

DataFlow

Type 2805A...

Quality Monitoring System

DataFlow is a universal system for process visualization, analysis, monitoring and documentation. Different hardware components can be used to adapt this system to specific application requirements.

The DataFlow package consists of two software products. DataFlow is a data acquisition tool, and DataFlow Statistics a statistics program for producing quality reports and carrying out statistical analyses. The two programs can be installed and run on separate systems, although DataFlow Statistics must have access to the DataFlow data.

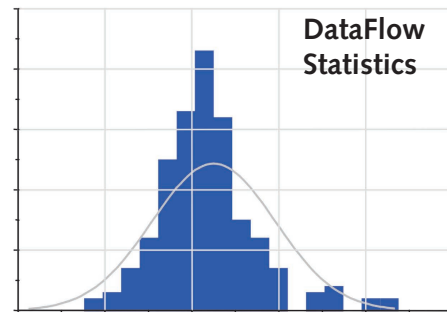
- Process visualization
- Process monitoring (100 %)
- Production documentation of each cycle and all moldings
- Up to 32 input channels
- Wizards for ease of use
- To us with Laptop, Desktop-PC or industrial computer
- Runs under Microsoft Windows® NT 4.0 Servicepack 6, Windows® 2000, Windows® XP

Description

DataFlow was developed for the injection molding process, but its universal functionality also makes it suitable for use in other cyclical industrial production processes requiring documentation.

The software can be installed on a desktop PC in a fixed location or on a laptop for mobile use. In conjunction with the signal conditioner it provides a powerful system for acquiring, processing and documenting an extremely wide variety of process data.

The family of signal conditioner platforms Types 2853A... and 2854A... forms the basis for both mobile and stationary systems. They can be individually equipped with plug-in cards depending on the measuring task and customer requirements. The multi-cavity system Type 6829A... is also supported.



Software module for statistics and documentation

Application

The wizards provided make the software user-friendly.

DataFlow Provides the Following Functionality

- Data acquisition including communication with connected hardware (signal conditioner)
- Graphical display functions (time-dependent, value-dependent, numerical & bar)
- File handling, including import and export of data and files
- Monitoring functions
- Data processing functions (filter, mathematical functions & signal conversion)
- Voltmeter and oscilloscope functions
- Offline data analysis for optimization and evaluation of production
- Static process evaluation
- Quality documentation for internal and external use

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System Requirements

- Operating System Windows® NT 4.0 Servicepack 6, Windows® 2000, Windows® XP
- >128 MB RAM
- CPU speed >600 MHz
- Bus frequency >233 MHz
- Free slot for A/D card (laptop: PC card, desktop: ISA or PCI slot)
- CD-ROM drive
- USB or parallel interface
- RS-232C serial interface (second USB interface)
- Network embedded (optional)

Important DataFlow Functions

- y(t) view: several curves on single view, or one curve per view in parallel
- y(x) view: several force, pressure or other curves can be plotted against, for example, a single displacement (force against displacement, pressure against displacement, etc)
- Superimpose recorded curves, e.g. the last 5 or 50 curves are retained in the display
- Zoom on specific sections
- Scale axes or freeze scale
- View digital outputs
- Test digital outputs before data acquisition
- Trend view: trend exhibited by the actual value
- Tabular view of measurements
- Set digital outputs through monitoring functions (up to 28 digital outputs depending on configuration)
- Data acquisition on up to 32 channels
- Complete monitoring functions: Maximum and minimum values, average, Box, Level, diverse integrales, tolerance band relatively and absolut positioned
- Copy views or rows of figures into Word or Excel with ease
- Evaluation of (Overmolding) Multy component molding for injection molding process

The Following Additional Functions are Available for Data Analysis and Diagnostics

- Search for bad cycles
- Extended superimposition
- Additional definition of monitoring functions
- Export data directly into Excel or as .txt file
- Additional opening of different data files

Operating of DataFlow

- Easy Set up of Measurement configuration and start of Measurement
- Adjustment Configurations "on the fly"
- Traceability of measurement values down to single cycle

Important DataFlow Statistics Functions

- Quality report, fully configurable as document with company logo
- Cp
- Cpk
- Gauss
- Trend
- Actual value view
- Fault summary
- Table with values and time mark for traceability down to single cycles

Just a View of the Graphical Display Possibilities



Top left: Status display of the digital outputs (alarm outputs and function fulfillment).

Top right: y(t) display with selectively taken curves.

Top left: Cursor position values, with actual value for positions of cursor 1 and 2, as well as integral, maximum, minimum and difference between the cursors.

Center right: y(t) display with selectively taken curves.

Center left: Numerical display of the channels with measurands and good/bad result.

Bottom right: Bar display with evaluation functions.

Bottom left: Curves with defined monitoring functions.

All of the graphics and tables can be readily copied into other documents and reused.

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Graphical Display Possibilities (cont.)

