



ACS

AC Test Sets

Sold & Serviced in USA by:



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Datasheet



HAEFELY

Current and voltage – our passion

Designed by



General Description

AC high voltage sources are used for dielectric proof tests on high voltage components - according to IEC and ANSI standards - such as distribution transformers, instrument transformers, switchgear, bushings, motors, cable terminations to give just a few examples.

The ACS range is our latest generation of standard dielectric test sets, they are easy and safe to use with long trouble free life cycle.

HAEFELY HVC 300 AC controls the system. This state of the art PLC based control includes all necessary

components for the operation of the test system and communicates with a standard Windows based computer running CaMS™ (Control and Measurement Studio), our universal platform for controlling test systems and measuring instruments

The ACS test sets can be combined with our highly accurate measuring instruments to perform additional tests like partial discharges or $\tan \delta$ (dissipation factor).

Features	Advantages
<ul style="list-style-type: none"> Fulfils IEC, IEEE and other relevant standards 	<ul style="list-style-type: none"> Guarantees test procedures and measurements as defined in the standards, guarantees reliable and traceable test results.
<ul style="list-style-type: none"> Highest industrial Safety Integrity Level SIL 3 (ISO 61508) certified. 	<ul style="list-style-type: none"> Guarantees maximum operator safety.
<ul style="list-style-type: none"> All in one solution from a single supplier 	<ul style="list-style-type: none"> Plug and play including the source and the measuring devices
<ul style="list-style-type: none"> HVC 300 AC control unit with HAEFELY CaMS™ user interface 	<ul style="list-style-type: none"> Windows based graphical user interface allows the operator to start using the system with minimal training.
<ul style="list-style-type: none"> Tank type oil isolated HV transformer with capacitive bushing, temperature indicator and dehydrated breather. 	<ul style="list-style-type: none"> Reliable transformer design which guarantees a long trouble free life.
<ul style="list-style-type: none"> Fastest and most reliable electronic flash detection 	<ul style="list-style-type: none"> keeps the test object safe in case of failure faster than a traditional current detection based method
<ul style="list-style-type: none"> PD free (option) 	<ul style="list-style-type: none"> The PD free options allows a PD level $<1 \text{ pC}^{(1)}$

⁽¹⁾ at the end of HV filter. (Inherent PD of the system, not considering environmental noise)

Applications

Performing dielectric test in high voltage apparatus like:

- HV components
- Instrument Transformers
- Distribution Transformers
- Switchgear
- Bushings and Arrestors
- Rotating machines
- Cable joints
- Connectors and isolators

Scope of Supply

AC dielectric test set ACS VV⁽¹⁾-PP⁽²⁾ including:

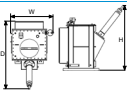
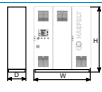
- STL Regulating cabinet
- HVC 300 AC embedded measuring and control device
- PK Tank type step up transformer
- CaMS™ Remote Software
- Power, measuring and communications cables, 20m length
- Ground Stick
- Emergency stop
- Test report
- Instruction Manuals

⁽³⁾VV = VOLTAGE (kV) ; ⁽⁴⁾PP = POWER (kVA), For accessories and options please see the ACS brochure, can be download from www.haefely.com

Technical Data

General							
	Reg.	Transf.	O. Volt. ⁽¹⁾ (kV)	O. Power (kVA)	O. Current (mA)	I. Power (kVA)	Duty Cycle
ACS 25-20	STL 20	PK 25-20	25	20	800 ⁽²⁾	22	1h ON, 1h OFF, 4 times/day
ACS 25-40	STL 40	PK 25-40	25	40	1600 ⁽²⁾	42	1h ON, 1h OFF, 4 times/day
ACS 25-60	STL 60	PK 25-60	25	60	2400 ⁽³⁾	62	15' ON, 1h OFF, 4 times/day
ACS 25-80	STL 100	PK 25-80	25	80	3200 ⁽³⁾	82	15' ON, 1h OFF, 4 times/day
ACS 50-20	STL 20	PK 50-20	50	20	400 ⁽²⁾	22	1h ON, 1h OFF, 4 times/day
ACS 50-40	STL 40	PK 50-40	50	40	800 ⁽²⁾	42	1h ON, 1h OFF, 4 times/day
ACS 50-60	STL 60	PK 50-60	50	60	1200 ⁽²⁾	62	1h ON, 1h OFF, 4 times/day
ACS 50-100	STL 100	PK 50-100	50	100	2000 ⁽²⁾	102	1h ON, 1h OFF, 4 times/day
ACS 75-20	STL 20	PK 75-20	75	20	267 ⁽²⁾	22	1h ON, 1h OFF, 4 times/day
ACS 75-40	STL 40	PK 75-40	75	40	533 ⁽²⁾	42	1h ON, 1h OFF, 4 times/day
ACS 75-60	STL 60	PK 75-60	75	60	800 ⁽²⁾	62	1h ON, 1h OFF, 4 times/day
ACS 75-100	STL 100	PK 75-100	75	100	1333 ⁽³⁾	102	15' ON, 1h OFF, 4 times/day
ACS 100-20	STL 20	PK 100-20	100	20	200 ⁽²⁾	22	1h ON, 1h OFF, 4 times/day
ACS 100-40	STL 40	PK 100-40	100	40	400 ⁽²⁾	42	1h ON, 1h OFF, 4 times/day
ACS 100-60	STL 60	PK 100-60	100	60	600 ⁽²⁾	62	1h ON, 1h OFF, 4 times/day
ACS 100-100	STL 100	PK 100-100	100	100	1000 ⁽²⁾	102	1h ON, 1h OFF, 4 times/day

