

DataFlow System

Type 2865B...

Process Analyse System for Plastics Processing

DataFlow is a modular system for measuring a wide variety of signals. These can originate from pressure or temperature sensors in molds, or measurements on injection molding machines.

- Highly versatile for use in plastics processing
- Portable

Description

The DataFlow system consists of the measuring unit and the matching DataFlow software. The unit digitizes the sensor signals and the software evaluates the data. The data is transmitted via USB.

The case of the SCP Compact is designed so that it can fit under a laptop or be installed in a test van.

In conjunction with the DataFlow software and the Process-statistics program, the system provides a user-friendly tool for process analysis, optimization and monitoring.

Supported Operating Systems

- Windows XP® Professional Service Pack 2/3
- Windows Vista®

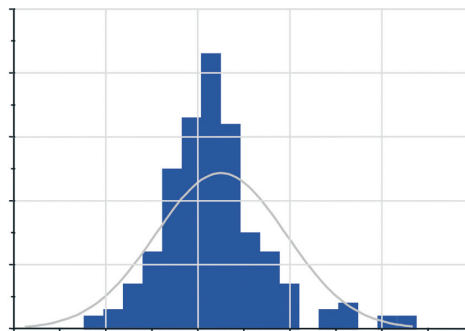
Application

The dataflow system has four main areas of use:

- Process analysis
- Process optimization
- Analysis of production for continuous improvement



DataFlow



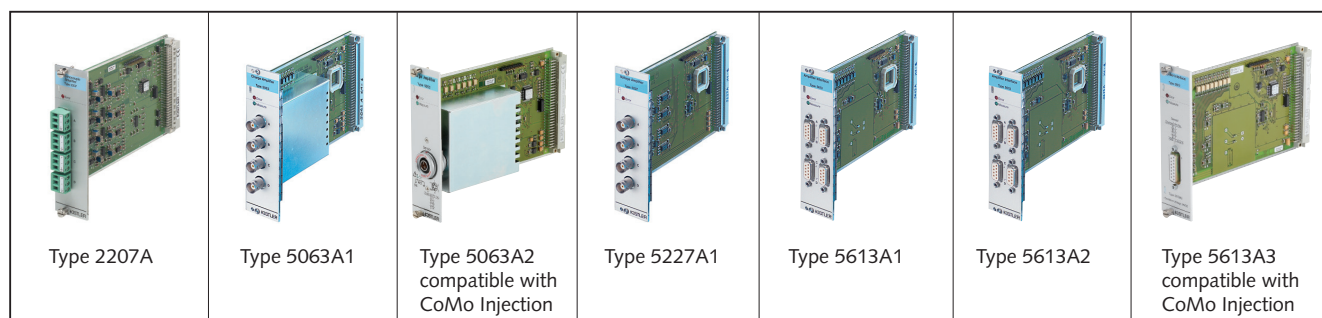
Signal Conditioning System SCP Compact with DataFlow Type 2805A...

Amplifier Modules

The following measuring modules are available:

- 4-channel thermocouple amplifier Type 2207A
- 4-channel charge amplifier Type 5063A1/A2
- 4-channel voltage amplifier Type 5227A1
- 4-channel amplifier module Type 5613A1/A2/A3

Module



Measuring Module Type 2865B00



With the modules Types 5063A2 and 5613A3 the DataFlow system is largely compatible with the CoMo Injection

Technical Data, SCP Compact Base Unit Type 2865B...

Chassis

Module cards	max.	4
Voltage (electrically isolated)	VDC	+5, +5 RS, +15, +15 SA, +24
Power consumption max.	W	53
Channels per rack	max.	16

Power supply

Standard	VDC	10 ... 36 ± 10 %
With external power supply	VAC	100 ... 240 ± 10 %
Power consumption max.	VA	95