DataFlow Statistics

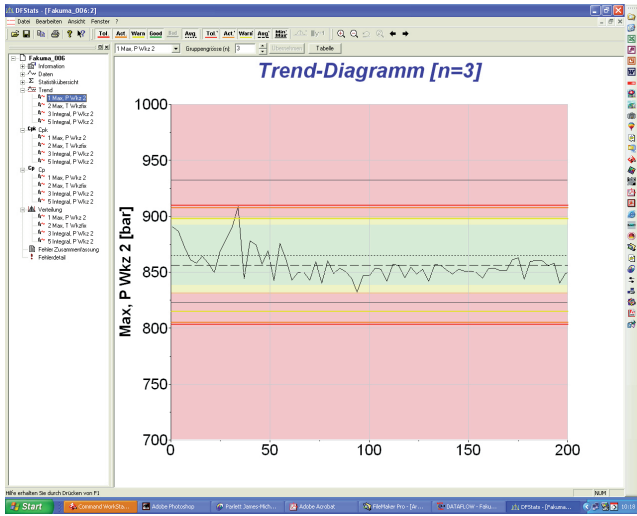


Fig. 1: Trend graph

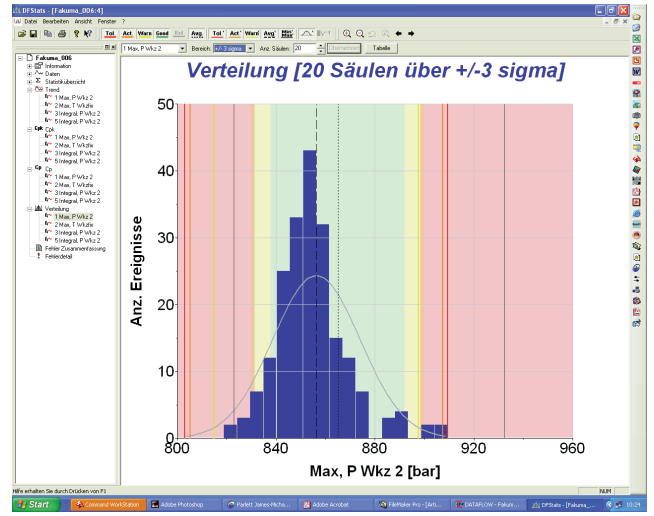


Fig. 3: Gaussian distribution

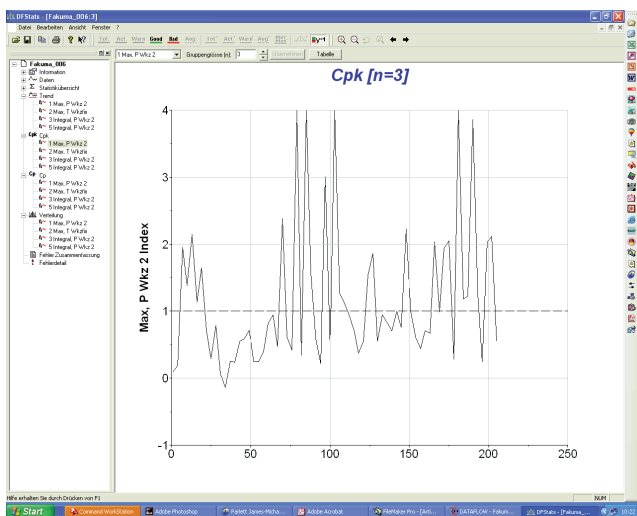


Fig. 2: Trend graph "CPK"

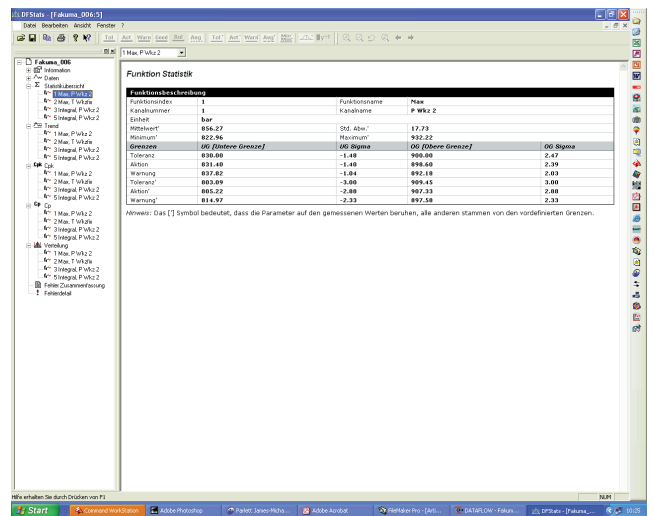


Fig. 4: Statistical analysis

All of the graphics and tables can be readily copied into other documents and reused.

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Installation Example: Connection of Sensors to the Mini SCP Type 2854A131

