

TC.ACSUSense



TC.ACSUSense – optional sense board



Interface TC.ACSUSense

- To compensate for the voltage drop on the load cables and correct the RMS value.
- Allows extending the programmable output voltage by taking into account the ratio of an external transformer.
- To compensate for the voltage loss of an external step-up/down transformer and control the correct RMS voltage at the output of the transformer.
- The voltage difference between TC.ACS output and sensed voltage is monitored. The device will shut down with an error message if the limit is exceeded.

Technical data

Topic	Data	Comments
Type of transformers	1x 3 ph YNyn0 3x 1ph	N1', N2', N3' may be connected or separate
Nominal frequency	50/60 Hz	
Max voltage	1000Vrms / 1500Vp	(L-L)
	1000Vrms / 1500Vp	(L-N / L-PE)
	500Vrms / 750Vp	(N-PE)
Max voltage compensation	15 %	excl. transformer ratio n: (Vacs*n*1.15)
Resolution	12 bit	

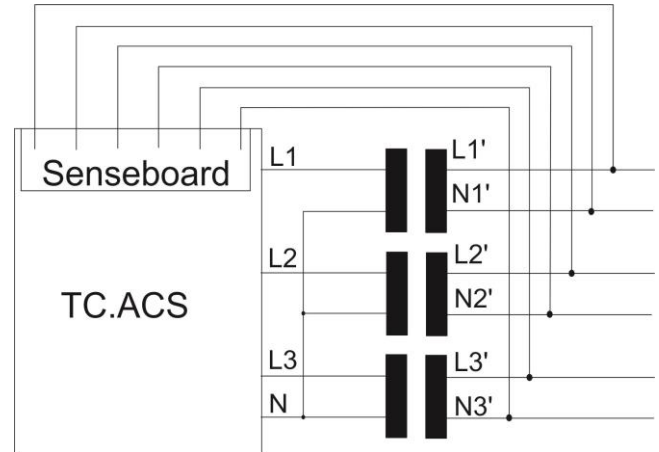
Remarks

The TC.ACSUSense is installed instead of the analogue amplifier card at the same option slot.

The port X614 is currently not supported

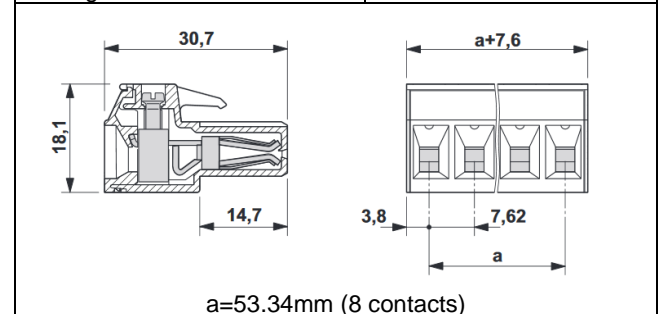
The RS232 interface on the card is used for specific firmware updates

Block diagram with transformer



Connection

Parameter	Value
Plugs used (included)	Phoenix PC4/8-ST-7.62
Spacing	7.62mm
Ratings	630V / 20A / 4mm ²



Item reference

TC.ACSUSense

Article number

PSLUSense



TC.ACS.DIG8IOST



TC.ACS.DIG8IOST



Interface TC.ACS.DIG8IOST

- Expands TC ACS with freely programmable isolated digital in- / outputs.
- LED status indicator on each digital port
- LED error indicators on digital in or out group
- 8 digital inputs 24V.
- 8 digital outputs 24V / 0.7A
- 4 potential free relay contacts SPDT

Technical data

X645 supply

Parameter	Value
Input voltage „+24V Ext“	20.4VDC...28.8VDC
Protection	Limited inrush current
Isolation vs. PE	250VDC
Output Voltage „+24V Aux“	23.2VDC...24.8VDC
Max. power „+24V Aux“	6W
Protection	Short circuit, overload
Isolation vs. PE	250VDC

X641 digital outputs

Parameter	Value
Max. current output (1 ch.)	0.7A
Max. peak current (1 ch.)	1.4A
Max. peak current (all ch.)	5.6A
Turn-on time	64µs (typ.), 120µs (max.)
Turn-off time	89µs (typ.), 170µs (max.)
Slew rate	1 V/µs (typ) @ $R_L=47\Omega$
Protection	Short circuit, overload, current limit, overvoltage protection when switching inductive loads
Isolation vs. PE	250VDC

X642 digital inputs

Parameter	Value
Max. voltage	30.0 VDC
Min. voltage (high)	15.0 VDC
Min. current (high)	2 mA
Max. voltage (low)	5.0 VDC (15.0 VDC @ $I<0.5mA$)
Isolation vs. PE	250VDC

X640 relay contacts

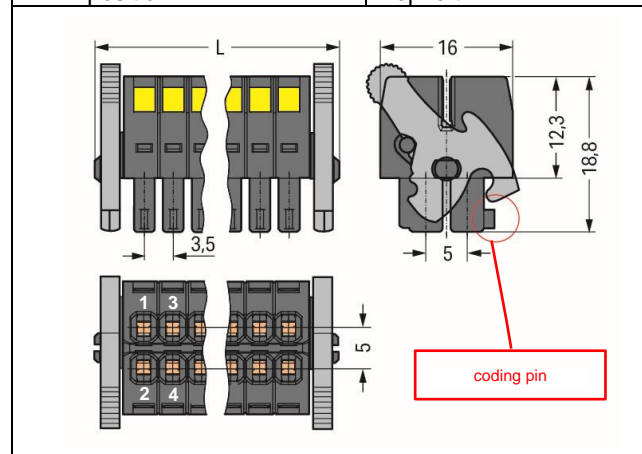
Parameter	Value
Nominal switching capacity (resistive load)	NO:5A 250VAC, 5A 30VDC NC:2A 250VAC, 1A 30VDC
Max. switching voltage	250VAC
Max. switching current	NO: 10A NC: 3A
Min. switching capacity (reference value)	100mA 5VDC
Max. switching power (resistive load)	150W 1250VA
Isolation voltage between channels	100Vrms, reinforced insulation
Isolation between contacts and +24VExt and Aux	300Vrms, reinforced insulation
Isolation vs. PE	300Vrms, basic insulation

1) The relay contacts are able to switch mains voltage. Due to air- and creepage distances, a mixed operation of mains voltage and 24V is not allowed.

2) according EN50178, degree of soiling 2

Connection

Parameter	Value
Plugs used (included)	WAGO series 713
Spacing	3.5mm
Pin 1 position	Top left



Item reference

TC.ACS.DIG8IOST

Article number

PSLDIG8IOST

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This information is subject to change without notice.

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