

AC current amplifiers  
 Type DCS /T series  
 Type DCS series

*Applications:*  
 Circuit breaker testing  
 Coil testing  
 Magnetic field generation  
 Thermal testing  
 etc.



Fig. 1: DCS 5000/T unit

DCS Top Facts:

- ✓ *Touch panel operation 7" (800x480)*
- ✓ *High efficiency >90%*
- ✓ *Switch-mode current amplifier*
- ✓ *Harmonic distortion < 1%*
- ✓ *Small dimensions*
- ✓ *DCS T-series with integrated sine wave oscillator unit*
- ✓ *DCS series with highly integrated FPGA signal synthesizer – sine, triangle, square and arbitrary wave oscillator unit*
- ✓ *Current and voltage monitoring unit (option)*
- ✓ *Adjustable current and voltage limitation (option)*
- ✓ *Redundant 2-channel safety shutdown (option)*

## TECHNICAL DATA – TYPE SPECIFIC

	<b>DCS1000</b>	<b>DCS1000</b>
<b>Performance</b>	DCS.1K.F.1	DCS.1K.F
<i>Continuous power</i>	1000VA	1000VA
<i>Internal current ranges</i>	1	0
<i>Standard current ranges</i>	100A <sub>rms</sub> (V <sub>max.</sub> : 10V <sub>rms</sub> )	none (external)
<i>Standard digital I/O ports</i>	optional	optional
<i>Frequency range</i>	45Hz ... 65Hz optional:16 2/3Hz ... 1kHz	
<i>Current accuracy</i>	<1% of the adjusted value (10% ... 100% of nominal range current)	
<i>Efficiency</i>	> 90% at nominal power	
<i>Protection circuits</i>	overload / open output / overtemperature	
<i>cos phi</i>	0 (inductive) ... 1 ... 0 (capacitive) at nominal power	
<i>Harmonic distortion</i>	<1% <sup>1)</sup>	
<b>Power Supply</b>	230V (±10%, 50Hz ... 60Hz) 16A / safety plug	230V (±10%, 50Hz ... 60Hz) 16A / safety plug
<i>Protection/contactor type</i>		
<b>Housing</b>		
<i>Type / colour</i>	19"-unit, colour light grey (RAL 7035)	
<i>Dimensions (mm)</i>	178x483x650 (4U)	178x483x650 (4U)
<i>Weight</i>	approx. 40kg	approx. 15kg
	<b>DCS5000/T</b>	<b>DCS5000/T</b>
<b>Performance</b>	DCS.5K.T.1	DCS.5K.T
<i>Continuous power</i>	5000VA	5000VA
<i>Internal current ranges</i>	1	0
<i>Standard current ranges</i>	500A <sub>rms</sub> (V <sub>max.</sub> : 10V <sub>rms</sub> )	none (external)
<i>Standard digital I/O ports</i>	4 (2 IN / 2 OUT)	4 (2 IN / 2 OUT)
<i>Frequency range</i>	45Hz ... 65Hz optional:16 2/3Hz ... 100Hz	
<i>Current accuracy</i>	<1% of the adjusted value (10% ... 100% of nominal range current)	
<i>Efficiency</i>	> 90% at nominal power	
<i>Protection circuits</i>	overload / open output / overtemperature	
<i>cos phi</i>	0 (inductive) ... 1 ... 0 (capacitive) at nominal power	
<i>Harmonic distortion</i>	<1% <sup>1)</sup>	
<b>Power Supply</b>	230V/400V (±10%, 50Hz ... 60Hz) 3 x 16A / CEE	230V/400V (±10%, 50Hz ... 60Hz) 3 x 16A / CEE
<i>Protection/contactor type</i>		
<b>Housing</b>		
<i>Type / colour</i>	19"-unit, colour light grey (RAL 7035)	
<i>Dimensions (mm)</i>	178x483x600 (4U)	178x483x600 (4U)
<i>Weight</i>	approx. 70kg	approx. 25kg