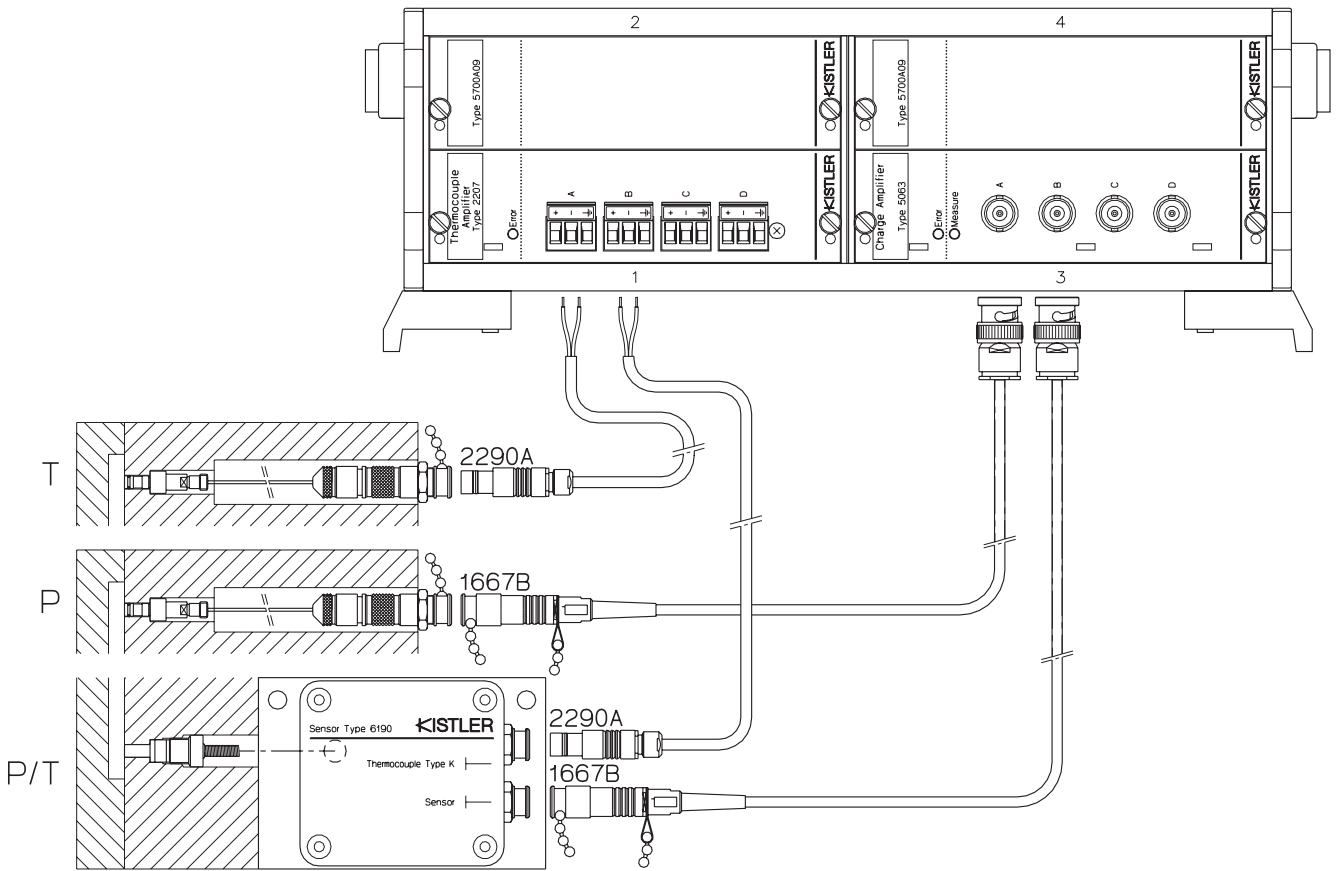


Fig. 5: Front side SCP Compact Type 2865A...

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Installation Example up to 16 Channel Mini SCP with Laptop (4 digital Outputs)

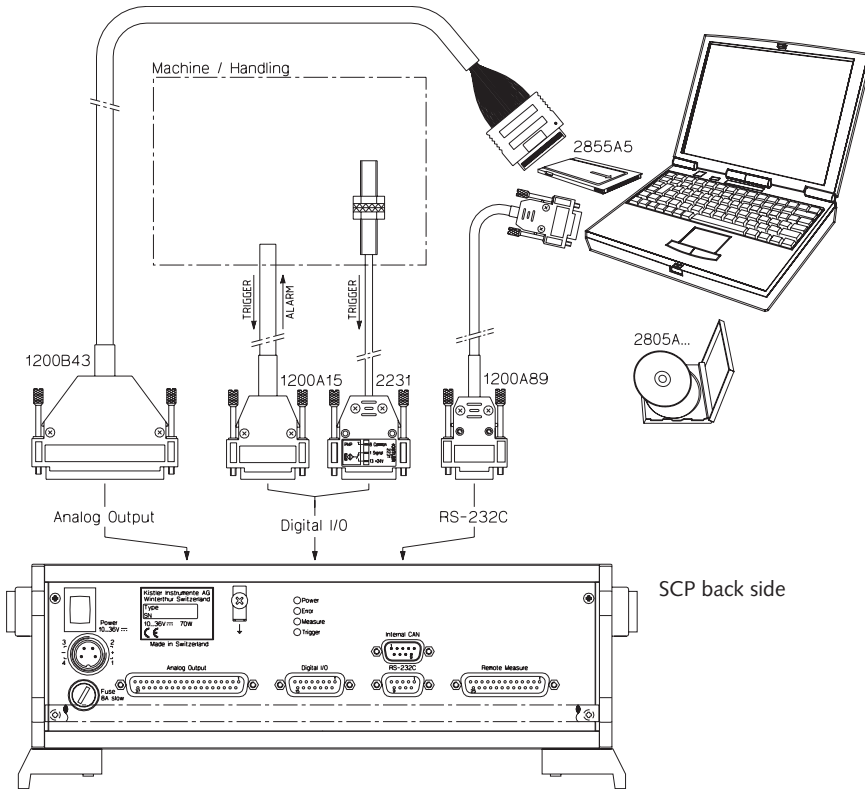


Fig. 6: Laptop with A/D card PC card DAS 16/16 Type 2855A5 (16 channels with up to 4 digital outputs)

| Ordering List | Type |
|----------------------|----------|
| • DataFlow | 2805A... |
| • A/D card | 2855A5 |
| • Cable RS-232C | 1200A89 |
| • Approximity switch | 2231 |
| • Signal cable | 1200B43 |
| • Signal Conditioner | 2853A... |
| | 2854A131 |
| | 2865A... |

| Optional | Type |
|--|---------|
| • Cable with Trigger digital In and Out instead of Type 2231 | 1200A15 |

