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Signal Conditioning Platform (SCP)

Type 2853A...

Universal Measuring Platform

With the SCP, Kistler Instrumente AG offers a practical signal conditioning unit in a standardized and modular design for use in the following sectors: "Acceleration", "Plastics processing" and "Combustion engines". The SCP consists of a standardized base unit and application-orientated modules.

The SCP features the following characteristics:

- Rack-mounted or desktop unit in a standardized 19" construction
- Normal and remote control using standardized communication protocols
- Menu-driven configuration via a GUI (Graphical User Interface)
- Application-specific modules for charge amplification, piezoresistive amplification, universal low-voltage amplification as well as signal conditioning individually tailored for each sensor
- Complete integration into Kistler software ("Plastics" field)
- Consisting of a base unit (Master) expandable by one additional (Slave) unit ("Combustion engines" sector)
- Optional automatic sensor detection (for "Combustion engines" and "Acceleration" sectors)

The application-specific modules are described in the relevant data sheets:

"Plastics processing"	Data sheet 000-408e (DB19.001e)
"Combustion engines"	Data sheet 000-409e (DB19.002e)
"Acceleration"	Data sheet 000-410e (DB19.003e)

Description of SCP

The SCP consists of a base unit and the application-specific modules.

A base unit consists of the chassis (Type 2853A) in 19" construction together with the module cards for the power supply, data communication (Type 5615A) and for the signal output (Type 5225A).

The power supply is an integral part of the base unit and contains a universal voltage conditioning system with high interference immunity. External data communication between SCP and a higher level computer is carried out by the module for data communication (Type 5615A) via an RS 232C interface. All analog measuring signals from the application-specific modules are made available for further processing by the signal output module (Type 5225A).

The base unit (Master) can be supplemented by one 19" additional unit (Slave), in which data communication continues to take place via the base unit. ("Combustion engines" sector).

A maximum of 8 slots is available per unit for modules with up to four measuring channels. Therefore, the base unit can provide a maximum of 32 measuring channels or, with the additional unit, a maximum of 64 measuring channels. In addition, up to 4 potential-free outputs are available to drive external equipment. The internal and external processes can be synchronized with trigger signals.

Parameters can be set for all SCP functions via the SCP configuration software (5.590.239) for Windows 98SE, NT, 2000 as well as XP. Standardized protocols for data communication ensure comprehensive compatibility with higher level computer and data acquisition systems.

Orders can be placed using the information from the data sheets for the field of application concerned.

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Technical Data

Chassis		
Module cards	max.	8
Channels	max.	32 per rack
	max.	2 rack combination
Power supply	VAC	100-240 V ±10 %
Max. power input	W	53
Degree of protection	IP	40
Operating temperature	°C	0 ... 60
	°F	32 ... 140
Dimensions		19"/ 3 HE 84 TE
Weight (without modules)	kg	≈5,6
Software		COM components for Microsoft Windows 98,XP,2000, NT

Analog interface card (Type 5225A1)		
Analog outputs		32
Voltage	V	±10
Current	mA	0 ... ±2 (pro Kanal)
Error	%	<±0,1
Trigger output	V	High > 2,4
	V	Low < 0,8
		(electrically isolated)
Connection	Type	Sub. D 37pol. female

CPU interface card Type 5615A (Type 2853A11 and Type 2853A12)		
Interface	RS232	
Trigger input voltage	V	High 3..30
(connected to 5225 trigger output)	V	Low < 2
Current input High	mA	2 ... 29
Digital outputs	floating switches with photo/MOS relay	
Current load (continuous)	mA	<100
Voltage (continuous)	V	<±42
Connection RS232	Type	Sub D 9 pol. female
Connection Operate Outputs	Type	Sub D 15 pol. female

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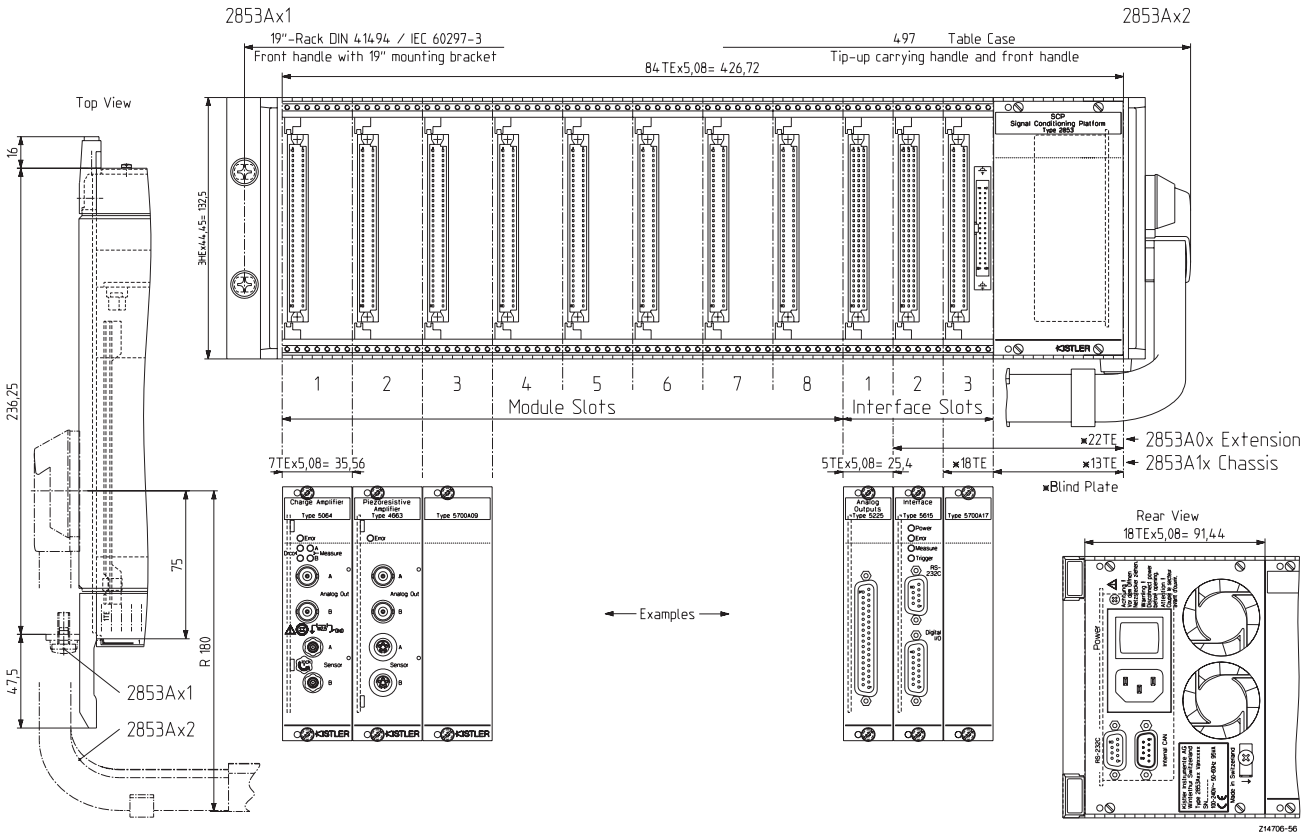
Dimensions



