Module 7HE

19" **SOLDERING -/ DESOLDERING STATION, 2 CHANNELS**

- Universally applicable soldering/ desoldering station for professional repairs of electronic modules for manufacturing areas, service & repair stations or test facilities.
- The station has two tool-independant channels and automatic tool cognition with automatic activation of the suitable control parameters. Soldering and desoldering or hot air soldering can be done at once.
- Suitable for a great variety of Weller soldering tools up to 200W e.g. soldering -, desoldering - and hot air pencil.
- Integrated rotary pump for vacuum and airflow (max. vacuum 0,7bar; max. airflow 18l/min).
- Variably programmable buttons for repeating functions.
- LC display.
- EGB safe.
- ECO button.
- Temperature control: 50°C – 550°C.



Soldering - Desoldering Station, 2 Channels	
380.001.502	19" Cassette 42TE
341.254.102	19" Panel 2HE

Accessory for Soldering - Desoldering Station	
380.000.100	Soldering Set 80 Watt (leadfree soldering) (Soldering Tool WP80, Safety Stand)
380.000.200	Soldering Set 120 Watt (Soldering Tool WP120, Safety Stand)
380.000.300	Desoldering Set 80 Watt (leadfree soldering) (Desoldering Tool, Safety Stand, Cleaning Set)
380.000.400	Desoldering Set 120 Watt (Desoldering Tool, Safety Stand, Cleaning Set)
380.000.500	Hot Air Set 100 Watt (Hot Air Pencil, Safety Stand, Nutdriver for Nozzle Change)



Soldering Set



Sesoldering Set

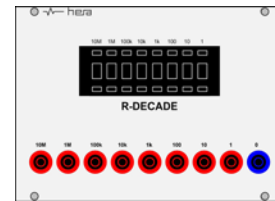


Hot Air Set



## 19" MODULE R-DECADE

- 8x decade switches with following precision resistors:  
1Ω, 10Ω, 100Ω, 1kΩ, 10kΩ, 100kΩ,  
1MΩ, 10MΩ.
- Accuracy: 0,1% + 100mΩ.
- Max. voltage: 200V AC; max. current: 0,5A.
- 9 x 4mm safety jacks for resistance tap.

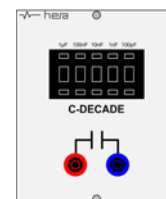


380.002.102

R-Recade 35TE

## 19" MODULE C-DECADE

- 8x decade switches with following precision capacitors: 100pF, 1nF, 10nF, 100nF, 1μF.
- Accuracy: 0,1% + 75pF.
- Max. voltage: 200V AC; max. current: 0,5A.
- 2 x 4mm safety jacks for capacity tap.

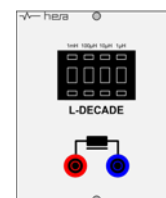


380.002.202

C-Decade 21TE

## 19" MODULE L-DECADE

- 4x decade switches with following precision coils: 1μH, 10μH, 100μH, 1mH.
- Max. voltage: 100V.
- 2 x 4mm safety jacks for inductivity tap.



380.002.302

L-Decade 21TE



19" MODULE **WITH LOAD RESISTORS**

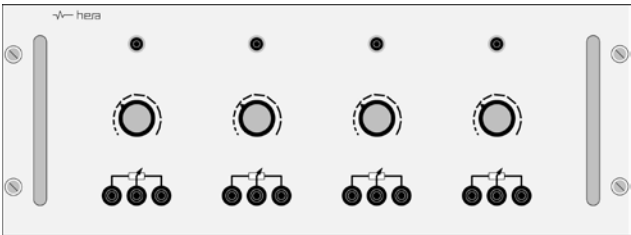
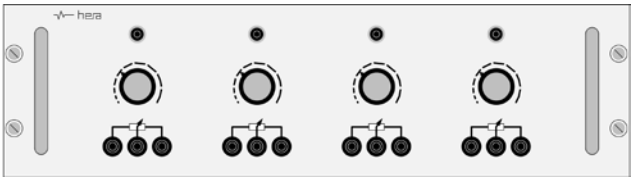
- Stepless adjustable load resistance 50W (test voltage: 2,5kV).
- Thermal circuit breaker for overload protection.
- Connection at 3x 4mm safety jacks.



Load Resistor	
380.005.102	0 - 10Ω / 2,2A 14TE
380.005.202	0 - 100Ω / 0,7A 14TE
380.005.302	0 - 1kΩ / 0,2A 14TE
380.005.402	0 - 10kΩ / 0,1A 14TE
380.005.002	3x Load Resistors 0 - 0,1 / 1 / 10kΩ 35TE

19" INSERTION **LOAD RESISTORS**

- 4x 50W  
four stepless adjustable load resistors (test voltage: 2,5kV):  
0 - 10Ω / 50W; 2,2A  
0 - 100Ω / 50W; 0,7A  
0 - 1kΩ / 50W; 0,2A  
0 - 10kΩ / 50W; 0,1A
- or 4x 300W  
four stepless adjustable load resistors (test voltage: 2,5kV):  
0 - 10Ω / 5,4A  
0 - 100Ω / 1,7A  
0 - 1kΩ / 0,5A  
0 - 10kΩ / 0,2A
- Thermal circuit breaker for overload protection.
- Each resistor with 2 end taps and one center tap at 4mm safety jacks.



Load Resistors	
380.010.102	4x 50W 3HE
380.010.302	4x 300W 4HE



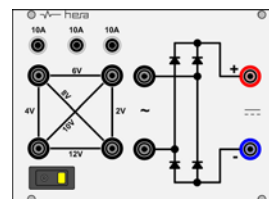
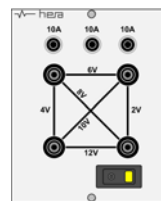
# VARIABLE AC SOURCES

The adjustable AC sources are ideal for the simulation of mains alternations. Due to latest technology and great performance they are perfectly suitable for education, R&D and service departments. The galvanically isolated types offer high accuracy and a maximum of safety to its user.



## 19" CASSETTE AC LOW VOLTAGE, 1PHASE

- Isolating transformer with floating 10A outputs, pluggable for 2V, 4V, 6V, 8V, 10V or 12V.
- Protected by front side operated thermomagnetic fuses.
- Output at 4mm safety jacks.
- Pluggable bridge rectifier via 4mm safety jacks.
- Illuminated 2poles switch.

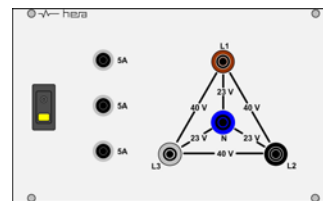


### AC Low Voltage, 1phase

342.012.102	no Bridge Rectifier 21TE
342.012.202	with Bridge Rectifier 35TE

## 19" CASSETTE AC LOW VOLTAGE, 3PHASE

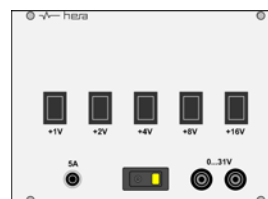
- 3phase isolating transformer 345VA for floating 3phase voltage of 23V/ 40V.
- Protected by front side operated thermomagnetic fuses.
- Output at 4mm safety jacks.
- Illuminated 2poles switch with contactor.



342.323.002	AC Low Voltage, 3phase 42TE
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## 19" CASSETTE AC LOW VOLTAGE

- Isolating transformer for 1V, 2V, 4V, 8V, 16V/ 5A. Protected by front side operated thermomagnetic fuse.
- 5x switch for voltage setting, thus the voltage can be adjusted between 0 ... 31V in 1V steps.
- Output at 4mm safety jacks.
- Illuminated 2poles switch.

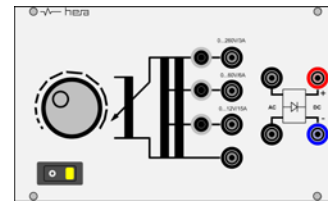


342.031.102	AC Low Voltage 35TE
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## 19" CASSETTE VARIABLE AC SOURCE 0 - 260V/ 3A

- 1x variac with down stream connected isolating transformer for floating voltage of 0...260V/ 3A, 0...60V/ 6A and 0...12V/ 15A.
- Protected by front side operated thermomagnetic fuses.
- Output at 4mm safety jacks.
- Bridge rectifier pluggable at 4mm safety jacks.
- Illuminated 2poles switch.



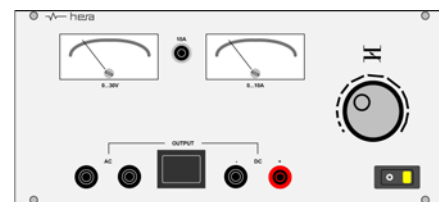
342.026.102 Variable AC Source 0 - 260V/ 3A 42TE

## 19" CASSETTE VARIABLE AC/DC SOURCE, 1PHASE

- Variac with downstream connected isolating transformer for floating output voltage of 0 - 100%. Protected by front side operated thermomagnetic fuse.
- Switchable bridge rectifier for a pulsating DC voltage with 48% ripple.
- AC - and DC output at 4mm safety jacks.
- Current - and voltage reading analogue: moving iron class 1,5 digital: 3digit LED display TrueRMS, accuracy: 0,5% +/-1 digit.
- Illuminated 2poles switch.

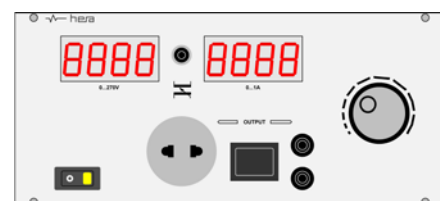
### Variable AC/DC Source, 1phase

346.033.202	0-30V / 10A analogue 56TE
346.053.202	0-50V / 3A analogue 56TE
346.271.202	0-270V / 1A + 0-60V / 4A analogue 63TE
346.271.602	0-270V / 1A + 0-60V / 4A digital 63TE
346.273.202	0-270V / 3A + 0-60V / 10A analogue 70TE
346.273.602	0-270V / 3A + 0-60V / 10A digital 70TE



## 19" CASSETTE VARIABLE AC SOURCE, 1PHASE

- 1x variac with downstream connected isolating transformer for floating output voltage of 0-100%. Protected by front side operated thermomagnetic fuses.
- Output selector for 4mm safety jacks or universal socket (Type F, E, NEMA) without protective earth.
- Current - and voltage reading analogue: moving iron class 1,5 digital: 3digit LED display TrueRMS, accuracy: 0,5% +/-1 digit.
- Illuminated 2poles switch.