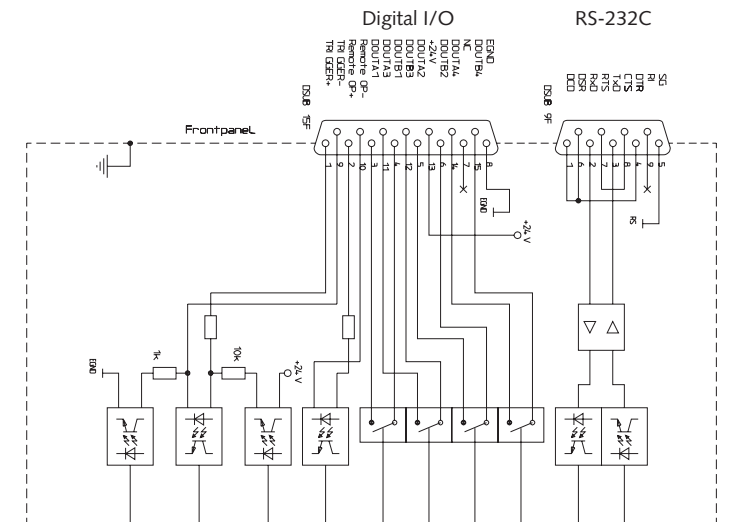
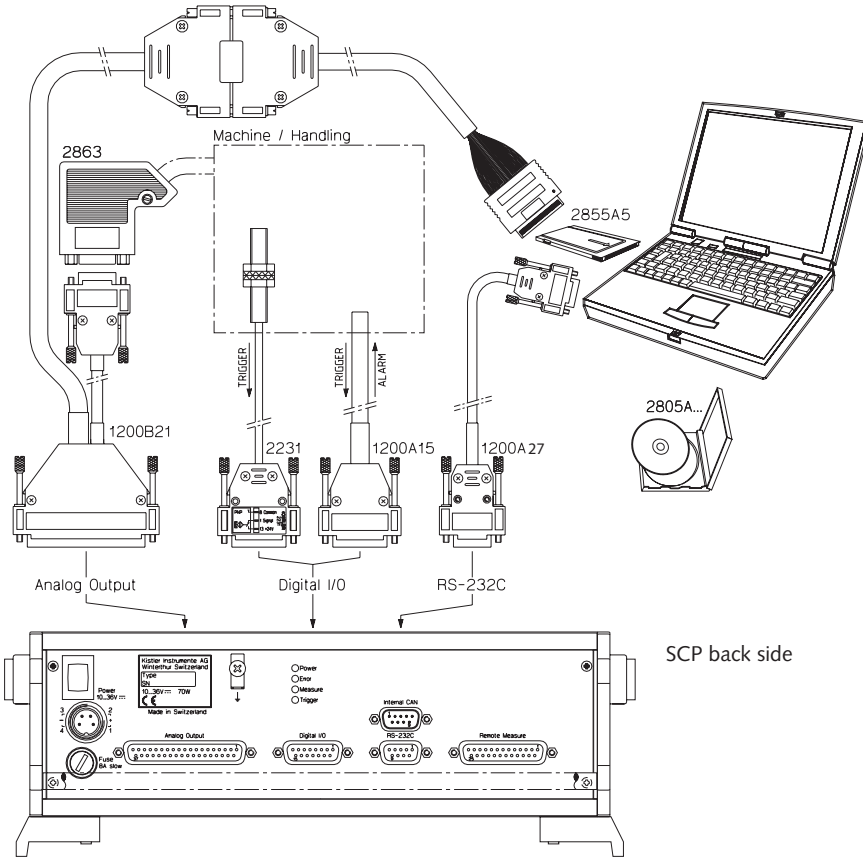


Fig. 7: Wiring diagram of the CPU output with digital I/O and RS-232C interface

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Installation Example up to 16 Channels Mini SCP with Laptop (8 digital Outputs)



| Ordering List | Type |
|--|----------------------------------|
| • DataFlow | 2805A... |
| • A/D card | 2855A5 |
| • Cable RS-232C | 1200A27 |
| • Approximity switch | 2231 |
| • Signal cable | 1200B21 |
| • TTL-Signal-Converter for digital Outputs | 2863 |
| • Signal Conditioner | 2853A... 2854A131 2865A... |

| Optional | Type |
|--|---------|
| • Cable with Trigger digital In and Out instead of Type 2231 | 1200A15 |

Fig. 8: Laptop with A/D card PC card DAS 16/16 Type 2855A5 (16 channels with up to 8 digital outputs)