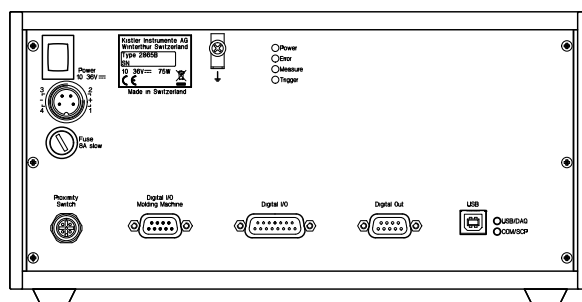
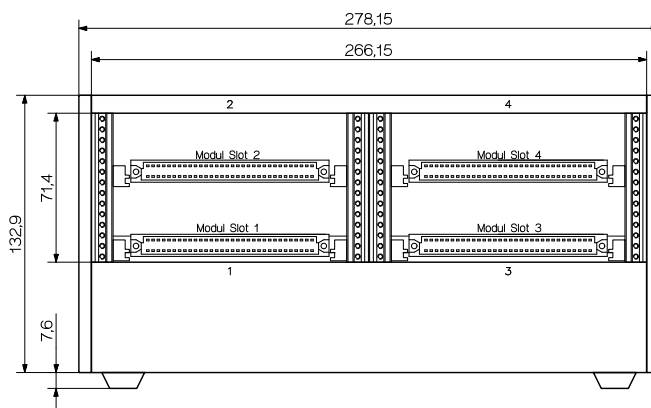
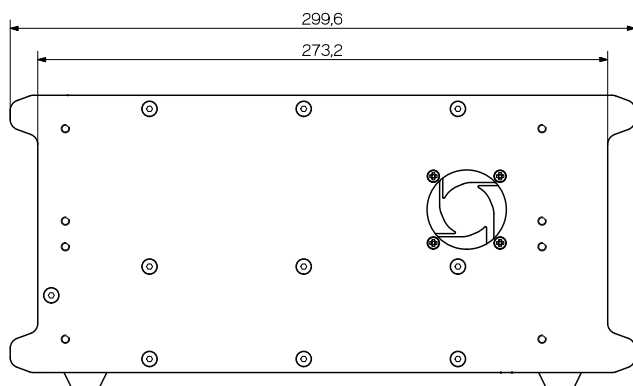
Degree of protection	IP	40
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Operating temperature range	°C	0 ... 50
	°F	32 ... 122

Dimensions Type 2854A131

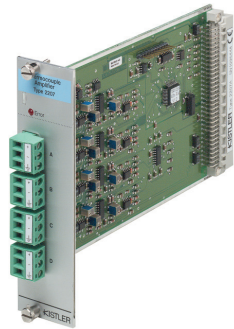
Height	mm	107,6
Width	mm	302,4
Depth	mm	min. 400
Weight (without modules)	kg	$\approx 3,5$

Dimensions



4-Channel Thermocouple Amplifier Type 2207A

Temperature amplifier for the connection of up to 4 thermocouples or temperature sensors Types K and J. The amplifier is equipped with differential amplifier and cold spot compensation.



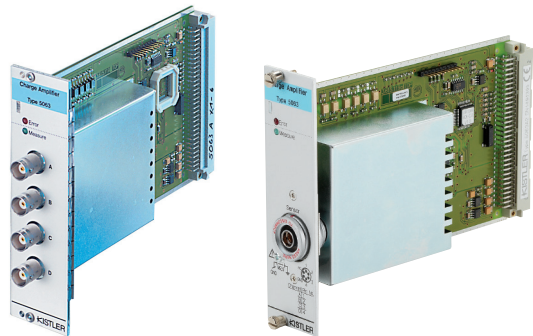
Technical Data

Channels		4
Thermocouple	Type	J or K
Measuring range I	°C	0 ... 400
Measuring range II	°C	0 ... 200
Error measuring range I	%	<0,5
Error measuring range II	%	<0,2
Zero point error	mV	<10 mV
Frequency range (-3 dB)	kHz	0 ... >1
Probe interrupt detection (neg. saturation)	V	-9 ... -10,5

Thermocouple connection	Type	Phönix screw terminals
Weight	kg	≈0,28

4-Channel Charge Amplifier Type 5063A1/A2

The charge amplifier for piezoelectric sensors is equipped with differential inputs and a common ground. All amplifiers have a common "Operate".