### Variable AC Source, 1phase

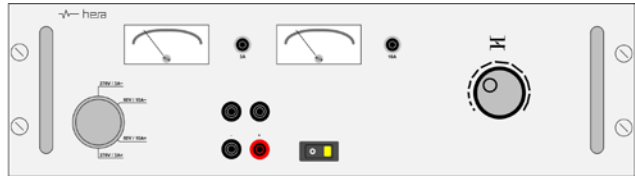
342.271.202	0-270V / 1A analogue 63TE
342.271.602	0-270V / 1A digital 63TE
342.273.202	0-270V / 3A analogue 63TE
342.273.602	0-270V / 3A digital 63TE





## 19" INSERTION AC/DC SOURCE, 1PHASE

- Variac with downstream connected isolating transformer for floating output voltage of 0 - 100%.
- Protected by front side operated thermomagnetic fuse.
- Switchable bridge rectifier for a pulsating DC voltage with 48% ripple.
- AC - and DC output at 4mm safety jacks.
- Current - and voltage reading  
analogue: moving iron class 1,5  
digital: 3digit LED display TrueRMS,  
accuracy: 0,5% +/-1 digit.
- Illuminated 2poles switch.

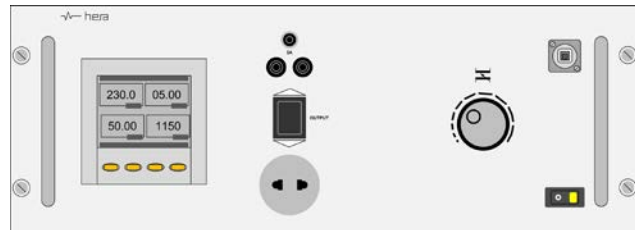
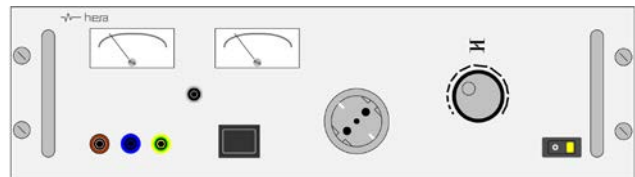


### AC/DC Source, 1phase

346.273.102	0-270V / 3A + 0-60V / 10A, analogue 3HE
346.273.502	0-270V / 3A + 0-60V / 10A, digital 3HE
346.275.102	0-270V / 3A analogue 4HE
346.280.102	0-270V / 10A analogue 4HE

## 19" INSERTION AC SOURCE, 1PHASE

- Variac with downstream connected isolating transformer (floating version) for an output voltage of 0 - 100%.
- Protected by front side operated thermomagnetic fuse.
- NON floating version:  
Selector for output with 3x 4mm jacks or PE socket, type F (others on demand).
- FLOATING version:  
Selector for output with 2x 4mm safety jacks or universal socket (Type F, E, NEMA) without PE contact.
- Current - and voltage reading:
  - analogue: moving iron class 1,5
  - digital: 3digit LED displays TrueRMS, accuracy: 0,5% +/-1 digit.
  - multifunctional display (MFD, optionally with USB or LAN interface.
- Illuminated 2poles switch.



### AC Source, 1phas

342. SSS. A 04

### SSS Voltage / Current

<b>233</b>	0-230V / 3,2A 3HE non-floating	<b>273</b>	0-270V / 3A 3HE FLOATING
<b>236</b>	0-230V / 6,3A 4HE non-floating	<b>275</b>	0-270V / 5A 4HE FLOATING
<b>242</b>	0-230V / 12A 4HE non-floating	<b>280</b>	0-270V / 10A 4HE FLOATING
<b>246</b>	0-230V / 16A 4HE non-floating	<b>282</b>	0-270V / 12A 4HE FLOATING
		<b>301</b>	0-300V / 10A 4HE FLOATING
		<b>286</b>	0-270V / 16A 7HE FLOATING (requires 3phase supply)
		<b>306</b>	0-300V / 16A 7HE FLOATING (requires 3phase supply)

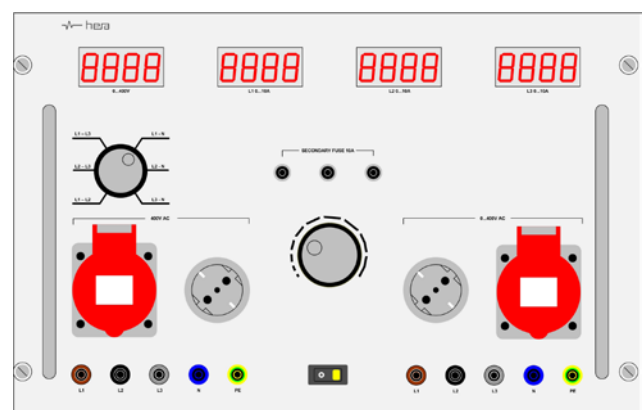
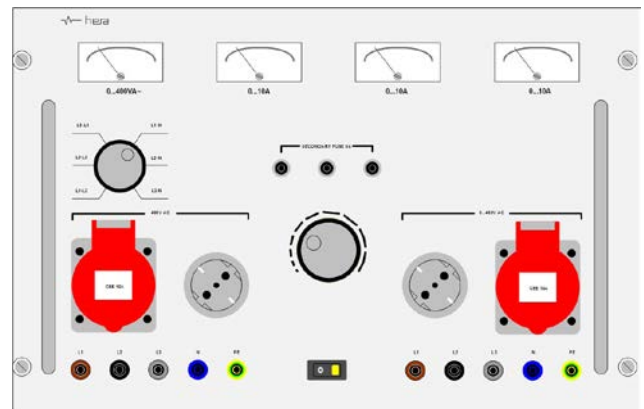
### A Reading

<b>1</b>	analogue
<b>5</b>	digital
<b>6</b>	Multifunctional Display (MFD)
<b>7</b>	MFD with USB
<b>8</b>	MFD with LAN

## 19" INSERTION AC SOURCE, 3PHASE

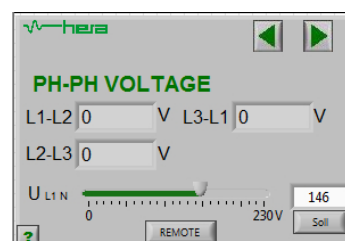
- Star connected 3phase variac for an output voltage of 0 - 100%.
- Option FLOATING: downstream connected isolating transformer for galvanically isolated output voltage.
- Inrush current limiter with primary fuse.
- Front side operated thermomagnetic fuses for output protection.
- Voltage reading with measuring point selector and 3x current readings L1, L2 and L3.
  - analogue: moving iron class 1,5
  - digital: 3digit LED displays TrueRMS
  - multifunctional display (MFD, optionally with USB or LAN interface).
- Output at 1x CEE socket, straight 400V/16A, 6h red or 690V/16A 5h black, 5x 4mm safety jacks (L1, L2, L3, N, PE) and PE socket (type F, others on demand).

AC Source, 3phase		343.SSS . A 02
SSS Power	A Display	
335 0-400V / 3A 7HE	1 analogue	
336 0-400V / 3A, FLOATING 7HE	5 digital	
455 0-450V / 5A 7HE	6 Multifunctional Display	
456 0-450V / 5A, FLOATING 7HE	7 MFD with USB	
460 0-400V / 10A 7HE	8 MFD with LAN	
461 0-400V / 10A, FLOATING 7HE		
557 0-520V / 7A, FLOATING 7HE		
561 0-520V / 10A, FLOATING 7HE		
558 0-520V / 7A, FLOATING 7HE, CEE socket 5h black		
562 0-520V / 10A, FLOATING 7HE, CEE socket 5h black		



### Technical Data Multifunctional Display:

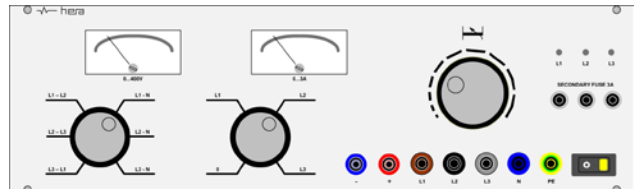
- Measuring instrument 96 x 96mm with graphic LCD display 128 x 80 pixel and 4x control buttons.
- Voltage TRMS (phase -, system - and line-to-line voltages); accuracy:  $\pm 0,2\%$ .
- Phase current TRMS (calculated neutral); accuracy:  $\pm 0,2\%$ .
- Power (effective -, reactive -, apparent power per phase and in total); accuracy:  $\pm 0,5\%$  v. EW.
- Power factor (per phase and in total); accuracy:  $\pm 0,5\%$ .
- Frequency (frequency of measured voltage); accuracy:  $\pm 0,05\%$ .
- HIGH and LOW value of actual voltage, current, power, power factor and frequency.
- Total harmonic distortion of voltages and currents.
- Harmonic analyses of voltage and current up to the 31th harmonic wave.
- Counter for active -, reactive - and apparent energy (partial and total counter with programmable tariff functions).
- Hour counter (programmable counter for total and service hours).



## 19" CASSETTE VARIABLE AC/DC SOURCE, 3PHASE

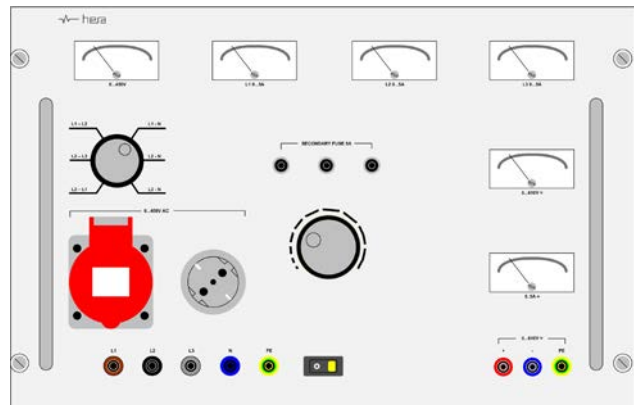
- 3phase variac for a non-floating output voltage of 0 - 400V. Protected by front side operated thermomagnetic fuse.
- AC/DC source with 6-point rectifier for a pulsating DC voltage with 4,3% ripple.
- Output at 4mm safety jacks.
- Current - and voltage reading with phase selector.
  - analogue: moving iron class 1,5
  - digital: 3digit LED display TrueRMS, accuracy: 0,5% +/-1 digit.
- Illuminated 2poles switch with contactor.