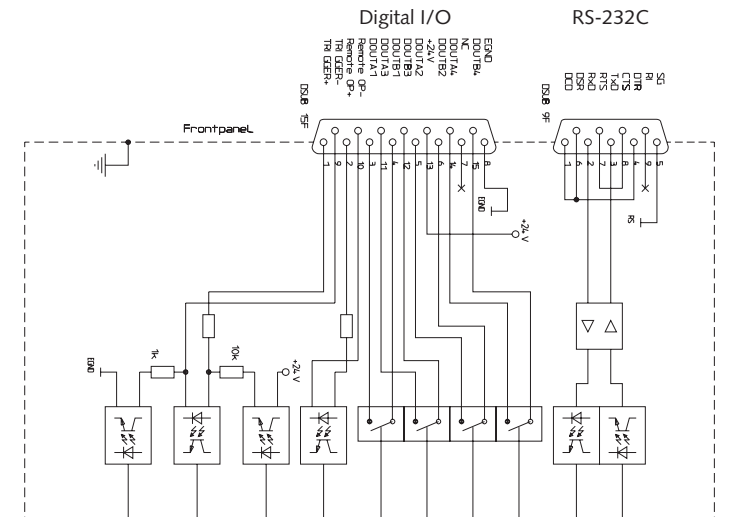
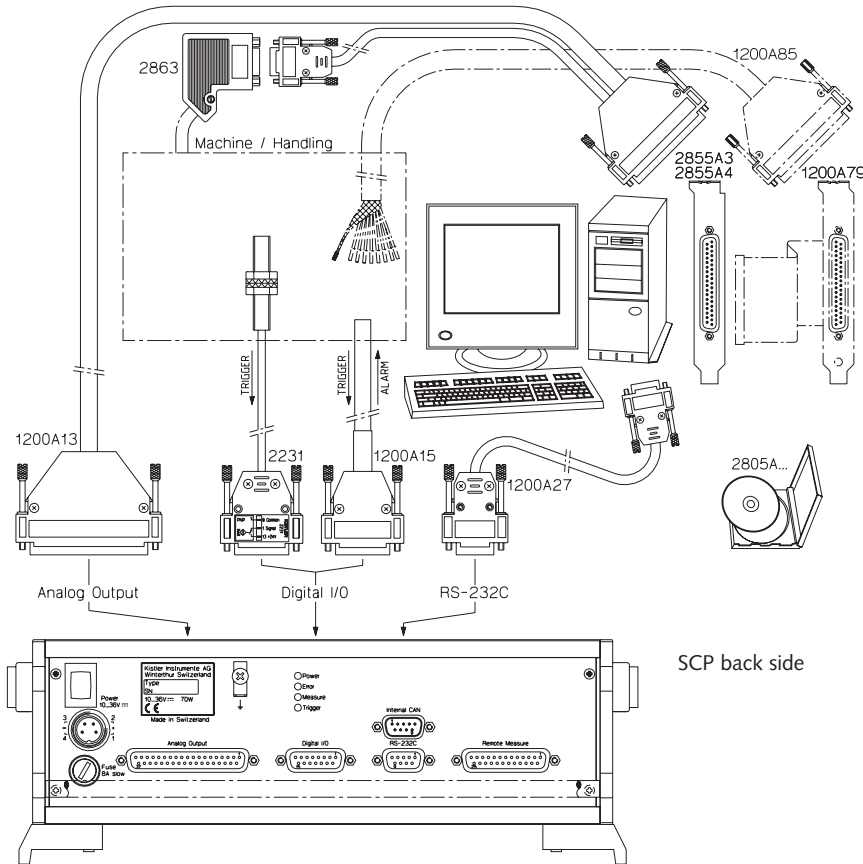


Fig. 9: Wiring diagram of the CPU output with digital I/O and RS-232C interface

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Installation Example up to 16 Channels with Desktop PC



| Ordering List | Type |
|--|----------------------------------|
| • DataFlow | 2805A... |
| • A/D card | 2855A4 |
| • Cable RS-232C | 1200A27 |
| • Approximity switch | 2231 |
| • Signal cable | 1200A13 |
| • TTL-Signal-Converter for digital Outputs | 2863 |
| • Signal Conditioner | 2853A... 2854A131 2865A... |

SCP back side

| Optional | Type |
|--|---------|
| • Cable with trigger digital In and Out instead of Type 2231 | 1200A15 |
| • Panel for additional digital Out from A/D card | 1200A79 |
| • Cable for the digital signal (TTL-Level) | 1200A85 |

Fig. 10: Desktop with A/D card PCI Type 2855A4 (16 channels with up to 28 digital Outputs)