(1) Output voltage at continuous duty cycle, 75% of the output voltage, (2) Output current at continuous duty cycle & 75% of the output current. (3) Ask Haefely for continuous duty

Mechanical									
	PK 25 - 20 PK 25 - 40	PK 25 - 60 PK 25 - 80	PK 50-20 PK 50-40	PK 50 - 60 PK 50 - 100	PK 75-20 PK 75-40	PK 75-60 PK 75-100	PK 100-20 PK 100-40	PK 100-60 PK 100-100	
Dimen. ⁽²⁾									
W - Width	900 mm	950 mm	900 mm	980 mm	900 mm	980 mm	995 mm	1100 mm	
D - Depth	1500 mm	1500 mm	1500 mm	1550 mm	1550 mm	1600 mm	1600 mm	1650 mm	
H - Height	1600 mm	1600 mm	1600 mm	1600 mm	1700 mm	1700 mm	1700 mm	1700 mm	
Weight ⁽²⁾	520 kg	930 kg	530 kg	950 kg	540 Kg	970 kg	560 kg	990 kg	
	STL 20		STL 40		STL 60		STL 100		
Dimen. ⁽²⁾									
W - Width	1800 mm		1800 mm		1800 mm		1800 mm		
D - Depth	890 mm		890 mm		890 mm		890 mm		
H - Height	2200 mm		2200 mm		2200 mm		2200 mm		
Weight ⁽²⁾	625 kg		740 kg		850 kg		920 kg		

(2) Dimensions and weights are approximate and can vary with the final design.

Common specs			
PD level	Standard	ACS PD FREE 10 ^(opt)	ACS PDFREE 1 ^(opt)
PD level	<25 pC	<10 pC	<1 pC
Tan δ, GST mode ready	Yes		
Bushing	Resin impregnated paper, bushing tap as capacitive divider for voltage reading.		
Control	HVC 300 AC CaMS™ software on Windows based computer ^(opt) , ethernet or fiber optic connection ^(opt)		

Measurement	
Voltage meas. modes	peak, peak/√2, rms.
Voltage range / accuracy	1V _{peak} ... 200 V _{peak} (8 ranges) / ± 1.0% RD, ± 0.01% Range. 4 digits.
Flash detection	Included, transient detection on voltage reading, response time < 20msec.
Current meas. modes	Peak, rms
Current ranges / accuracy	100 mA ... 5A (6 ranges) / ± 1.0% RD, ± 0.01% Range – 4 digits
Overcurrent detection	Included, slope

Environmental and Power Supply	
Operating temperature	0°C +40°C
Storage temperature	-5°C ... +50°C
Humidity	5 ... 90% r.h , non-condensing
Altitude above sea level	< 1000 m , voltage derated by 1% per 100m above
Colours	RAL 9002 (Tanks and cibles) , Aluminium (Electrodes)
Power supply Spec.	2 x 400 V ± 10 % ⁽³⁾ (Standard) – Other input voltages with the ACS TRANS ^(opt)

PC, Screen Resolution and Operation System Requirements	
PC min. configuration	Intel Core i3@ / AMD Athlon II X2@ or better, 4 GB RAM, Ethernet / USB 2.0
Screen resolution	1920 x 1080 (FHD)
Operation system	Windows 10™ 64 bits

Applicable Standards	
Safety	SIL III
CE conformity	EMC Directive 2014/30/EU

(opt) optional

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HAEFELY

Current and voltage – our passion



HIGH VOLTAGE



INSTRUMENTS



EMC


precision.
swiss made.