AC/DC Source, 3phase	
348.401.102	AC Source 0-400V / 1A analogue 70TE
348.401.602	AC Source 0-400V / 1A digital 70TE
348.403.102	AC/DC Source 0-400V / 3A analogue 84TE
348.403.602	AC/DC Source 0-400V / 3A digital 84TE



## 19" INSERTION AC/DC SOURCE, 3PHASE

- 3phase variac in star connection for an output voltage of 0 - 100%. Protected by front side operated thermomagnetic fuse.
- Option FLOATING: downstream connected isolating transformer for galvanically isolated output voltage.
- 1x CEE socket, straight 400V/ 16A, 6h, red or 690V/16A 5h black.
- 5x 4mm safety jacks (L1, L2, L3, N, PE).
- 1x PE socket, type F (others on demand).
- Voltage reading with measuring point selector and 3x current readings L1, L2 and L3.
  - analogue: moving iron class 1,5
  - digital: 3digit LED displays TrueRMS accuracy: 0,5% +/-1 digit.
- 6-point rectifier (ripple 4,3%) with displays for DC voltage and DC current.
- 4mm safety jacks for the adjustable DC voltage supply (factor 1,35 of AC voltage).
- Illuminated 2poles switch with contactor.



AC/DC Source, 3phase		347.LLL.A.02	7HE
<b>LLL Power</b>		<b>A Reading</b>	
335	0-400V / 3A, non-floating	461	0-400V / 10A, FLOATING
336	0-400V / 3A, FLOATING	557	0-520V / 7A, FLOATING
455	0-450V / 5A, non-floating	561	0-520V / 10A, FLOATING
456	0-450V / 5A, FLOATING	558	0-520V / 7A, FLOATING 7HE with CEE Socket 5h black
460	0-400V / 10A, non-floating	562	0-520V / 10A, FLOATING 7HE with CEE Socket 5h black

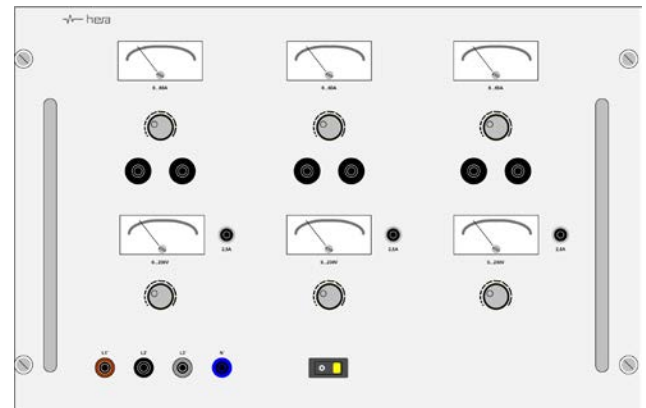
## 19" INSERTION METER TESTER

### Voltage Generator:

- 3x individually adjustable variacs for floating voltage output of 0 - 230V/ 2,5A.
- Protected by front side operated thermomagnetic fuse.
- Output at 4x 4mm safety jacks (L1, L2, L3, N).
- 3x analogue voltage readings (moving iron class 1,5).

### Current Generator:

- 3x individually for floating current output of 0 - 60A/ 6,6V.
- Output at 6x 4mm safety jacks (L1-L1', L2-L2', L3-L3').
- 3x analogue current readings (moving iron class 1,5).
- Illuminated 2poles switch with contactor.



353.260.102

Meter Tester 7HE

## 19" INSERTION MOTOR TESTER WITH VARIAC

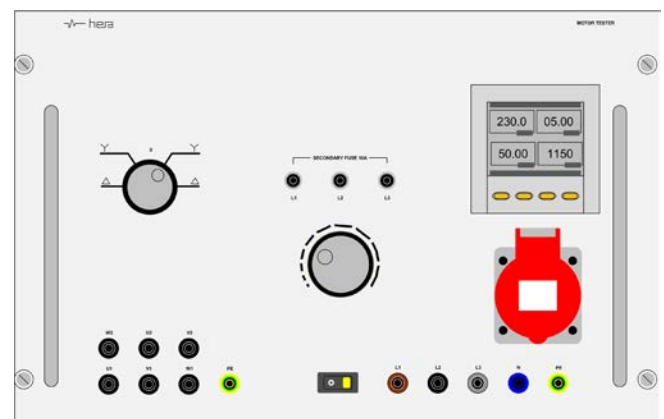
- 3phase variac for non-floating output voltage of 0 – 400V/ 10A.
- Protected by front side operated thermomagnetic fuses.
- 7x 4mm safety jacks arranged as motor terminal board (U1, U2, V1, V2, W1, W2 and PE).
- Selector switch for start - delta and rotation direction.
- Extra outputs with 4mm safety jacks (L1, L2, L3, N, PE) and CEE socket, straight 400V/ 16A, 6h, 5poles.
- Illuminated 2poles switch with contactor.

### Analogue Readings:

- 1x voltage reading with measuring point selector and 3x current readings (moving iron class 1,5).

### Multifunctional Display (MFD):

- Graphical LLLCD display for the simultaneous indication of four freely programmable values.
- Phase voltages and currents TRMS.
- Power (effective-, reactive - and apparent power, per phase and total).
- Power factor per phase and in total.
- Frequency.
- HIGH - and LOW values.
- Harmonic distortion of voltages and currents.
- Harmonic analysis for voltage and current.
- Counter for effective -, reactive - and apparent energy.
- Hour counter.



Motor Tester with Variac 0-400V/ 10A

7HE

385.381.102 with Analogue Readings

385.381.602 with Multifunctional Display

385.381.702 with Multifunctional Display and USB Interface

385.381.802 with Multifunctional Display and LAN Interface

19" INSERTION **MOTOR TESTER** FOR EXTERNAL VARIAC

- Rocker switch for the stepless adjustment of the external variac.
- 7x high current jacks arranged as motor terminal board (U1, U2, V1, V2, W1, W2 and PE).
- Selector switch for start - delta and rotation direction.
- More outputs with high current jacks (L1, L2, L3, N, PE) and CEE sockets.

**Analogue Readings:**

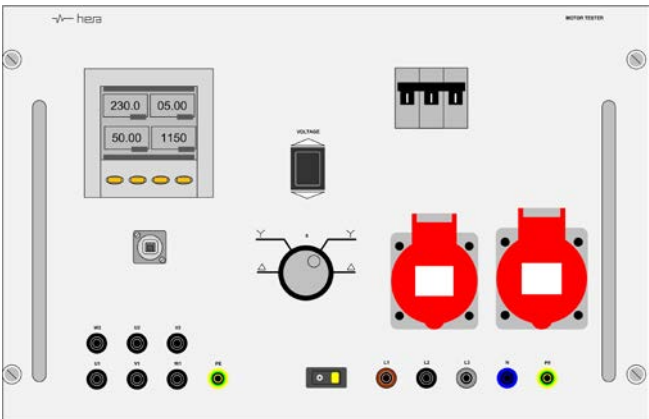
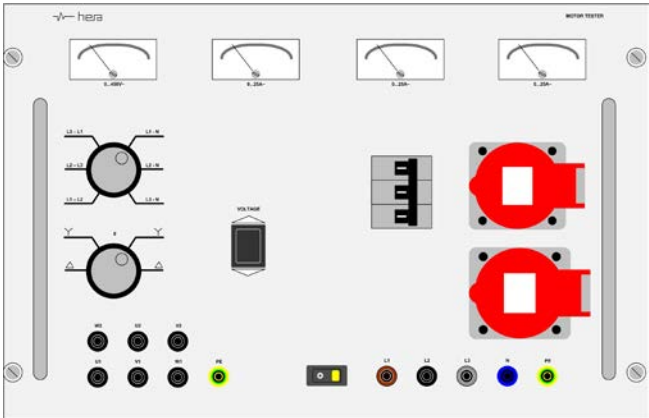
- 1x voltage display with selector switch for measuring points and 3x current readings (moving iron class 1,5).

**Digital Displays:**

- 1x voltage display with selector switch for measuring points and 3x current display (3digit LED display; TrueRMS; accuracy: 0,5% +/-1 digit).

**Multifunctional Display:**

- Graphical LCD display for the simultaneous indication of 4 freely programmable values.
- Phase voltage and phase current TRMS.
- Power (effective -, reactive - and apparent power per phase and in total).
- Power factor per phase and in total.
- Frequency.
- HIGH and LOW values.
- Harmonic distortion of voltages and currents.
- Harmonic analysis of voltage and current.
- Counter for effective -, reactive - and apparent energy.
- Hour counter.



Motor Tester		385.3 SS A 02	7HE
SS Current		A Reading	
82	25A	1	analogue
84	40A	5	digital
86	60A	6	Multifunctional Display
99	100A	7	MFD with USB Interface
		8	MFD with LAN Interface

**EXTERNAL VARIAC FOR MOTOR TESTER**

- Sheet steel housing with casters, two with brakes.
- Integrated motor driven 3phase variac with inrush current limiter.
- Input terminal block and primary fuse.
- Transfer terminal to motor tester and RCD.

External Variac for Motor Tester	
285.516.100	0 - 400V / 16A
285.525.100	0 - 400V / 25A
285.540.100	0 - 400V / 40A
285.550.100	0 - 400V / 50A
285.560.100	0 - 400V / 60A
285.599.100	0 - 400V / 100A

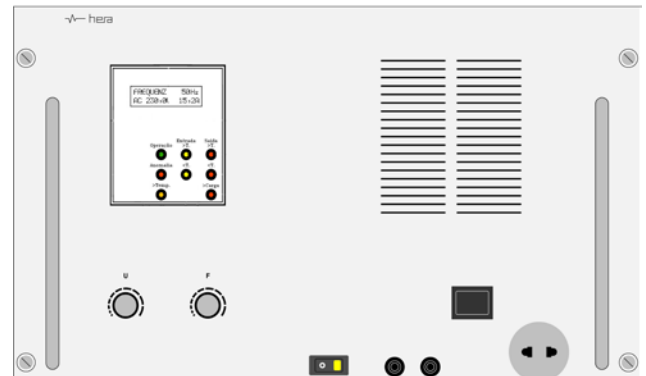




## 19" INSERTION SINUS FREQUENCY CONVERTER 1PHASE 60HZ

Microcontroller operated sinus frequency converter for floating voltage with variable output. Status-LED field and alphanumeric LCD display.