Accessories Included	Type
2853A11 and 2853A12:	
• Software on CD	7.643.014
• CPU interface card	5615A
• Analog interface card	5225A1
2853A01 and 2853A02:	
• Analog interface card	5225A1
• CAN connecting cable 0,5 m	5.590.239

Accessories	
2853A11 and 2853A12:	
• CPU interface card	5615A
• Analog interface card	5225A1
2853A01 and 2853A02:	
• Analog interface card	5225A1

Optional Accessories	
• Communication cable serial 5m	1200A27
• Dummy front panel modules	5700A09
• A/D card 16 channel PC card 12 bit resolution	2855B1
• A/D card 16 channel PC card 16 bit resolution	2855A5
• A/D card 16 channel PCI card 16 bit resolution	2855A4
• A/D card 64 channel PCI card 16 bit resolution	2855A6
• A/D card 16 channel ISA card 12 bit resolution	2855A3
• A/D card 64 channel ISA card 12 bit resolution	2855A2

Connecting cable A/D card SCP chassis	
• A/D card 2855B1	1200B21
• A/D card 2855A5	1200B21
• A/D card 2855A4	1200A13
• A/D card 2855A6	1200A41
• A/D card 2855A3	1200A13
• A/D card 2855A2	1200A41
• Grounding cable	5.590.175

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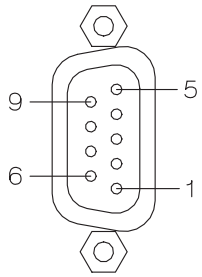
Pin Allocation Sub 9

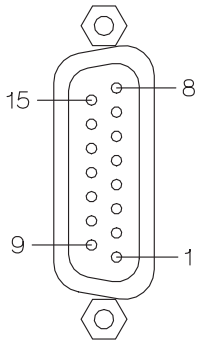


Pin Layout:

1	1, 6, 4
6	1, 6, 4
2	RxD
7	7,8
3	TxD
8	7, 8
4	1, 6, 4
9	NC
5	GND RS

Pin allocation Type 5615A RS232 interface

Pin Allocation Sub 15

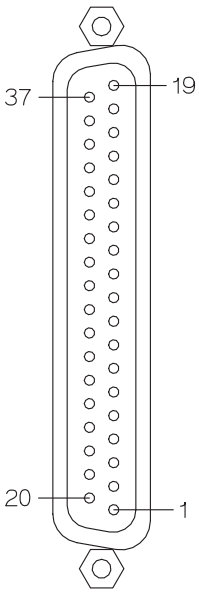


Pin Layout:

1	TRIGGER+
9	TRIGGER–
2	Remote OP+
10	Remote OP–
3	DOUT A1
11	DOUT A3
4	DOUT B1
12	DOUT B3
5	DOUT A2
13	+24 V
6	DOUT B2
14	DOUT A4
7	NC
15	DOUT B4
8	EGND

Pin allocation Type 5615A operate and digital outputs

Pin Allocation Sub 39



Pin Layout:

1	AGND	29	Analog 5C
20	Analog 1A	11	Analog 5D
2	Analog 1B	30	Analog 6A
21	Analog 1C	12	Analog 6B
3	Analog 1D	31	Analog 6C
22	Analog 2A	13	Analog 6D
4	Analog 2B	32	Analog 7A
23	Analog 2C	14	Analog 7B
5	Analog 2D	33	Analog 7C
24	Analog 3A	15	Analog 7D
6	Analog 3B	34	Analog 8A
25	Analog 3C	16	Analog 8B
7	Analog 3D	35	Analog 8C
26	Analog 4A	17	Analog 8D
8	Analog 4B	36	AGND
27	Analog 4C	18	TRIG OUT+
9	Analog 4D	37	TRIG OUT–
28	Analog 5A	19	GND RS
10	Analog 5B		

Pin allocation Type 5225A1 analog outputs and trigger

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