Technical Data

Channels		4
Measuring range I	pC	±5 000 ... 50 000
Measuring range I on delivery calibrated to	pC	±20 000
Measuring range I/II ratio		4
Error	%	<±1
Drift 0 ... 50 °C	pC/s	<±0,2
25 °C	pC/s	<±0,05
Frequency range (20 V _{pp})	kHz	0 ... >25
Reset/Operate transition	pC	<±2
Signal polarity	negative input charge results in pos. output voltage	

Max. voltage between sensor GND and output/ supply voltage	V	±50
Common mode noise rejection	dB	>70
Sensor connections	Type	BNC neg.
Weight	kg	≈0,26

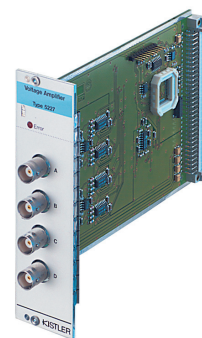
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4-Channel Voltage Amplifier Type 5227A1

Voltage amplifier for the connection of up to 4 "voltage sources" with ± 10 V. The operation of the amplifier is software controlled.



Technical Data

Channels		4
Measuring range	V	± 10
Selectable gain		1/2/5/10
Error	%	$< \pm 0,5$
Zero point error	mV	$< \pm 10$
with gain 10	mV	$< \pm 20$
Frequency range (20 Vpp)	-3 dB kHz	0 ... > 50
	-5 % kHz	0 ... > 30
Max. voltage between sensor GND and output/supply voltage	V	± 50

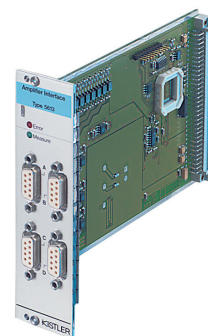
Common mode rejection between sensor GND and output/supply GND	dB	> 70
Input impedance	M Ω	> 10
Sensor connections	Type	BNC neg.
Weight	kg	$\approx 0,21$

4-Channel Amplifier Modules Type 5613A1/A2

Amplifier module for connection of up to 4 external amplifiers or transmitters. The module provides an excitation voltage for the external amplifiers of 24 V (Type 5613A1) or ± 15 V (Type 5613A2) respectively as well as Operate and Range signals (for all channels active simultaneously).

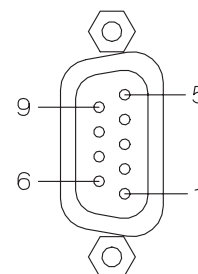
Technical Data

Channels		4
Measuring range	V	± 10
Gain		1
Error	%	$< \pm 0,1$
Zero point error	mV	$< \pm 2$
Frequency range (20V _{pp})	kHz	0 ... > 50
Input impedance	k Ω	> 300
Power supply for external amplifier (electrically isolated)	Type 5613A1 Type 5613A2	
Voltage	VDC	24 ± 15
Current consumption per channel	mA	< 45 $< \pm 30$
Sensor connections	Type	D-Sub 9 pin neg.
Weight	kg	$\approx 0,16$



Pin Allocation D-Sub 9 pin neg.

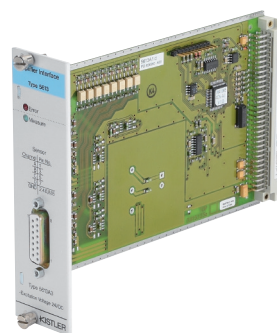
Pin Allocation	
1	(-15 V)
2	+24 V (+15 V)
3	+RANGE II
4	+OPERATE
5	Signal Input
6	Power GND
7	-RANGE II
8	-OPERATE
9	Signal GND



Pin allocation Type 5613A... Operate, Range and excitation voltage for external Amplifier.

4-Channel Amplifier Module Type 5613A3

Amplifier module for four voltage signals with a 24 V supply for an external amplifier such as the temperature amplifier Type 2205A...