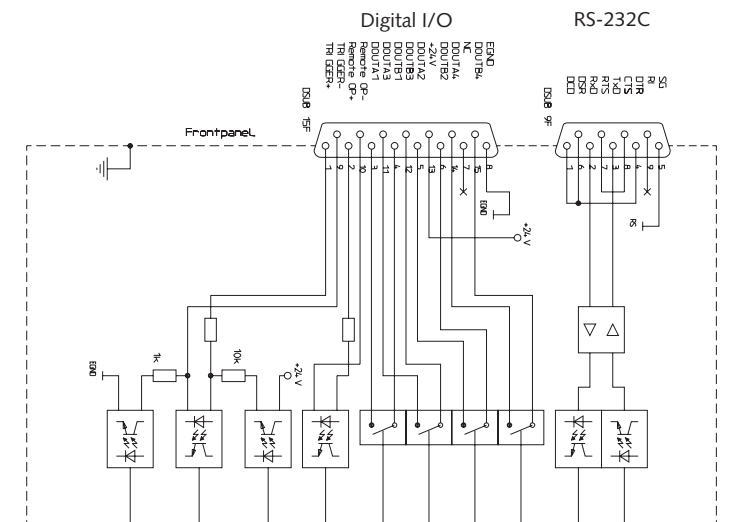
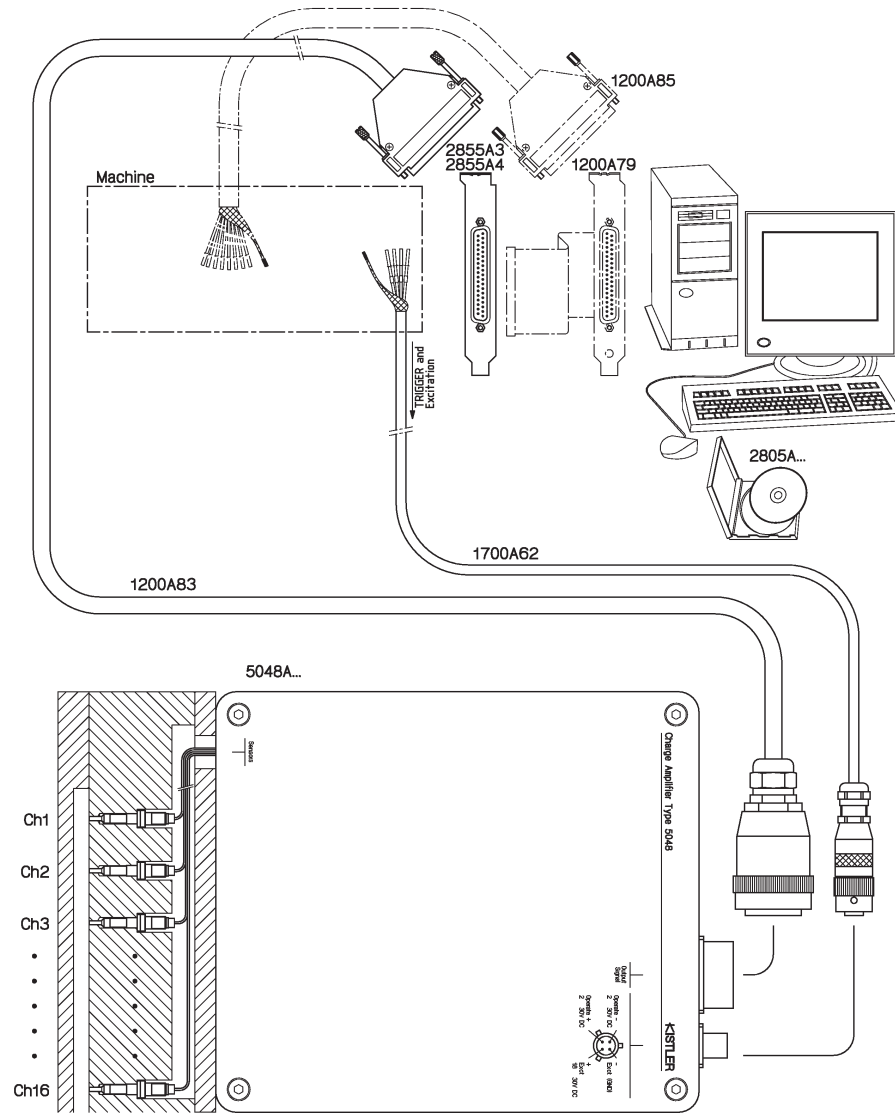


Fig. 11: Wiring diagram of the CPU output with digital I/O and RS-232C interface

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Installation Example up to 16 Channels with Desktop PC and Multi Cavity System Type 6829A... (Type 5048A...) optional 24 digital Outputs



Ordering List

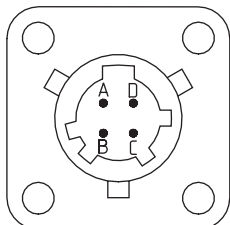
- | | Type |
|--|-------------|
| • DataFlow | 2805A... |
| • A/D card | 2855A4 |
| • Cable | 1200A83 |
| • Cable for power supply and trigger for Amplifier Type 5048A... (Type 6829A...) | 1700A62 |

Optional

- | | Type |
|--|-------------|
| • Panel for additional digital Out from A/D card | 1200A79 |
| • Cable for the digital signal (TTL-Level) | 1200A85 |

Fig. 12: Desktop with A/D card PCI Type 2855A4 (16 channels with up to 24 digital Outputs)

