Conversion of the ADC values

			Saved as	Offset	Gain	Factor b	Physical factor k		Measurand	Unit
Scope	CH	1	Int16	1,36E-02	8,76E-05	5,299641744	2,00	A/V	Current	[A]
	CH	2	Int16	1,50E-02	8,68E-05	5,299641744	2,00	A/V	Current	[A]
	CH	3	Int16	1,09E-02	8,65E-05	5,299641744	2,00	A/V	Current	[A]
				Offset	Gain	Factor b	Physical factor k		Measurand	Unit
DAQ1	CH	1	Int32	0	5,36E-09	1	250	Pa/V	Sound pressure	[Pa]
	CH	2	Int32	0	5,36E-09	1	1	g/V	Acceleration plain bearing	[g]
	CH	3	Int32	0	5,36E-09	1	10	g/V	Acceleration piston rod	[g]
	CH	4	Int32	0	5,36E-09	1	10	g/V	Acceleration ball bearing	[g]
				Offset	Gain	Factor b	Physical factor k		Measurand	Unit
DAQ2	CH	1	Int16	0,00488591	3,29E-04	1	1,25	kN/V	Axial force	[kN]
	CH	2	Int16	0,00488591	3,29E-04	1	1,5	Nm/V	Torque	[Nm]
	CH	3	Int16	0,00488591	3,29E-04	1	1	bar/V	Pressure pneumatics	[bar]
	CH	4	Int16	0,00488591	3,29E-04	1	62,5	N/V	Lateral force	[N]
	CH	5	Int16	0,00488591	3,29E-04	1	30	mm/s /V	Velocity	[mm/s]
	CH	6	Int16	0,00488591	3,29E-04	1	0,5	A/V	Active current	[A]

Conversion:

$$Physical\ value[Unit] = ((ADC \cdot Gain) + Offset) \cdot b \cdot k$$

Gain and Offset: Given by the PXI system to convert the binary values into voltage (explanation on the following slide)
Factor b: Caused by a following operational amplifier circuit determined empirically by measuring input and output voltage
Physical factor: Given by the datasheets of the sensors

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