**Technical Data**

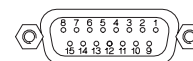
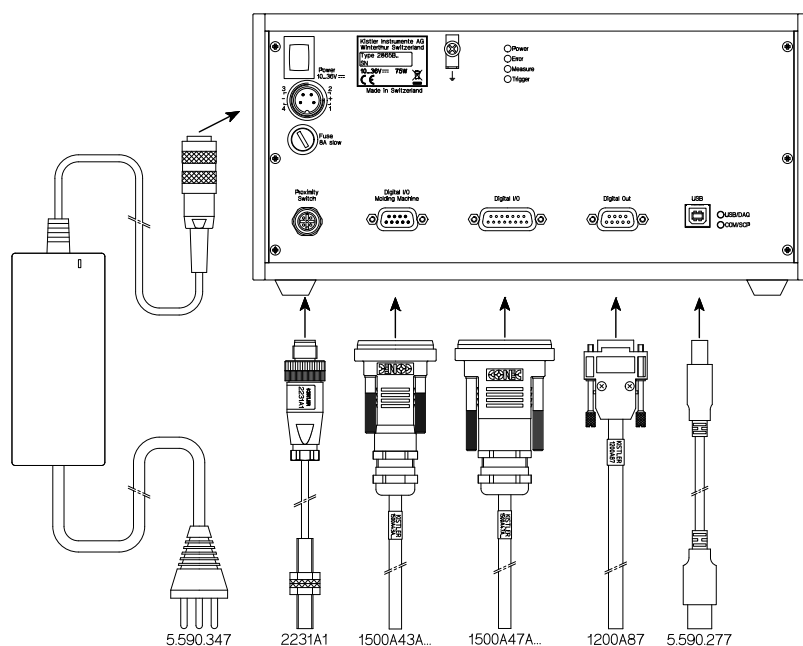
Channel		4
Measuring range	V	± 10
Amplification		1
Error	%	$< \pm 0,1$
Zero point error	mV	$< \pm 2$
Frequency range (20 V _{pp})	kHz	0 ... >50
Input impedance	k Ω	>300

Pin Allocation D-Sub 15-pol. neg.

Function	
Channel 1 +	1
Channel 1 -	2
Channel 2 +	3
Channel 2 -	4
Channel 3 +	5
Channel 3 -	6
Channel 4 +	7
Channel 4 -	8
+24 V	9
Operate +	10
Operate -	11
Range 2 +	12
Range 2 -	13
NC	14
Power GND	15

Type:

D-Sub 15 pol. neg.

Voltage Input
Ch 1 ... 4**Connection External Units**

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Digital outputs

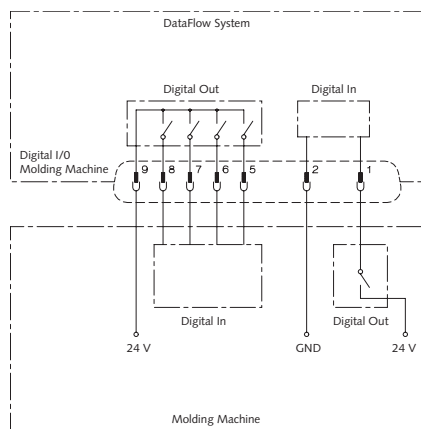
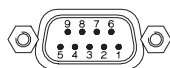
Type	Electrically isolated (Foto MOS-Relais)	
Number	12	
Current load, pulse <0,1 s	mA	<360
Current load continuous	mA	<100
Impedance in the switched condition	Ω	<35
Max. voltage (constant)	VDC	±40

Digitale I/O Molding Machine (the same as on CoMo Injection)

Pin allocation

Function	Default allocation	Pin
DI_1	Cycle start_in	1
Reference point_in		2
open		3
open		4
DO_1	Ready measure_out	5
DO_2	Universal1_out	6
DO_3	Universal2_out	7
DO_4	Universal3_out	8
Reference point_out		9

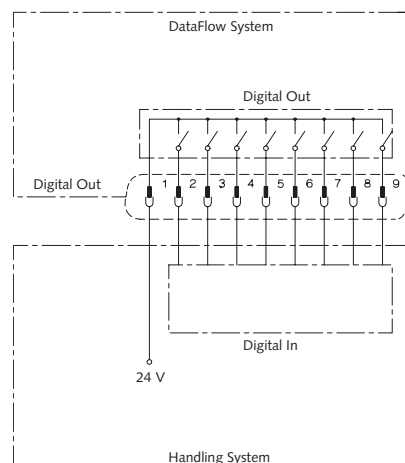
Typ:
D-Sub 9-pol. male
Digital I/O Molding Machine



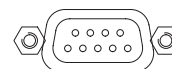
Digitale Out

Pin allocation

Function	Default allocation	Pin
DO_1	EO-Resultat1_out	2
DO_2	EO-Resultat2_out	3
DO_3	EO-Resultat3_out	4
DO_4	EO-Resultat4_out	5
DO_5	EO-Resultat5_out	6
DO_6	EO-Resultat6_out	7
DO_7	EO-Resultat7_out	8
DO_8	EO-Resultat8_out	9
Reference point_out		1