	<b>DCS10000</b>	<b>DCS10000</b>
<b>Performance</b>	DCS.10K.F.1	DCS.10K.F
<i>Continuous power</i>	10000VA	10000VA
<i>Internal current ranges</i>	1	0
<i>Standard current ranges</i>	1000A <sub>rms</sub> (V <sub>max.</sub> :10V <sub>rms</sub> )	none (external)
<i>Standard digital I/O ports</i>	optional	optional
<i>Frequency range</i>	45Hz ... 65Hz optional:16 2/3Hz ... 1kHz	
<i>Current accuracy</i>	<1% of the adjusted value (10% ... 100% of nominal range current)	
<i>Efficiency</i>	> 90% at nominal power	
<i>Protection circuits</i>	overload / open output / overtemperature	
<i>cos phi</i>	0 (inductive) ... 1 ... 0 (capacitive) at nominal power	
<i>Harmonic distortion</i>	<1% <sup>1)</sup>	
<b>Power Supply</b>	230V/400V (±10%, 50Hz ... 60Hz) 3 x 20A /CEE	230V/400V (±10%, 50Hz ... 60Hz) 3 x 20A /CEE
<i>Protection/contactor type</i>		
<b>Housing</b>		
<i>Type / colour</i>	19"-unit, colour light grey (RAL 7035)	
<i>Dimensions (mm)</i>	356x483x600 (8U)	356x483x600 (8U)
<i>Weight</i>	approx. 120kg	approx. 40kg
	<b>DCS10000/T</b>	<b>DCS10000/T</b>
<b>Performance</b>	DCS.10K.T.1	DCS.10K.T
<i>Continuous power</i>	10000VA	10000VA
<i>Internal current ranges</i>	1	0
<i>Standard current ranges</i>	1000A <sub>rms</sub> (V <sub>max.</sub> :10V <sub>rms</sub> )	none (external)
<i>Standard digital I/O ports</i>	4 (2 IN / 2 OUT)	4 (2 IN / 2 OUT)
<i>Frequency range</i>	45Hz ... 65Hz optional:16 2/3Hz ... 100Hz	
<i>Current accuracy</i>	<1% of the adjusted value (10% ... 100% of nominal range current)	
<i>Efficiency</i>	> 90% at nominal power	
<i>Protection circuits</i>	overload / open output / overtemperature	
<i>cos phi</i>	0 (inductive) ... 1 ... 0 (capacitive) at nominal power	
<i>Harmonic distortion</i>	<1% <sup>1)</sup>	
<b>Power Supply</b>	230V/400V (±10%, 50Hz ... 60Hz) 3 x 20A /CEE	230V/400V (±10%, 50Hz ... 60Hz) 3 x 20A /CEE
<i>Protection/contactor type</i>		
<b>Housing</b>		
<i>Type / colour</i>	19"-unit, colour light grey (RAL 7035)	
<i>Dimensions (mm)</i>	356x483x600 (8U)	356x483x600 (8U)
<i>Weight</i>	approx. 130kg	approx. 40kg

## TECHNICAL DATA – GENERIC

<b>Sine oscillator unit</b>	<b>DCS T-series</b>
Waveform	Sine / 15bit resolution
Frequency range	16 2/3Hz ... 100Hz / 100mHz resolution
<b>Sine / arbitrary oscillator unit</b>	<b>DCS series</b>
Type	4-channel synthesizer
Wave forms	sine, square, triangle, ramp, arbitrary / 17Bit resolution
Frequency range	DC ... 1kHz / 1µHz resolution
Frequency accuracy	25ppm
Phase range	0° ... 360° / 0.001° resolution
Memory depth	1MSample
Synthesizer functions	ADD, AM, FM, PM, PWM
Sequence memory	1024 steps
<b>Interface</b>	Ethernet, Optical CAN (for parallel operation only)
<b>Ambient temperature</b>	0°C ... 40°C
<b>Relative humidity</b> (non-condensing)	max. 80% for temperatures <31°C, decreasing linearly to 50% at 40°C

## OPTIONS DCS series

OPT.DCS.14	Current and voltage monitoring unit, DCS series only
OPT.DCS.16	Extended frequency range 16 2/3Hz ... 100Hz, DCS /T series
OPT.DCS.16K	Extended frequency range 16 2/3Hz ... 1kHz, DCS series
OPT.DCS.IO.F	Additional I/O ports DCS series
OPT.DCS.IO.T	Additional I/O ports DCS /T series
OPT.DCS.RSA	Redundant safety shutdown

### Remarks:

- 1) At nominal current

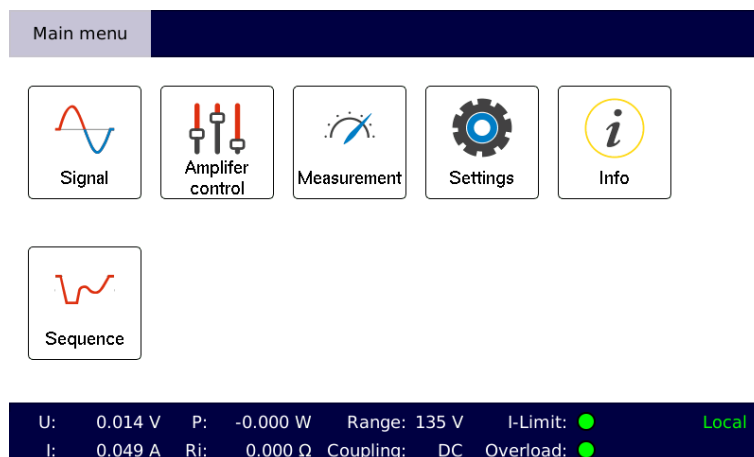


Bild 2: Main menu