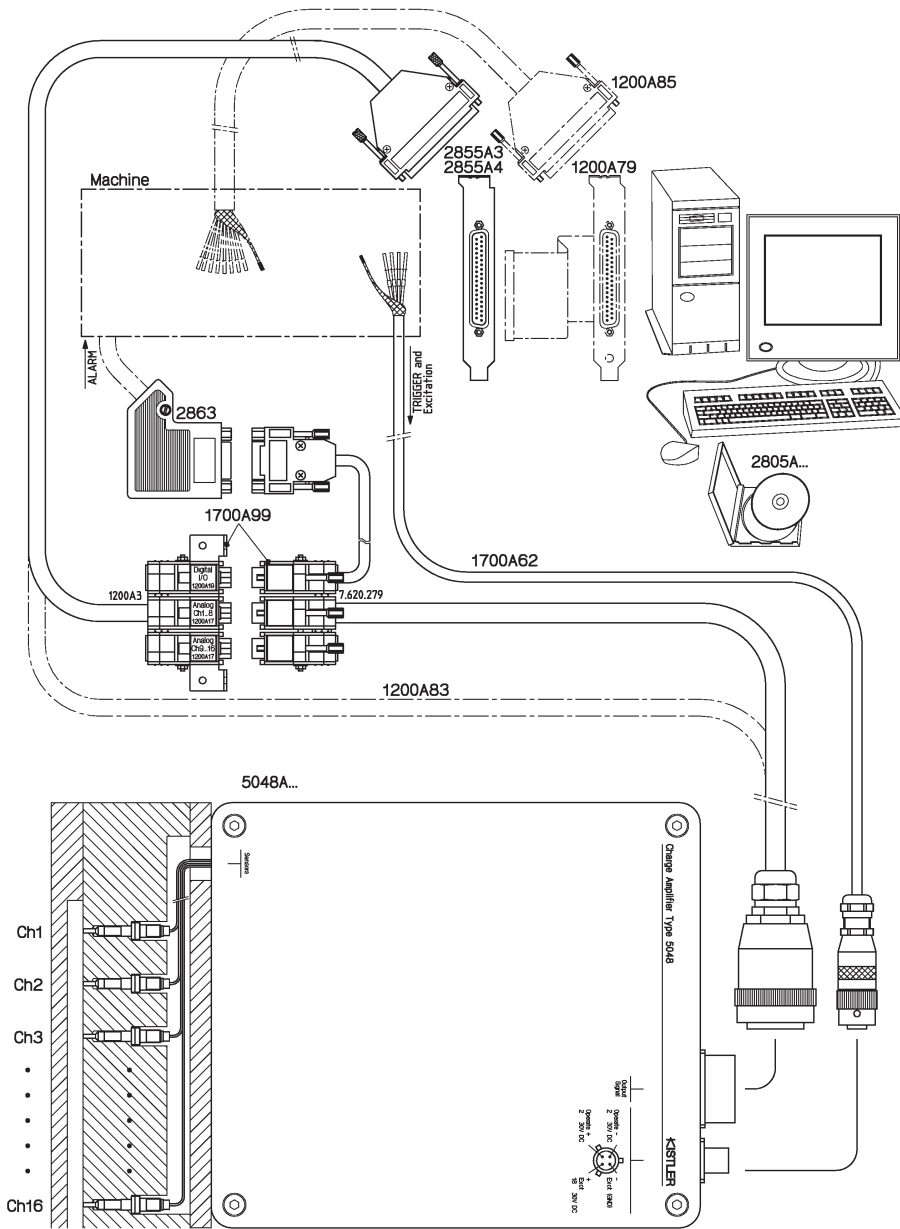
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- A + Exct. 18 ... 30 V DC
- B - Exct. (GND)
- C - Operate (GND)
- D + Operate

Fig. 13: MIL 4-pole connector for charge amplifier Type 5048A... for power supply and trigger

Installation Example up to 16 Channels and Multi Cavity System Type 6829A... (Type 5048A...)
4 digital Outputs and optional 24 digital Outputs



- | Ordering List | Type |
|--|----------|
| • DataFlow | 2805A... |
| • A/D card | 2855A4 |
| • Cable set | 1700A99 |
| • Cable for power supply and trigger for Amplifier Type 5048A... (Type 6829A...) | 1700A62 |
| • TTL-Signal-Converter for digital Outputs | 2863 |

- | Optional | Type |
|--|---------|
| • Panel for additional digital Out from A/D card | 1200A79 |
| • Cable for the digital signal (TTL-Level) | 1200A85 |

Fig. 14: Desktop with A/D card PCI Type 2855A4 (16 channels with up to 28 digital Outputs)

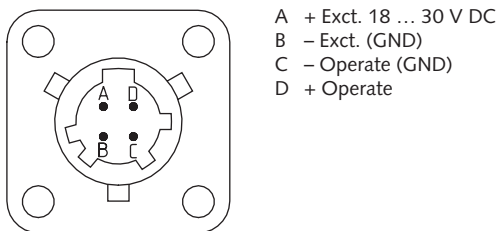
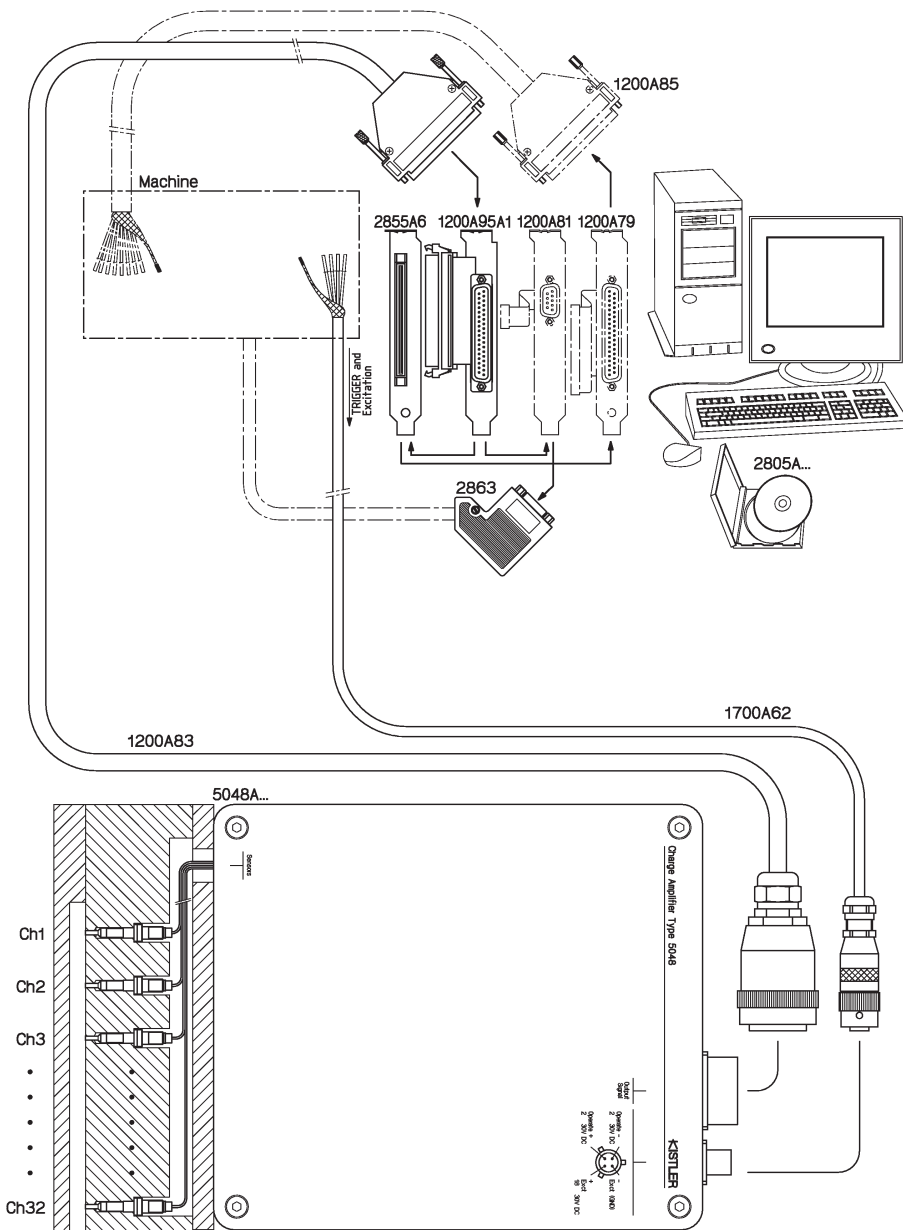