Type:
D-Sub 9-pol. neg.
Digital Out

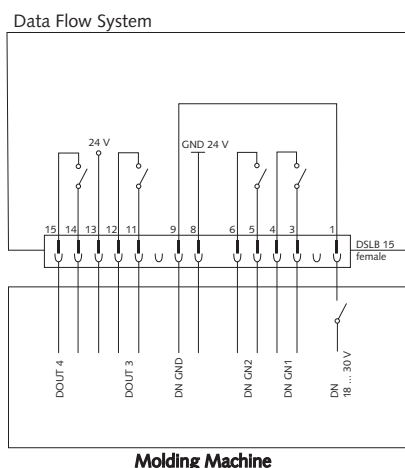
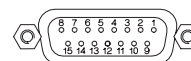


Digitale I/O

Pin allocation

Function	Remark	Pin
DIN	Trigger 18 ... 30 Volt	1
DOUT	A1	3
DOUT	B1	4
DOUT	A2	5
DOUT	B2	6
EGND	GND 24V	8
DIN GND	Trigger GND	9
DOUT	A3	11
DOUT	B3	12
+24 V		13
DOUT	A4	14
DOUT	B4	15

Type:
D-Sub 15-pol. neg.
Digital I/O



Molding Machine

Proximity Switch

Pin Allocation

Function	Pin
+24 V	1
	2
Trigger	3
	4
EGND	5

Type:
M12, 5-pol. neg.
Proximity Switch



Order form with Ordering Code

An order can be accepted only on this form. Please place a check mark next to the measuring modules required and their positions in the rack slots.

DataFlow System without Modules		
Ordering Key		
Type 2865B ☐		
Execution without case	10	
Execution with case	15	
Type 2865B10	Type 2865B15	Type
☒	☒	2865B00 Measuring unit
☐	☒	5.070.127 Case
☒	☒	2231A1 Proximity switch, 5 m
☒	☒	7.643.016 DataFlow Software Type 2805A...
☒	☒	5.510.347 Power supply
☒	☒	1503 country-specific power supply Z16687

Measuring Modules for Base Unit SCP Compact

Measuring modules order as separate position

Slot 1	Slot 2	Slot 3	Slot 4	Type	
☐	☐	☐	☐	2207A	4 channel thermocouple amplifier
☐	☐	☐	☐	5063A1	4 channel charge amplifier
☐	☐	☐	☐	5063A2	4 channel charge amplifier
☐	☐	☐	☐	5227A1	4 channel voltage amplifier
☐	☐	☐	☐	5613A1	4 channel amplifier module
☐	☐	☐	☐	5613A2	4 channel amplifier module
☐	☐	☐	☐	5613A3	4 channel amplifier module
☐	☐	☐	☐	5700A09	Dummy front plate

Please place a check on the allocation for each slot.

Supply

Pin Allocation

Function	Pin
+24 VDC_Power	1, 2
GND 24 V	3, 4

Type:
M12, 4-pol. neg.



Optional Accessories

Type/Art.No.

- Connecting cable: charge amplifier Type 5039A... to amplifier interface Type 5613A1 1200A5
- Connecting cable: hydraulic pressure transmitter K-Line RAG50-A ... BV1B (0 ... 10 V) to amplifier interface Type 5613A1 1200A11
- Connecting cable: SmartAmp Type 5049A... to amplifier interface Type 5613A1 1200A9
- Connecting cable: charge amplifier Type 5011 to amplifier interface Type 5613A1 1200A7
- Connecting cable: piezoresistive amplifier Types 4618A0 and 4618A2 to amplifier interface Type 5613A1 1200A29
- Connecting cable: adapter box Type 5415A1 or multipole connector Type 1708A... to amplifier interface Type 5603A2 1995A...
- Connecting cable: temperature amplifier Type 2205A... to amplifier interface Type 5613A3 1457A...
- Connecting cable: charge amplifier Type 5155A... to amplifier interface Type 5613A3 1200A115A7
- Connecting cable to interface card Type 5615 for digital inputs and outputs 1200A15
- Grounding cable L for ground Loop suppression 5.590.175
- Connecting cable Digital I/O Molding Machine 1500A43A...
- Connecting cable Digital I/O Molding Machine 1200A15
- Connecting cable Digital Out 1200A87
- Connecting cable Digital I/O 1500A47A...

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