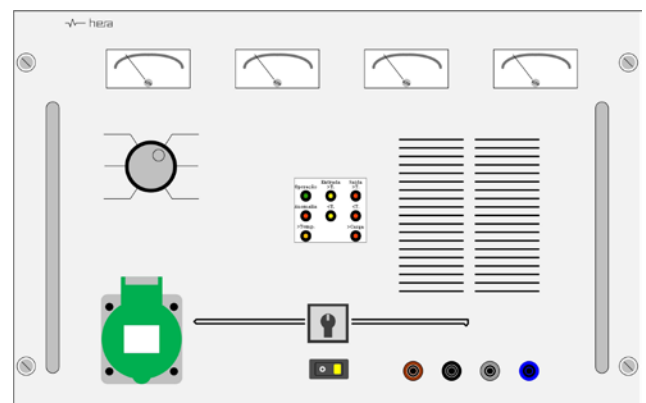
- Sinus source, galvanically isolated from input  
THD-U: 2-3% at 100% ohmic load.
- Power: 100% duration  $\cos \phi$  0,8m 120% for 3-5min.
- Adjustable output voltage 100V - 250V,  
stability:  $\pm 1,5\%$ .
- Adjustable frequency 47Hz at 63Hz (sinus),  
stability:  $\pm 0,1\%$ .
- Text display for voltage, current and frequency.
- Short circuit proofed with automatic switch off.
- 8 status LEDs (indication for AC voltage, AC  
overvoltage, AC overload).
- Output selector for 4mm sockets and universal socket  
(Type F, E, NEMA).
- Illuminated 2poles switch.



Sinus Frequency Converter 1phase 60Hz 7HE	
355.063.202	Output 800VA (3,0A)
355.066.202	Output 1500 VA (6,0 A)

## 19" INSERTION SINUS FREQUENCY CONVERTER 3PHASE 400HZ

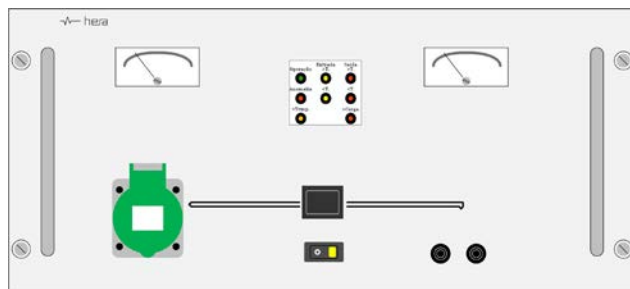
- Microcontroller operated 3phase sinus frequency  
converter for floating voltage.
- 3x sinus sources; galvanically isolated from input  
THD-U: 2-3% at 100% ohmic load.
- Power: 100% duration  $\cos \phi$  0,8; 120% for 3-5min.
- Output power: 3x 500VA.
- Output voltage: 3x 115/200 V; stability:  $\pm 1,5\%$ .
- Output frequency: 400Hz (sinus); stability:  $\pm 0,1\%$ .
- Analogue voltage reading with measuring point  
selector.
- 3x analogue current readings (L1, L2 and L3).
- Short circuit proofed with automatic switch off.
- 8 status LEDs (indication for AC voltage, AC  
overvoltage, AC overload).
- Output selector between 4mm safety jacks and CEE  
socket 2h 5poles.
- Illuminated 2poles switch with contactor.



356.406.202	Sinus Frequency Converter 3phase 400Hz 7HE
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## 19" INSERTION **SINUS FREQUENCY CONVERTER 1PHASE 400HZ**

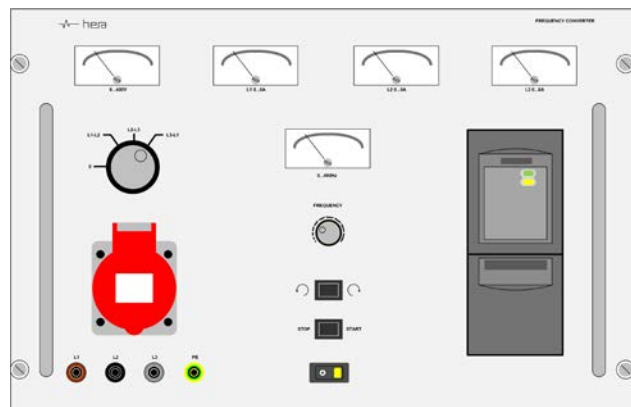
- Microcontroller operated 1phase sinus frequency converter for floating voltage.
- Sinus sources; galvanically isolated from input THD-U: 2-3% at 100% ohmic load.
- Power: 100% duration  $\cos \phi$  0,8; 120% for 3-5min.
- Output power: 500VA.
- Output voltage: 115V; stability:  $\pm 1,5\%$ .
- Output frequency: 400Hz (sinus); stability:  $\pm 0,1\%$ .
- 2x analogue readings for voltage and current.
- Output selector between 4mm safety jacks and CEE socket 2h 5poles.
- Short circuit proofed with automatic switch off.
- 8 status LEDs (indication for AC voltage, AC overvoltage, AC overload).
- Illuminated 2poles switch.



355.406.202 Sinus Frequency Converter 1phase 400Hz 5HE

## 19" INSERTION **MOTOR TESTER WITH FREQUENCY CONVERTER**

- Menu-driven vector frequency converter 0 - 400Hz (max. 650Hz).
- Frequency adjustment via 10turn potentiometer.
- Switch for rotary field selection.
- 4x 4mm safety jacks (L1, L2, L3, PE).
- CEE socket, red, straight 400V/ 16A, 6h, 5poles.
- Analogue voltage readings, class 1,5 with measuring point selector.
- 3x analogue current reading (L1, L2, L3) class 1,5.
- Illuminated 2poles switch with contactor.

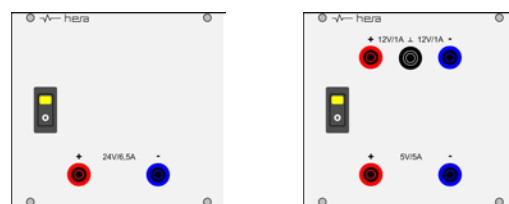


356.400.102 Motor Tester with Frequency Converter 7HE



## 19" DC SOURCE - FIXED VOLTAGE

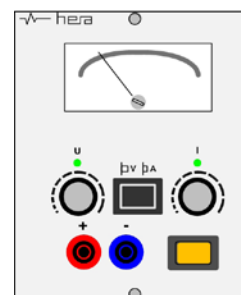
- Stabilized and short circuit proofed DC power supply, galvanically isolated.
- Overload -, overvoltage - and overtemperature protected.
- Offset, approx. 2%.
- Ripple: approx. 120mV p-p.
- Output on 4mm safety jacks.
- Illuminated 2poles switch (primary).



DC Source - Fixed Voltage		368.	AAA	AA	S
AAA	AA	Type	S System		
105.05	5V / 5A	14 TE	2	19" Cassette	
105.10	5V / 10A	21TE	5	19" Module 7HE	
112.03	12V / 3A	14TE	6	19" Panel 2HE	
112.06	12V / 6A	21TE			
112.12	12V / 12,5A	28TE			
113.11	13,5V / 11,2A	28TE			
124.03	24V / 3,2A	21TE			
124.08	24V / 8,4A	28TE			
148.02	48V / 2,3A	21TE			
148.04	48V / 4,2A	28TE			
212.03	+ 12V / 3A + 5V / 6A	28TE			
224.02	+ 24V / 2A + 5V / 6A	28TE			
312.01	+/- 12V / 1A + 5V / 5A	14TE			
315.01	+/- 15V / 0,8A + 5V / 5A	14TE			

## 19" CASSETTE ADJUSTABLE DC SUPPLY COMPACT 0...30V / 0...2A

- Linear controlled, earthfree and short circuit proofed laboratory power supply.
- Potentiometer for voltage and current adjustment and status LED.
- Output on 4mm safety jacks.
- Offset: < 0,05%.
- Ripple: < 1mV eff.
- Selector switch for analogue reading class 1,5 (voltage or current).



380.810.202

Adjustable DC Supply Compact 21TE

# LAB POWER SUPPLIES FOR EACH APPLICATION

## hera Lab Power Supplies are characterized by following features:

- intuitive operating concept with fine-pitch rotary switch and buttons for fast and precise settings
- all values at a glance with background illuminated graphical display
- remote accessible due to USB - and LAN interface
- operating software (IMODdesktop) with arbitrary - and recording function

