COMPUTERS & CONTROL

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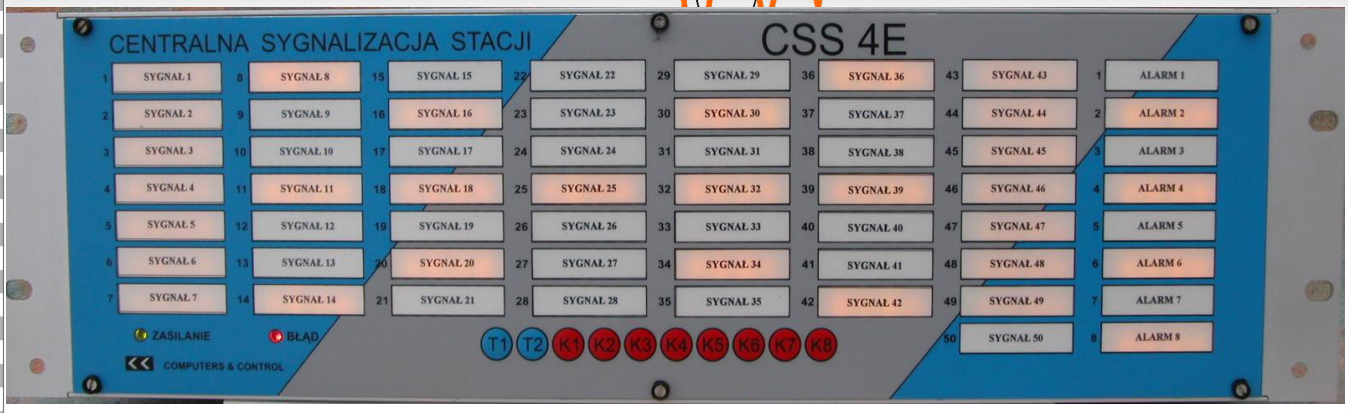
CSS4E

DATA ACQUISITION UNIT



CSS4E is a freely programmable, scalable device equipped with up to 112 individual isolated digital inputs, up to 64 configurable relay outputs and different versions of LED indicators panel, which indicates occurrence of a specific state of the binary inputs and outputs. Received digital signals can be grouped and individually assigned to optical indicators and relay's outputs. CSS4E also has the possibility of recording, reproduction and translation of the input signals, the mutual conditioning of their logic and allows the customer to carry out the functions of the field trivalent logic. Occurs both in the enclosures to be mounted in cabinets (3U or 6U) and at wall (CPRO-84/3U only) housing.

Depending on the version of the implementation various sizes of the signaling field are offered:

LED field size	Housing type	
	3U Cassette	6U Cassette
40 x 12 [mm]	50 input signal indicators 8 output signal indicators	106 input signal indicators 16 output signal indicators
30 x 20 [mm]	32 input signal indicators 4 output signal indicators	64 input signal indicators 8 output signal indicators

CSS4E is an open system - the basic input or output module can be attached to the main unit depending of needs. One CSS4E module may contains (regardless of the housing type and LED size or quantity) up to 16 modules with 8 input/output each,(up to 112 inputs and up to 64 outputs total) and 10 freely programmable keys pursuing example function tests or deletion. These keys can be duplicated by any of the binary input. Every CSS4E module has his own power supply, on demand the two independent power supplies in one unit is available.

Device can read simultaneous signals and send them to the master systems using protocols IEC 60870-5-103 and XMD-CCBUS - possibility of full device control /setting, adjust, reading/ and data presentation is achieved via SAZ-2000 program.

Advanced logic function module /with selectable functors and delays/, automatic summer/winter time zone adjust, all-year programmable calendar with freely adjusted activity zones, galvanic separation of inputs and outputs, two separate configurations sets and three password – protected access levels enables realization of the most sophisticated applications.

Basic technical data

Binary inputs

Insulation withstand – 3[kV] AC/DC, 5[kV] 5[us] pulse
Current consumption – 5[mA]/input
Logic levels /depends of needs/:

110[V]DC nominal voltage case:	(0-60)[V]	= FALSE,	(70-121)[V] = TRUE
220[V]DC nominal voltage case:	(0-145)[V]	= FALSE,	(165-242)[V] = TRUE
12[V]DC nominal voltage case:	(0-8)[V]	= FALSE,	(9-30)[V] = TRUE
24[V]DC nominal voltage case:	(0-16)[V]	= FALSE,	(18-30)[V] = TRUE

Amount of binary inputs
up to112 freely programmable + 1 dedicated (ParSel)

