

of **Tradinco Instruments**  
**Tradinco Calibration Laboratory (TCL)**  
**Berkel en Rodenrijs**

Valid from: **16-12-2009** to **11-04-2013**

Replaces annex dated: **25-03-2009**

Premises: -

HCS code	Measured quantity, Range/ Instrument	Frequency / Range	Best measurement capabilities ( $k=2$ )	Remarks
LF 00	DC/LF Quantities			
LF 11	Direct voltage			
	10 mV – 100 mV		$4,5 \cdot 10^{-5} \cdot U$	Measuring
	100 mV – 1 V		$2,0 \cdot 10^{-5} \cdot U$	
	1 V – 1000 V		$1,5 \cdot 10^{-5} \cdot U$	
	330 mV – 1030 V		$6,0 \cdot 10^{-5} \cdot U$	Generating
LF 2 1	Direct current			
	100 $\mu$ A – 10 mA		$7,0 \cdot 10^{-5} \cdot I$	Measuring
	10 mA – 100 mA		$1,3 \cdot 10^{-4} \cdot I$	
	100 mA – 1 A		$3,0 \cdot 10^{-4} \cdot I$	
	3,3 mA – 33 mA		$(1,5 \cdot 10^{-4} - 2,2 \cdot 10^{-4}) \cdot I$	Generating
	33 mA – 330 mA		$2,7 \cdot 10^{-4} \cdot I$	
	330 mA – 1,2 A		$3,8 \cdot 10^{-4} \cdot I$	
LF 3 1	Alternating voltage			
	100 mV – 100 V	40 Hz – 1 kHz	$1,5 \cdot 10^{-3} \cdot U$	Measuring
	100 mV – 1 V	1 kHz – 100 kHz	$1,8 \cdot 10^{-3} \cdot U$	

This annex has been approved by:

Ir. J.C. van der Poel  
Chief Executive



of **Tradinco Instruments**  
**Tradinco Calibration Laboratory (TCL)**  
**Berkel en Rodenrijs**

Valid from: **16-12-2009** to **11-04-2013**

Replaces annex dated: **25-03-2009**

HCS code	Measured quantity, Range/ Instrument	Frequency / Range	Best measurement capabilities ( $k=2$ )	Remarks
PV 0 0	Pressure and vacuum			
PV 1 1	Absolute gas pressure	1 kPa to 3,5 kPa	$6 \text{ Pa} + 1,0 \cdot 10^{-4} \cdot p$	Gas
		3,5 kPa to 67 kPa	$45 \cdot 10^{-6} \cdot p$ (not smaller than 2 Pa)	
		67 kPa to 7 MPa	$35 \cdot 10^{-6} \cdot p$ (not smaller than 3 Pa)	
		7 MPa to 35 MPa	$1,0 \cdot 10^{-4} \cdot p$	
PV 1 2	Over atmospheric gas pressure	20 Pa to 1,4 kPa	$250 \cdot 10^{-6} \cdot p_e$ (not smaller than 0,15 Pa)	Gas
		1,4 kPa to 7 MPa	$35 \cdot 10^{-6} \cdot p_e$ (not smaller than 0,35 Pa)	
		7 MPa to 35 MPa	$1,0 \cdot 10^{-4} \cdot p_e$	
PV 2 1	Absolute liquid pressure	350 kPa to 1,5 MPa	$1,0 \cdot 10^{-4} \cdot p$	Oil
		1,5 MPa to 80 MPa	$70 \cdot 10^{-6} \cdot p$ (not smaller than 150 Pa)	
		80 MPa to 100 MPa	$115 \cdot 10^{-6} \cdot p$	
		100 MPa to 250 MPa	$2,0 \cdot 10^{-4} \cdot p$	
PV 2 2	Over atmospheric liquid pressure	260 kPa to 1,5 MPa	$1,0 \cdot 10^{-4} \cdot p_e$	Oil
		1,5 MPa to 80 MPa	$70 \cdot 10^{-6} \cdot p_e$ (not smaller than 150 Pa)	
		80 MPa to 100 MPa	$115 \cdot 10^{-6} \cdot p_e$	
		100 MPa to 250 MPa	$2,0 \cdot 10^{-4} \cdot p_e$	
PV 3 1	Under atmospheric pressure	-100 kPa to -4 kPa	$1,0 \cdot 10^{-4} \cdot p_e$	Gas

Annex to ISO/IEC 17025 Accreditation  
with number: **K 050**

of **Tradinco Instruments**  
**Tradinco Calibration Laboratory (TCL)**  
**Berkel en Rodenrijs**

Valid from: **16-12-2009** to **11-04-2013**

Replaces annex dated: **25-03-2009**

Remarks:

- § The calibrations are carried out at an ambient temperature of 20 °C (nominal).
- §  $p_e = p - p_{amb}$ ;  $p_e$  is the gauge pressure,  $p_{amb}$  is the ambient pressure.
- § The best measurement capability: the highest achievable accuracy for a given measuring point or measuring range, expressed as the total positive and negative measurement uncertainty.
- § The measurement uncertainty is calculated according to EA-4/02 "Expression of the Uncertainty of Measurement in Calibration".

This annex is applicable to calibrations carried out in the own laboratory.