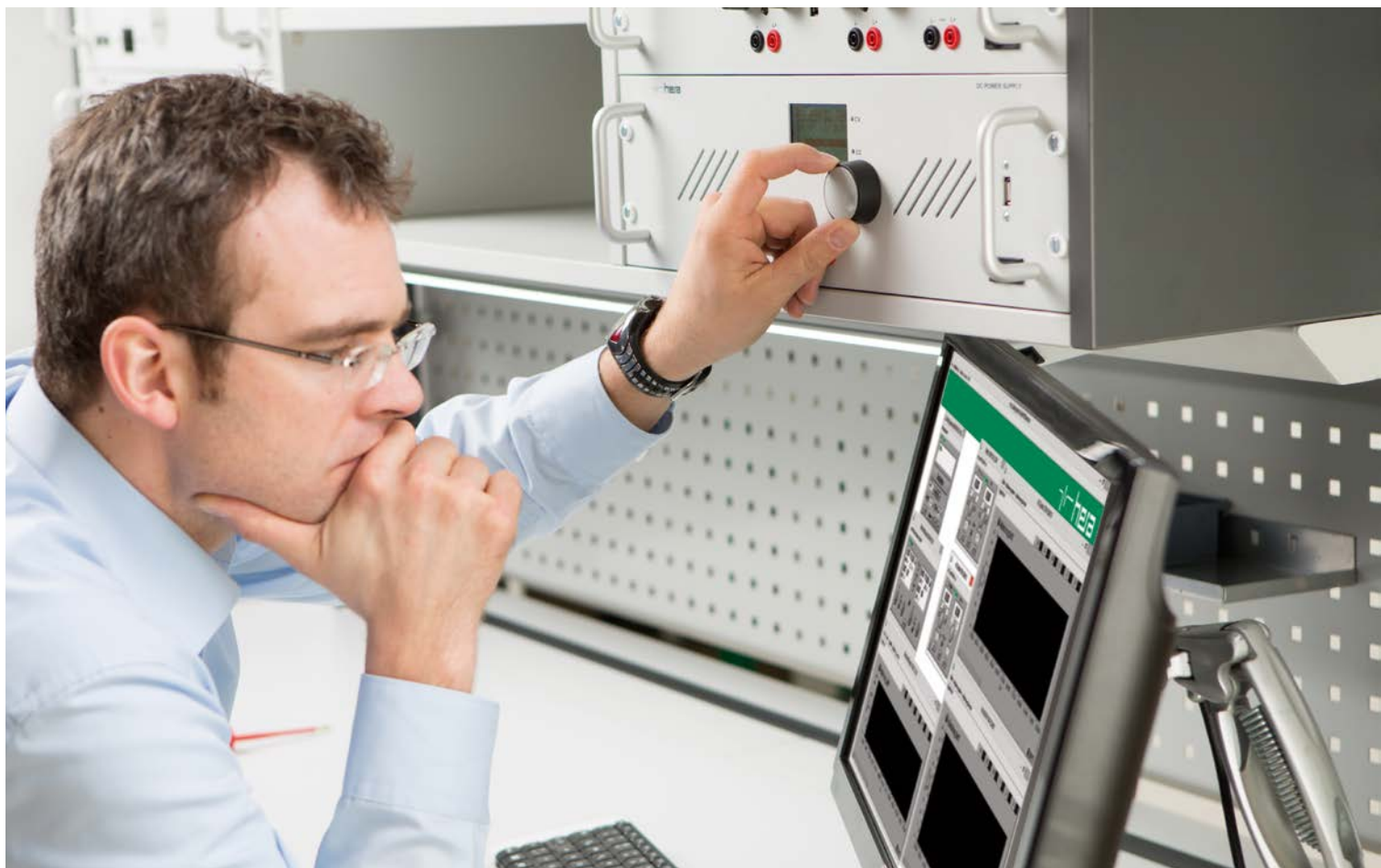
The ideal DC source due to two types of power supplies:

### Lab Power Supply **EXTEND RANGE:**

- powerful switch-mode controlled power supply with ripple < 5mV
- extended voltage - and current range up to max. power

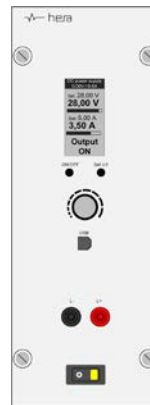
### Lab Power Supply **LINEAR:**

- classic linear controlled lab power supply with ripple < 1mV
- power ranges 60 - 300W



## 19" LAB POWER SUPPLY ICOM LINEAR

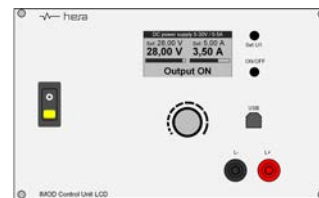
- Background illuminated graphic LCD display 60x30mm (128x64) for a simultaneous indication of all important values and modes.
- Rotary switch with pushbutton function for a fast and precise setting of voltage and current.
- Extra buttons for fast and intuitive operation.
- Output ON -/ OFF button with status indication in display.
- Double power supply with easy selection between 2-channel -, tracking -, series - and parallel mode.
- Outputs on 4mm safety jacks.
- Illuminated 2poles switch.
- Front side with USB -, rear side with LAN interface.
- LabView driver, compatible with software IMODdesktop and IMODmobile for remote operation.



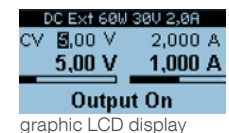
19" Module 7HE

### LINEAR-Version:

- Linear controlled DC source with transformer switching.
- Silent running fan with temperature-controlled speed at 150W and 300W (60W type fanless).
- Measurement display: 14bit (16384 dots).
- Measurement resolution: 16Bit (65536 dots).
- Ripple (at  $I_a = 50\%$ ):  $<0,7\text{mV}_{\text{RMS}}$ .
- Set time (load step 10-90%  $I_a$ , at 50%  $U_a$ ):  $<120\mu\text{s}$ .
- External voltage protection: 100V / 50V (60W).



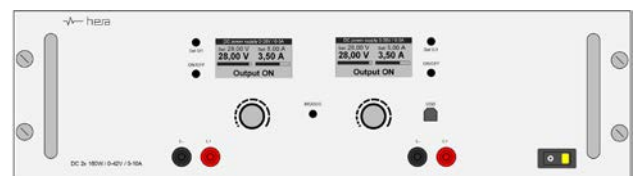
19" Cassette 1-channel



graphic LCD display

### 3-Channel Power Supply with fixed 5V / 5A:

- Stabilized and short circuit proofed fixed voltage supply, galvanically isolated.
- Overload -, overvoltage - and overtemperature protected.
- Offset: approx. 2%.
- Ripple: approx. 120mV p-p.
- Output on 4mm safety jacks.
- Illuminated 2poles switch (primary).



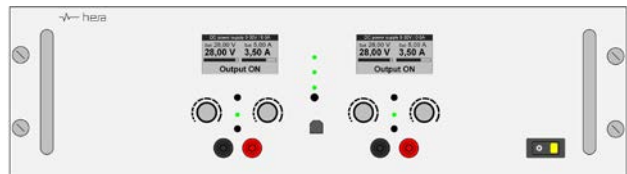
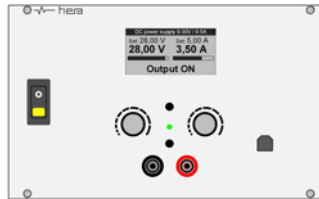
19" Insertion 2-channel

Lab Power Supply ICOM LINEAR 36 <b>A</b> <b>LLL</b> <b>S</b> 03		
<b>A</b> Channels	<b>LLL</b> Voltage / Current	<b>S</b> System
1 1-Channel <b>42TE / 3HE</b>	<b>302</b> 0 - 30V / 0 - 2A	1 19" Cassette
2 2-Channel <b>63TE / 3HE</b>	<b>305</b> 0 - 30V / 0 - 5A	3 19" Module 7HE (only 1-channel)
3 3-Channel <b>only 3HE</b>	<b>310</b> 0 - 30V / 0 - 10A	4 19" Insertion
	<b>605</b> 0 - 60V / 0 - 5A	



## 19" LAB POWER SUPPLY EXTENDED RANGE

- Background illuminated LCD display for the simultaneous 4digit display of voltage and current.
- Rotary switch for current and voltage adjustment in adjustable steps.
- Output ON -/ OFF button with mode indication in display.
- Double power supplies with easy selection between 2-channel -, tracking -, series - and parallel mode.
- Programmable operation lock and overvoltage - overcurrent protection.
- Output on 4mm safety jacks.
- Illuminated 2poles switch.
- Front sided USB interface for remote access, optionally with rear sided LAN interface.
- Incl. LabView driver and WinRemote software.



### Technical Data:

- Fanless max. 160W.
- Stability at 0-100% load: <0,8%.
- Stability at 10% mains alternation: <0,02%.
- Ripple: <5mV<sub>RMS</sub>.
- Set time 10-100% load: <1ms.
- Overvoltage protection: 0...46,2V.
- Accuracy: <0,2%.
- Nominal values of current and voltage adjust one another, so the max. power is not exceeded.

### 3-Channel Power Supply with fixed 5V / 5A:

- Stabilized and short circuit proofed fixed voltage supply, galvanically isolated.
- Overload -, overvoltage - and overtemperature protected.
- Offset: approx. 2%.
- Ripple: approx. 120mV p-p.
- Output on 4mm safety jacks.
- Illuminated 2poles switch (primary).



Lab Power Supply EXTENDED RANGE 36 **A** **LLL** **S** 02

<b>A</b> Channels	<b>LLL</b> Voltage/ Current	<b>S</b> System	<b>V</b> Interface
1 1-Channel <b>42TE / 3HE</b>	<b>406</b> 100W / 0 - 42V / 0 - 6A	7 19" Cassette	2 USB
2 2-Channel <b>63TE / 3HE</b>	<b>410</b> 160W / 0-42V / 0 - 10A	8 19" Insertion	7 USB / LAN
3 3-Channel <b>only 3HE</b>	<b>420</b> 320W / 0 - 40V / 0 - 20A		
	<b>803</b> 100W / 0 - 84V / 0 - 3A		
	<b>805</b> 160W / 0 - 84V / 0 - 5A		

## 19" HIGH POWER DC SOURCE 2HE

- 19" microcontroller operated laboratory power supply.
- Power controlled output stage (nominal values of current and voltage adjust one another, so max. power  $P = U \times I$  is not exceeded).
- 2x rotary switch and 6x buttons for operation.
- Colored TFT display for indication of nominal -, actual values and operating mode.
- Rear sided USB - and LAN interface.
- Rear sided high current terminal clamp.
- Dimensions: 483 x 89 x 470mm (WxHxD).