Binary outputs
Switching capacity
One relay - 250[V]AC/8.0[A], 250[V]DC/0.3[A]
Amount
up to 64 freely programmable + 2 dedicated (UP and AI function)

WARNING:
Max. allowable input/output amount can not exceed 128

Casing

Surface mounting case:	CPRO 84/3U weight up to 9[kg] IP class 40 /option – IP65/
Flush mounting cases:	EURO/3U or /6U (rack 19") weight up to 7[kg] IP class 40 /option - IP65/

Allowable ratings

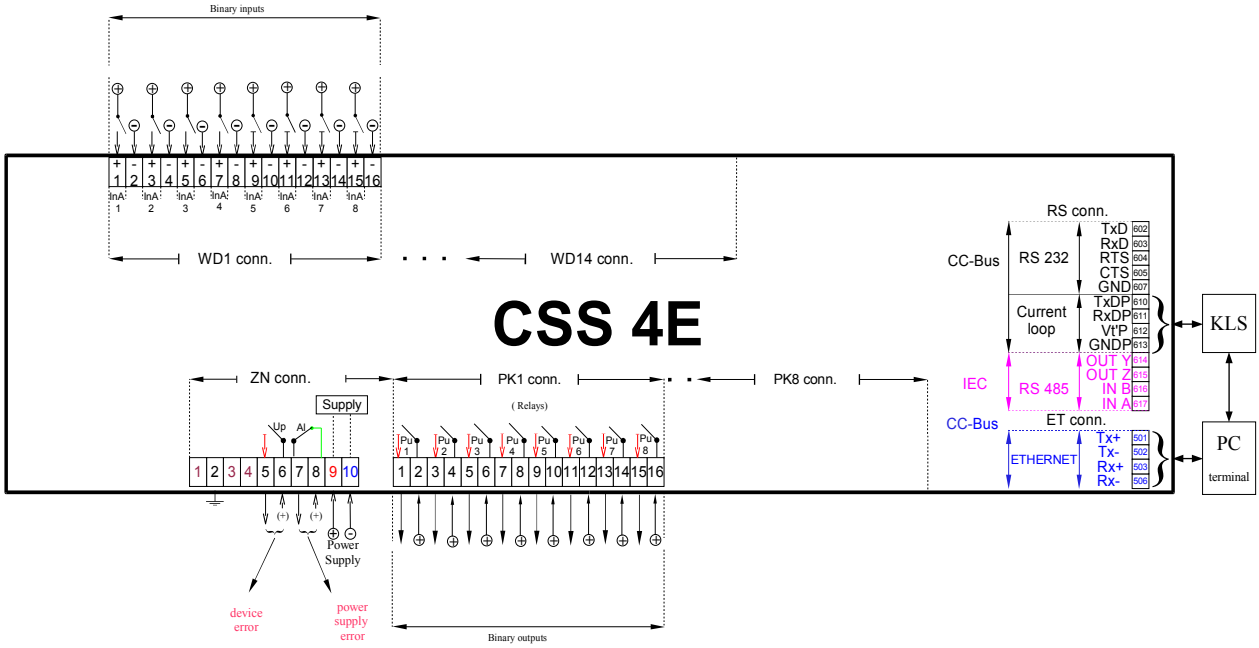
Supply voltage:	90-340[V]DC / 65-240[V]AC
Operation temperature:	0[°C] to +40[°C]
Storage temperature:	-10[°C] to +70[°C]
Storage humidity:	40-80[%]

Interfaces

CCBUS protocol :	RS232, CL (current loop) and Ethernet (separate channel), (optional fiber optic interface)
IEC 60870-5-103 protocol:	RS485, (optional fiber optic interface)
CANBUS protocol (option):	2 x RS485

Event recorder
Capacity: min. 1000 events (with separate time stamp)