Fig. 15: MIL 4-pole connector for charge amplifier Type 5048A... for power supply and trigger

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Installation Example up to 32 Channels with Desktop PC and Multi Cavity System Type 6829A... (Type 5048A...) optional 28 digital Outputs



| Ordering List | Type |
|--|-----------|
| • DataFlow | 2805A... |
| • A/D card | 2855A6 |
| • Signal cable | 1200A83 |
| • Panel | 1200A95A1 |
| • Cable for power supply and trigger for Amplifier Type 5048A... (Type 6829A...) | 1700A62 |

| Optional | Type |
|--|---------|
| • Panel for 4 digital signal | 1200A81 |
| • TTL-Signal-Converter for digital Outputs | 2863 |
| • Panel for additional digital Outputs from A/D card | 1200A79 |
| • Cable for the digital signal (TTL-Level) | 1200A85 |

Fig. 16: Desktop with A/D card PCI 6402/16 Type 2855A6 (32 channels with up to 28 digital Outputs)

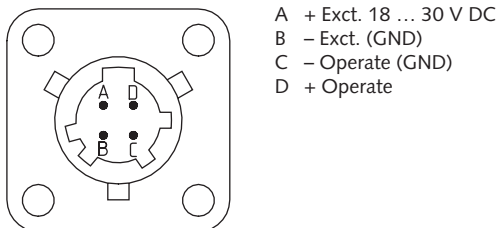


Fig. 17: MIL 4-pole connector for charge amplifier Type 5048A... for power supply and trigger

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Other configuration are possible. Our technicians will be pleased to help and support you.

Scope of Delivery Including Accessories

DataFlow **Type 2805A-02-1**

- DataFlow incl. DataFlow Statistics 7.643.016
Software (CD-ROM) for Windows® NT, Windows® 2000 and Windows® XP
- DataFlow runtime license for parallel port 7.511.309
- Instruction Manual DataFlow, DataFlow Statistics

DataFlow **Type 2805A-02-2**

- DataFlow incl. DataFlow Statistics 7.643.016
Software (CD-ROM) for Windows® NT, Windows® 2000 and Windows® XP
- DataFlow runtime license for USB port 7.511.310
- Instruction Manual DataFlow, DataFlow Statistics

DataFlow **Type 2805E-02-0**

- DataFlow incl. DataFlow Statistics 7.643.016
Software (CD-ROM) for Windows® NT, Windows® 2000 and Windows® XP
- Instruction Manual DataFlow, DataFlow Statistics

Optional Accessories

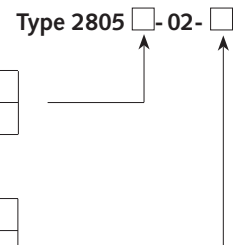
- | | |
|---|----------|
| • A/D card 16 channel PC card (Laptop) 16 bit resolution | 2855A5 |
| • A/D card 16 channel PCI card (Desktop) 16 bit resolution | 2855A4 |
| • A/D card 64 channel PCI card (Desktop) 16 bit resolution | 2855A6 |
| • Signal Conditioning Platform up to 32 input channels | 2853A... |
| • Signal Conditioner up to 16 input channels | 2865A... |
| • Multi Cavity System | 6829A... |

Ordering Key

| | |
|--------------------------|----------|
| DataFlow runtime license | A |
| DataFlow UP-Date | E |

for Runtime License Version Only

| | |
|-------------------|----------|
| for parallel port | 1 |
| for USB port | 2 |
| UP-Date-Version | 0 |



Information about Amplifiers and Signal Conditioning Platforms according to data sheet 2853A_000-374, 2865A_000-467 and 6829A_000-046.

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