### Technical Data:

- Operating voltage: 90 - 264V (1000/1500W)  
180 - 264V (3000W)
- Efficiency: max. 92%
- Ripple: 8mV<sub>RMS</sub> (at 40 and 80V)  
34mV<sub>RMS</sub> (at 200V)  
59mV<sub>RMS</sub> (at 360V);  
48mV<sub>RMS</sub> (at 500V)
- Accuracy: < 0,1% of nominal value
- Voltage stability: < 0,05% of nominal value  
at 0-100% load
- Set time: < 2ms  
10-100% load
- Rise time 10-90%: max. 30 ms
- Dielectric strength: 2500V DC

**NOTE: Customized bench rack depth required!**

High Power DC Source 1000W	
365.100.040	0 - 40V / 0 - 40A
365.100.080	0 - 80V / 0 - 40A
365.100.200	0 - 200V / 0 - 15A
365.100.360	0 - 360V / 0 - 10A
365.100.500	0 - 500V / 0 - 6A

High Power DC Source 1500W	
365.150.040	0 - 40V / 0 - 60A
365.150.080	0 - 80V / 0 - 60A
365.150.200	0 - 200V / 0 - 25A
365.150.360	0 - 360V / 0 - 15A
365.150.500	0 - 500V / 0 - 10A

High Power DC Source 3000W	
365.300.040	0 - 40V / 0 - 120A
365.300.080	0 - 80V / 0 - 120A
365.300.200	0 - 200V / 0 - 50A
365.300.360	0 - 360V / 0 - 30A
365.300.500	0 - 500V / 0 - 20A

## 19" OUTPUT PANEL FOR HIGH POWER DC SUPPLY 1HE

- 2x isolated 4mm jacks fully wired to the high power DC supply.
- 2x sense 4mm safety jacks (min. 32A output current).
- LAN - / USB interface.
- Dimension: 483 x 44,45 x 100mm (WxHxD).



19" Output Panel 1HE > 32A with LAN Interface

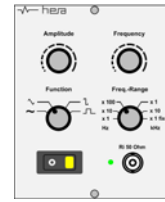


19" Output Panel 1HE max. 32A with USB Interface

19" Output Panel for High Power DC Supply		365.000. <b>A</b> <b>I</b> 2	1HE
<b>A</b> Output		<b>I</b> Interface	
<b>5</b>	4x 4mm Safety Jacks (max. 32A)	<b>0</b>	no Interface
<b>6</b>	2x 4mm Clamp (max. 64A) + Sense	<b>2</b>	USB Interface incl. Cable
<b>7</b>	2x 4mm Clamp (max. 200A) + Sense	<b>6</b>	LAN Interface CAT6 incl. Cable

## 19" CASSETTE FUNCTION GENERATOR COMPACT 200KHZ

- Selector switch for waveforms: sinus, triangle, square, positive pulse.
- Selector for frequency range: x1Hz, x10Hz, x100 Hz, x1kHz, x10kHz and 1kHz fix.
- Potentiometer for stepless adjustment.
- Potentiometer for stepless amplitude adjustment between 0...20V<sub>ss</sub>.
- Output at BNC sockets (Ri = 50Ω).

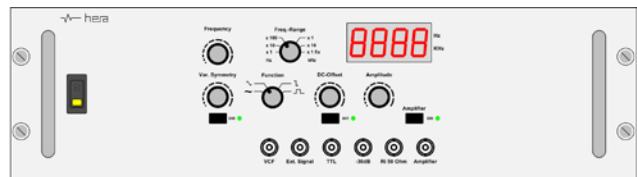
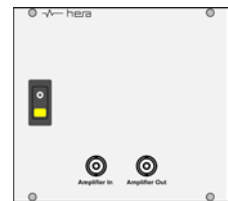
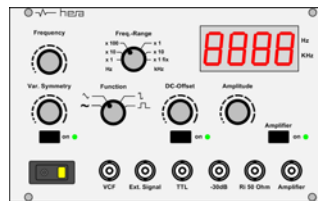


380.820.102 Function Generator Compact 200kHz

21TE

## 19" CASSETTE FUNCTION GENERATOR 1MHZ (POWER AMPLIFIER)

- Frequency adjustment at multiturn potentiometer.
- 6-position selector switch for frequency adjustment.
- Selector switch for waveform adjustment: sinus, triangle, square, external signal.
- Variable symmetry via potentiometer between 20%...80%.
- Amplitude adjustment via potentiometer between 0...30V ss (no-load operation).
- DC-Offset (zero shifting) between -10V...+10V.
- External voltage input (VCF) for frequency adjustment.
- 4digit LED display for frequency indication.
- 5x BNC sockets with ext signal input; TTL-output, 30dB output, 50W output.



### Option Power Amplifier:

- Switchable in the range of 0,1Hz...100kHz.
- 40W<sub>eff</sub> continuous power at sinus with 5Ω.
- Short-circuit proofed due to retracted current characteristic.
- Max. output voltage 40V<sub>ss</sub>.

### Function Generator 1MHz / Power Amplifier

371.653.102	Function Generator no Power Amplifier	42TE
371.653.202	Function Generator <b>with</b> Power Amplifier	42TE
371.653.002	Power Amplifier	28TE
372.653.202	Function Generator <b>with</b> Power Amplifier	3HE



## 19" DDS FUNCTION GENERATOR LC WITH POWER AMPLIFIER

The DDS sweep function generator offers a large variety of signals, it can be used for the generation of regular signals or as sweep generator for pulse signals.

- 6digit LED display.
- Operation with keys or stepless.
- 16x waveforms like sinus, square, triangle, ramp, pulse neg/pos. etc.
- 10 $\mu$ Hz frequency resolution.
- Total distortion: < 1%.
- Squared signal: < 50ns rise -/ fall time.
- Amplitude: 0 - 20Vpp (resolution: 5mVpp).
- Offset: +/- 10V.
- Modulation: FM, AM, PM, PWM, FSK.
- Modulation frequency: 40mHz - 20kHz.
- USB Interface.
- With 10W power amplifier.
- Safety: EN 61010-1; CAT II.

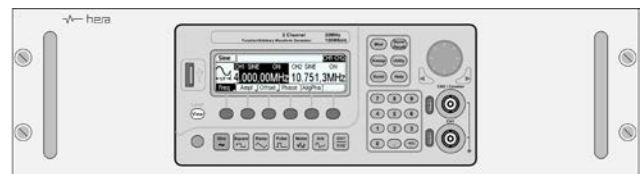
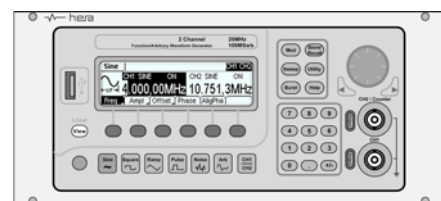


DDS Function Generator LC with Power Amplifier

371.656.302	3MHz (56TE)	371.656.202	20MHz (56TE)
372.656.302	3MHz (3HE)	372.656.202	20MHz (3HE)

## 19" FUNCTION GENERATOR ARBITRARY / 2-CHANNEL

- 2-channel arbitrary waveform generator with frequency counting and USB interface. Easy menu-navigation with graphic display.
- Waveforms: sinus, square, triangle, pulse, ramp, 48 defined output waves, variable arbitrary output forms, noise.
- Frequency range sinus 1 $\mu$ Hz - 20MHz, harmonic distortion <0.2%.
- Frequency range square 1 $\mu$ Hz - 5MHz, rise time <20ns.
- Frequency range triangle 1 $\mu$ Hz - 150kHz.
- Frequency range arbitrary 1 $\mu$ Hz - 5MHz, resolution 1 $\mu$ Hz.
- Waveform storage 4kpts.
- Impedance 50 $\Omega$ .
- Sweep function 1ms - 500s.
- Internal modulation AM/ FM/ PM/ FSK.
- Amplitude: 2mV<sub>pp</sub> - 10V<sub>pp</sub> (channel 1)/ 2mV<sub>pp</sub> to 3V<sub>pp</sub> (channel 2).
- Integrated frequency counter (200MHz).
- USB interface for data storage on PC or memory stick.
- Incl. LabView driver and user software.

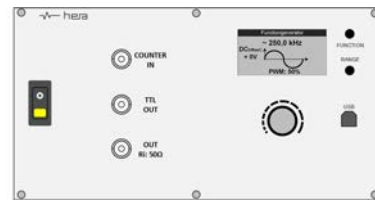


Function Generator Arbitrary / 2-Channel

371.660.702	19" Cassette 49TE
372.660.702	19" Insertion 3HE

## 19" FUNCTION GENERATOR ICOM

- Background illuminated graphic LCD display 60x30mm.
- Rotary switch with pushbutton function and 2 extra control buttons.
- 3x BNC sockets (COUNTER IN, TTL OUT, OUT Ri: 50 Ω).
- Waveforms: sinus, triangle, square, saw tooth, pulse, trapezium.
- Frequency range: 50mHz – 10 MHz (sinus), 50mHz – 1MHz (other signals).
- Arbitrary function with value table (comfortably used with IMODdesktop)
- Other functions: PWM, TTL output.
- Amplitude:  $30V_{SS}$  (max. 1MHz), max.  $3V_{SS}$  at 10MHz.
- Resolution: 12bit.
- Duty cycle: 0,1 % ... 99,9%.
- DC Offset:  $\pm 7,5V$ .
- Frequency measurement: max. 50MHz.
- Illuminated 2poles switch.
- Front side with USB -, rear side with LAN interface.
- LabView driver and operting software, compatible with IMODdesktop / IMODmobile for remote use.

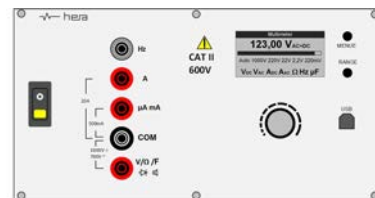


### Function Generator ICOM

371.830.102	19" Cassette 49TE
372.830.102	19" Insertion 2HE

## 19" DIGITAL MULTIMETER ICOM

- Background illuminated graphic LCD display 60x30mm.
- Rotary switch with pushbutton function and 2 extra control buttons.
- 5x 4mm safety jacks (Hz, A,  $\mu A$ /mA, COM, V/ $\Omega$ /F/diode/continuity / temperature).
- Resolution: 4 3/4digits (50.000 counts).
- Voltage DC:  $10\mu V$  – 1000V.
- Voltage AC TrueRMS:  $10\mu V$  – 700V.
- Current DC: 10nA – 20A .
- Current AC TrueRMS: 10nA – 20A.
- Fuses for current inputs.
- Resistance: max. 50M $\Omega$ .
- Frequency: 100 $\mu$ Hz – 50MHz.
- Capacity: max. 5mF.
- Other functions: diode test, continuity test and temperature measurement.
- Range selection: manual or autoranging.
- Safety: CAT II 600V.
- Illuminated 2poles switch.
- Front side with USB -, rear side with LAN interface.
- LabView driver and operting software, compatible with IMODdesktop / IMODmobile for remote use.