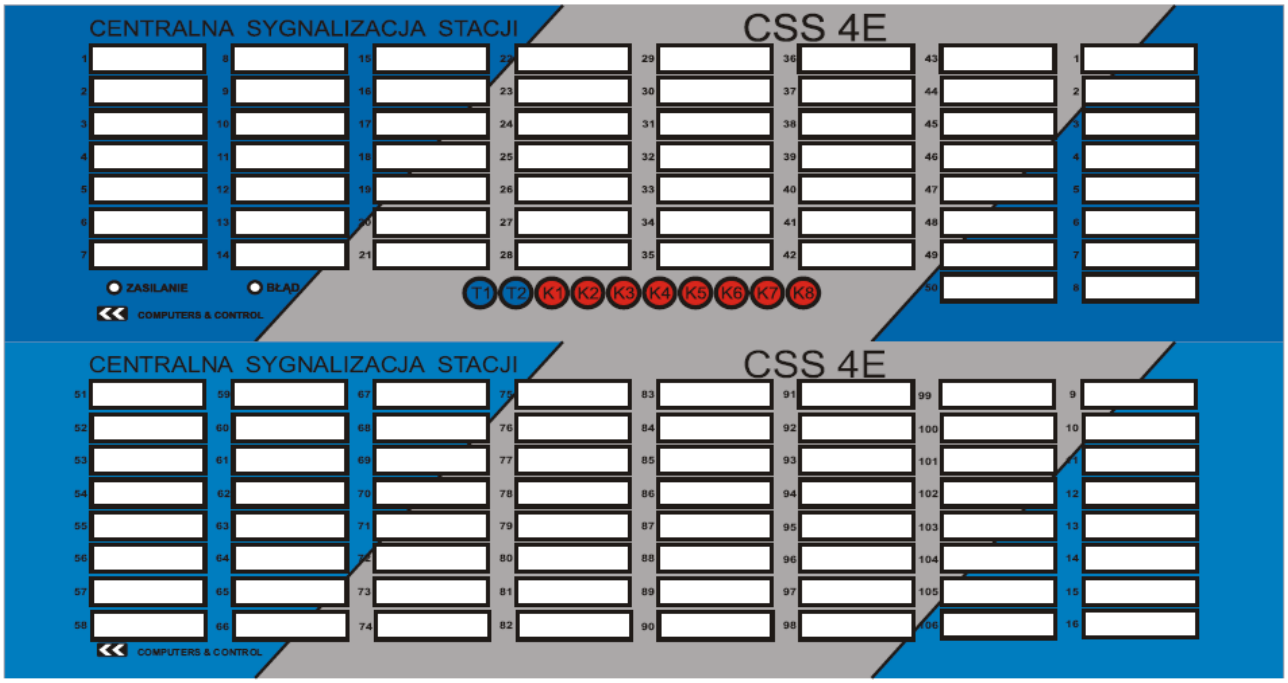
CSS 4E example assembly diagram



Notes:

1) Output relay contacts in the non-powered unit state;
2) Although CSS 4E can be equipped with up to 14 **WD** input modules and up to 8 **PK** output modules, overall number of modules can not exceed 16

40x12[mm] LED field size example front panel



30x20[mm] LED field size example front panel

Regulations:

No.	Test type	Standard	Tested elements	Test range
1	Electrostatic discharge immunity	PN-EN 50263:2002 PN-EN 60255-22-2:1999	Through the housing access	-6/8[kV] contact discharge -8/15[kV] discharge through the air
2	Resistance to electrical fast transients	PN-EN 50263:2002 PN-IEC 60255-22-4:1996 PN-EN 61000-4-4:2005	Power port I/O ports	class III – 2[kV] class IV – 4[kV]
3	Shock resistance	PN-EN 50263:2002 PN-EN 60255-22-5:2003 PN-EN 61000-4-5:2006	Power port I/O ports	class III : - common voltage – 2[kV] - differential voltage – 1[kV]
4	Immunity from electromagnetic fields	PN-EN 60255-22-3:2002	Device	- frequency: (900 ± 5)[MHz] - electromagnetic field level: 10[V/m]
5	Conducted immunity induced by radio frequency fields	PN-EN 60255-22-6:2004	Power port I/O ports	- frequency: 0,15< f < 80[MHz] - amplitude : 10[V] r.m.s unmodulated - source impedance: 150[Ω]
6	Sinusoidal vibration	PN-EN 60068-2-6:2002	Device	- frequency: (10-150)[Hz] - acceleration: 5[m/s^2] (rms)
7	Tolerance to cold	PN-EN 60068-2-1:2007(U)	Device	test temperature: (-5)˚C 1. fall time to test temperature 1[h] test duration 1[h] 2. fall time to test temperature 0,4[h] test duration 16[h] 3. initial temperature (-5)˚C test duration 1[h]
8	Tolerance to dry heat	PN-EN 60068-2-2:2002	Device	test temperature: (+50)˚C rise time to test temperature 0,5[h] test duration 96[h]
9	Resistance to cold	PN-EN 60068-2-1:2007(U)	Device	temperature: (-10)˚C test duration 96[h]
10	Resistance to dry heat	PN-EN 60068-2-2:2002	Device	temperature: (+60)˚C test duration 96[h]

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