604.000.100: Immersion Sensor -70 ... +250°C



604.000.200: Surface Sensor -190 ... +260°C



604.000.300: Kapton Sensor -190 ... +260°C

### Digital Multimeter ICOM

371.710.602	Digital Multimeter ICOM (49TE)
372.710.602	Digital Multimeter ICOM (2HE)
604.000.100	Immersion Sensor -70 ... +250°C
604.000.200	Surface Sensor -190 ... +260°C
604.000.300	Kapton Sensor -190 ... +260°C



## 19" DIGITAL MULTIMETER LC2

- TrueRMS multimeter 6000digits with easy to read LC display and bargraph.
- Measuring range: manual and autoranging.
- Measuring range AC / DC Voltage: 600mV...1000V.
- Measuring range AC / DC Current: 600μA...10A (shortly up to 20A).
- Measuring range resistance: 600Ω...60MΩ.
- Measuring range capacity: 6nF...6mF.
- Measuring range inductivity: 600μH...100mH.
- Measuring range temperature: -40°C...1000°C.
- Measuring range frequency: 6kHz...60MHz.
- Continuity test, transistor -, thyristor - and diode test.
- Min.-/ max.- and hold function.
- CAT II 600 V.
- USB interface.
- Including measuring leads, temperature probe and operating software.



Digital Multimeter LC2

371.711.603	19" Insertion 3HE
372.711.603	19" Cassette 49TE

## 19" CASSETTE DIGITAL MULTIMETER COMPACT

- 4 1/2digit LED display with a digit height of 13mm.
- Functions: AC / DC voltage, AC / DC current and resistance.
- TrueRMS measurements.
- Range selection: manual with switches.
- Measuring cycle: approx. 2,5 measurements / sec.
- DC voltage: 200mV max. 1000V in 5 ranges (resolution: max. 10μV).
- DC current: 200μA max. 20A in 6 ranges (resolution: max. 10nA).
- AC voltage: 200mV max. 1000V in 5 ranges (resolution: max. 10μV).
- Resistance: 200Ω max. 20MΩ in 5 ranges (resolution: max. 10mΩ).
- Connection at 4mm safety jacks.
- Illuminated 2poles switch.



372.710.402

Digital Multimeter Compact 21TE

## 19" LCR METER 10HZ ... 2KHZ

- Test frequency range: 10Hz ...2kHz (accuracy: ± 0.01%, resolution: 4digits).
- Basic accuracy: 0.05%.
- Max. measuring cycle: 25ms.
- Combination of 16 main - and auxiliary parameter measurements and observation of two parameters. The display allows the simultaneous presentation of 4 parameter.
- Color LCD display: 8,9 cm-diagonal (3,5 inch).
- Standard interface: RS-232C and USB memory.

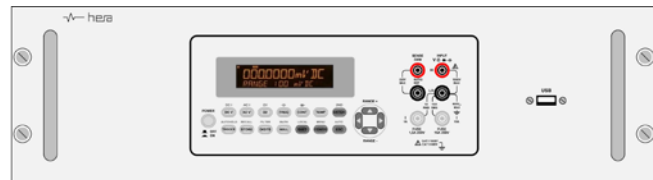
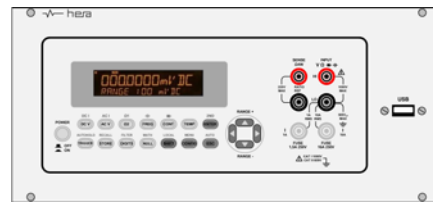


372.720.102

LCR Meter 2HE

## 19" PRECISION MULTIMETER USB

- Dual display for the simultaneous presentation of two separate measuring values.
- Resolution: 6 1/2 digits.
- 2-wire- / 4-wire-resistance measurement.
- 5000 measurements/ sec. at 4 1/2 digits.
- Integrated functions: DCI, DCV, ACI, ACV, 2WO, 4WO, frequency, period, diode, continuity test, limits, ratio, MX+B, %, dB, dBm, min./max. and zero.
- Different triggers.
- TrueRMS AC voltage - and AC current measurement.
- USB interface.
- Incl. LabView driver and user-software.



### Precision Multimeter USB

371.711.402	19" Cassette 56TE
372.711.402	19" Insertion 3HE

## 19" PRECISION MULTIMETER LAN

- 5 3/4 digit display (480.000 dots).
- 3 simultaneous readings: z.B. DC + AC + statistics.
- Measuring cycle max. 200 measurings / sec.
- 0,015% basic accuracy (DC).
- 12 measuring functions: DCV, DCI, TrueRMS ACV and ACI, frequency, 2- and 4-wire-resistance, capacity, continuity, diode, temperature, power.
- Perfect readability due to brilliant color TFT display.
- Resolution 1μV, 100nA, 1mΩ, 1pF, 1Hz, 0,1°C.
- True effective measurement AC, AC+DC.
- Arithmetic functions: limit test, min./max., average, offset, DC power, dB, dBm.
- Temperature measurement with platinum sensors (PT100/ PT500/ PT1000).
- Data logging as .CSV file internally or on USB memory stic.
- Interface: USB and Ethernet.
- Incl. LabView driver and user-software.



Die vier Anzeigemodi Histogramm, Bargraph, Ziffern und Trend liefern genaue und schnelle Messergebnisse



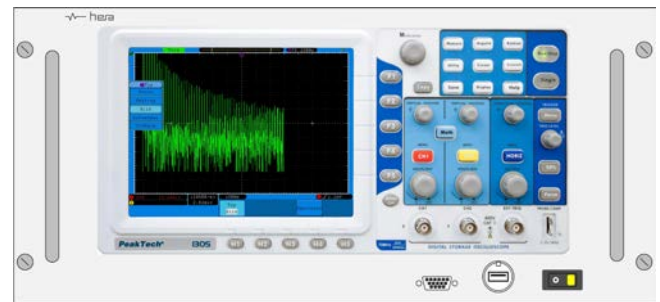
371.702.202	19" Cassette 56TE
372.702.202	19" Insertion 3HE

► other brands and types available

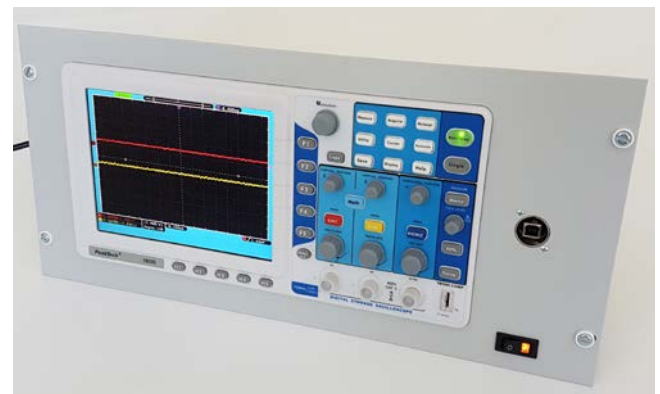
## 19" 2-CHANNEL DIGITAL STORAGE OSCILLOSCOPE PEAKTECH

Digital storage oscilloscope with high resolution color display, background illuminated, high band width and measuring rate, big internal data storage and USB interface. LAN interface for networks integration and VGA connector for presentation with external beamer or monitor.

- 2 channels.
- 8" TF color display (800 x 600 picture; 65536 colors).
- USB interface for real time data transmission or memory read-out.
- Autoset - and autoscale function.
- Big internal storage for 15 waveforms.
- 20 automatic measuring modes and FFT function.
- PASS/FAIL function.
- Safety: EN 61010-1; CAT II.
- Accessory: 2 St. BNC cable, PASS/ FAIL adapter, USB cable, Software-CD, power cable and 2 probes.



► other brands and types available



Digital Storage Oscilloscope		5HE
373.101.030	30MHz / 125MSa/s	
373.101.070	70MHz / 500MSa/s	
373.101.100	100MHz / 1GSa/s	
373.101.200	200MHz / 2GSa/s	

## 19" DIGITAL STORAGE OSCILLOSCOPE GW INSTEK

Digital storage oscilloscope with perfect price / performance ratio. for industrial or educational purpose. Software for data transmission and data logging within scope of delivery.

- 2- or 4-channel.
- 8" TFT color display.
- 2GSa/s real time sampling rate.
- 2MPts memory depth.
- 36 automatic measurements.
- FFT analysis.
- 6digit frequency counter.
- USB interface and front side USB connector for memory stick.



Digital Storage Oszilloscope		5HE
373.119.207	2-Channel / 70MHz	
373.119.407	4-Channel / 70MHz	
373.119.222	2-Channel / 200MHz	
373.119.422	4-Channel / 200MHz	

19" CASSETTE **CONSTANT CURRENT SOURCE**

- Selector for 4mA, 20mA and 0...50mA.
- Burden voltage: max. 30V.
- 10turn potentiometer for 0...50mA.
- LED display 3digit.
- Status-LED (ok / overload).
- Output on 4mm safety jacks.
- Illuminated 2poles switch.



369.050.402      Constant Current Source (21TE)

19" CASSETTE **CONSTANT VOLTAGE SOURCE**

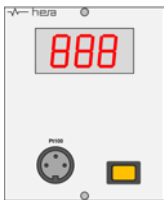
- Selector for 1V, 10V and 0...30V.
- Short circuit current: 100mA.
- 10turn potentiometer for 0...30V.
- LED display 3digit.
- Status-LED (ok / overload).
- Output on 4mm safety jacks.
- Illuminated 2poles switch.



369.050.202      Constant Voltage Source (21TE)

19" CASSETTE **DIGITAL THERMOMETER**

- Temperature meter for PT100/PT1000 probe according to DIN EN 60751.
- Device in 3-wire technology with automatic adjustment to cable resistances.
- Measuring current max. 1,5mA. Analogue output (no isolated) in mV/°C.
- Accuracy:  $\pm 0,1\% \pm 1$  a.f.m.
- Measuring rate: 2,5 measurements / sec.
- 3 1/2digit LED display (12,5mm; red).
- Incl. immersion sensor or surface sensor in 3-wire technology.



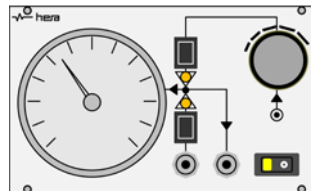
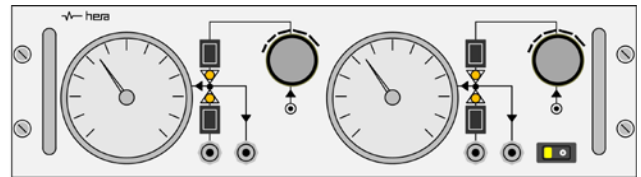
Digital Thermometer

369.060.102	- 100,0°C ... + 199,9°C (21TE)
369.060.202	- 100,0°C ... + 400°C (21TE)



## 19" CASSETTE PRESSURE CALIBRATOR, ANALOGUE

- Precision regulator.
- Selector for internal or external supply with 3/2-magnetic valve and status LED.
- Inlet and outlet with selfclosing quick-connectors 4/6mm.
- Analogue pressure gauge class 1,0.
- Illuminated 2poles switch.
- Completely hosed, with open end 4/6.



### Pressure Calibrator, Analogue

389.001.102	Vacuum (42TE)
389.102.102	0 - 2,5bar (42TE)
389.106.102	0 - 6bar (42TE)
389.110.102	0 - 10bar (42TE)
389.110.302	0 - 2,5bar + 0 - 10bar (3HE)

## 19" CASSETTE DIGITAL MANOMETER / DIGITAL CALIBRATOR

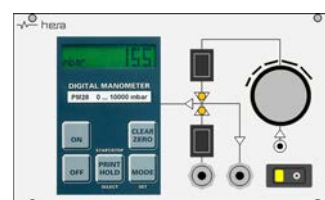
- Digital pressure instrument with sensor for the measurement of difference -, relative - and absolute pressure.
- 3½ digit LCD display.
- Piezoresistive pressure sensor.
- Measuring range HI, class 0.2% (full scale).
- Measuring range LO, class 0.5% (full scale).
- Inlet and outlet with selfclosing quick-connectors 4/6mm.



Digital Manometer

### Calibrator with:

- Precision regulator.
- Selector for internal or external supply with 3/2-magnetic valve and status LED.
- Illuminated 2poles switch.
- Completely hosed, with open end 4/6.



Digital Pressure Calibrator

### Digital Manometer / Digital Calibrator

383.002.002	Digital Manometer 0 - 2000mbar (28TE)
383.010.002	Digital Manometer 0 - 10bar (28TE)
383.002.102	Digital Calibrator 0 - 2000mbar (49TE)
383.010.102	Digital Calibrator 0 - 10bar (49TE)

## CALIBRATION HAND PUMP

- Manual pumps with fine valve for precise pressure adjustment.
- Manual pump with selector switch for vacuum.

### Calibration Hand Pump

390.000.700	Vacuum -800mbar
390.005.000	0 ... 7bar
390.040.000	-0,95 ... 40bar
390.060.000	-0,95 ... 60bar





## 19" INSERTION APPLIANCE TESTER VDE 0701/0702

- Device for appliance testing according to DIN VDE 0701–0702, repeat test BGV A3 and DIN EN 62353.
- Direct selection of the individual measurement types with function button.
- Automatic adaption of limiting value (protective conductor, insulation).
- 2 poles measurement (low ohmic, insulation, equivalent leakage current, voltage).
- Tests of firmly connected devices is possible.
- Clear text operation with schematic diagram and green / red LED indication for OK / failure.
- Large display, rich in contrast.
- Mains connection is checked for PE contact and automatic switch off in case of dangerous leakage current of test item.
- Bluetooth and USB interface.
- Fast procedure of all activated tests inclusive function test with real-effective-power indication in only one step.
- Optional: Operation via Android Test Master App with SQLITE3 data base.
- Optional protocol generation with guided test procedures with universal app Report Master for iOS and Windows.
- Instant pole-changing.



### Measurements (usage failure 5% v.M. + 1% v.B.)

- Protective conductor: 0,000Ω...4,000Ω  
test current: 200mA DC / no-load voltage 10V.
- Insulation resistance: 0,00MΩ...20,00MΩ,  
no-load voltage: 50 , 250V, 500V,  
short circuit current: 1mA
- Integrated leakage current switch-off:  
difference current > ca. 20mA.
- Equivalent leakage current: 0,00mA...20,00mA,  
open circuit voltage: approx. 200V AC (max. 2,5mA)
- Difference current: 0,00mA...20,00mA AC  
according DIN EN 61557-14 for correct evaluation of the  
harmonic waves.
- Touch protection: 0,000mA...4,000mA.
- Mains voltage measurement: 200V...250V AC.

### Incl. accessory:

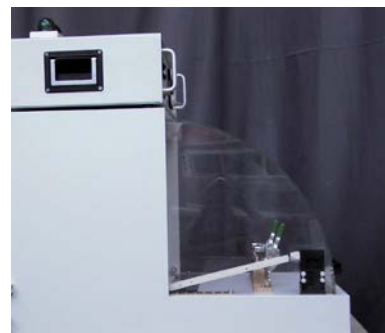
- Bluetooth and USB C interface.
- Measuring leads 2m, 1x red + 1x black.
- Report Master App for 1 year.
- Inhouse calibration certificate.



Appliance Tester	
377.002.903	19" Appliance Tester (4HE)
338.700.309	Safety-Remote Single License

## TEST HOOD

- Dimensions: 530 x 900 x 660mm (WxDxH).
- Lower side with plastic base and cavity for test item adation.
- Foldable rounded plexiglass test hood with handle and safety switch.
- Rear panel and sides made of durable plastics.

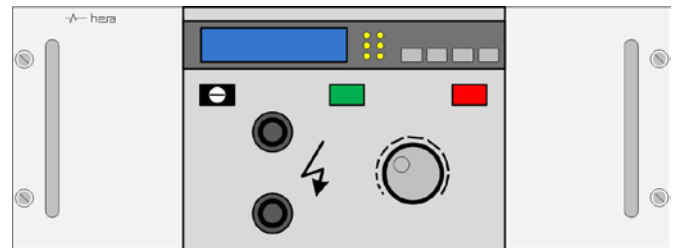


377.050.100	Test Hood
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## 19" HIGH VOLTAGE TESTER

- HV test voltage : 0...6000V manually stepless adjustable. HV resolution: 10V<sub>eff</sub> HV.
- Voltage reading: digital root mean indication (TRMS).
- HV test current: I<sub>max</sub> = 100mA | I<sub>k</sub>>200mA (according VDE- / IEC standard).
- Total current: digital root mean square indication (TRMS) resolution: 0,1mA.
- HV limiting current evaluation: HV-I min/max comparator:  
0,1...100mA - freely programmable report if the limiting current is exceeded.
- HV response time: < 30ms.
- HV nominal power: >500VA (according to VDE-/ IEC-standard) of approx. 500V.
- HV operating mode: manual, automatic, burn.
- HV activation: in mains voltage zero crossing.
- Protection: key switch, external safety contact and emergency stop.
- Microprocessor controlled with HIGH-TEC processor if latest technology.
- Display: illuminated, high-contrast, 2-line 16digit alphanumeric reading.
- Signal: optic and accoustic failure message.
- CE-conform: according to EN50191.

377.010.102 High Voltage Tester 4HE



## 19" UNIVERSAL TESTER

### Universal Tester for all Safety Tests:

- Resistance test for PE contact 1...30A AC/ 6V or 12V.
- Insulation resistance test 30...1000V.
- High voltage test 0...6000VAC/ 100mA/ 500VA.

### Technical Data:

- Illuminated TFT touch display 10,5".
- Data base for approx. 10000 test procedures and test results.
- 8 Gbyte memory.
- LAN -, 4x USB - and CAN Bus interface.
- 3x serial RS232- 9poles SUB-D.
- Connectors for warn - and result lamps.
- Input for external safety features and emergency stop.
- Digital in- and outputs (24V DC) for external control, e.g. PLC controlled.
- 4x inputs for variable usage, e.g. external programs.
- Menu languages DE, UK, IT and SP.
- Accoustic signal for failures.
- Depth incl. rear sided connector : 350mm + approx. for industrial plug.



in Ordnung							
Nr.	Beschreibung	Endspannung	Schwell	GenussZeit	Schwell	GenussZeit	Bemerkung
1	Isolationswiderstand L/N-PE	500V	400V	2.040	2.040		
2	Durchgang L/N	4.50mA	0.05mA	100.00	100.00		
3	Schleifenwiderstand	10A	13.3A	0.200	0.100		



377.030.100 Universal Tester 4HE

### Accessory

377.039.100	PE Probe (1...30Amp-2,5m) with Start Button
377.039.150	PE Connecting Cable and PE Crocodile Clamp
377.039.200	Safety Gun (2x required) 10kVDC / 8kVAC (2m)
377.039.300	Warning Lamp, standing
377.039.350	Result Lamp, standing
377.039.400	Foot Switch for Test Voltage ON/ OFF (2m cable)



19" **SUB RACK** FOR 19" CASSETTES

- 19" sub rack for 3HE euro cassettes in euro raster and 3HE front panels (DIN 41494).
- Right and left with fixing brackes for the fixation in 19" racks (light grey powder coated).
- Incl. guiding rails and H15 connectors.
- Completely wired with 3phase harness and terminal block.
- Depth: 290mm.



341.003.302      19" Sub Rack for Cassetts 84TE / 3HE



19" **SUB RACK** FOR 19" EP/ MP MODULES

- 19" sub rack for the acceptance of 3HE modules in EP raster or 5HE modules in MP raster.
- Right and left with fixing brackes for the fixation in 19" racks (light grey powder coated).



19" Sub Rack for 19" EP/MP Modules	
341.003.102	1½ EP (3HE)
341.005.102	3MP (5HE)



## 19" SUB RACK FOR LS2000 INSERTIONS

- 19" sub rack for 1x double insertion or 2x single insertion.
- Right and left with fixing brackets for the fixation in 19" racks (light grey powder coated).
- Incl. guiding rails and H15 connectors.
- Completely wired with 3phase harness and terminal block.

341.007.302

19" Sub Rack for LS2000 Insertions 7HE



## PROFI 19" SHELF UNIT

- The shelf unit is prepared for the acceptance in PROFI 19" bench racks with tilted front.
- Incl. 1x height adjustable shelf board.
- Color: light grey.



PROFI 19" Shelf Unit

7HE

341.008.002

Standard

341.008.502

ESD

