

# Operating Panel

Type 2158A

## Parametrization, Visualization and Data Backup

Operating Panel Type 2158A can be used for all Kistler NC joining modules with associated servo controllers, and NC Compact Firmware Type 2159A. It is used to parameterize and display the joining process and for data backup. The Operating Panel is not required for ongoing operation.

- 5,7" TFT color display touch screen operation
- Visualization of diagram and window evaluation
- Parameterization for set-points (position, speed, window, type of shutoff)
- Calibration menu X/Y axis for strain gage and Piezo
- Documentation with OK/NOK statistics and csv files
- Data backup, securing parameter sets



### Description

The operating panel supports the user during initial start up and is used to visualize the joining process. The simple menu on the touch screen makes it possible to parameterize 16 different standard joining processes with no problems. Critical segments in the assembly cycle are defined in the force/displacement characteristic using evaluation windows (2 joining windows, 1 end window). In addition, for each program there is the option of activating a fast shutdown. OK/NOK statistics provide valuable tips on production and quality assurance. In addition csv files can be generated for documentation of target and actual values inclusive curve development.

### Application

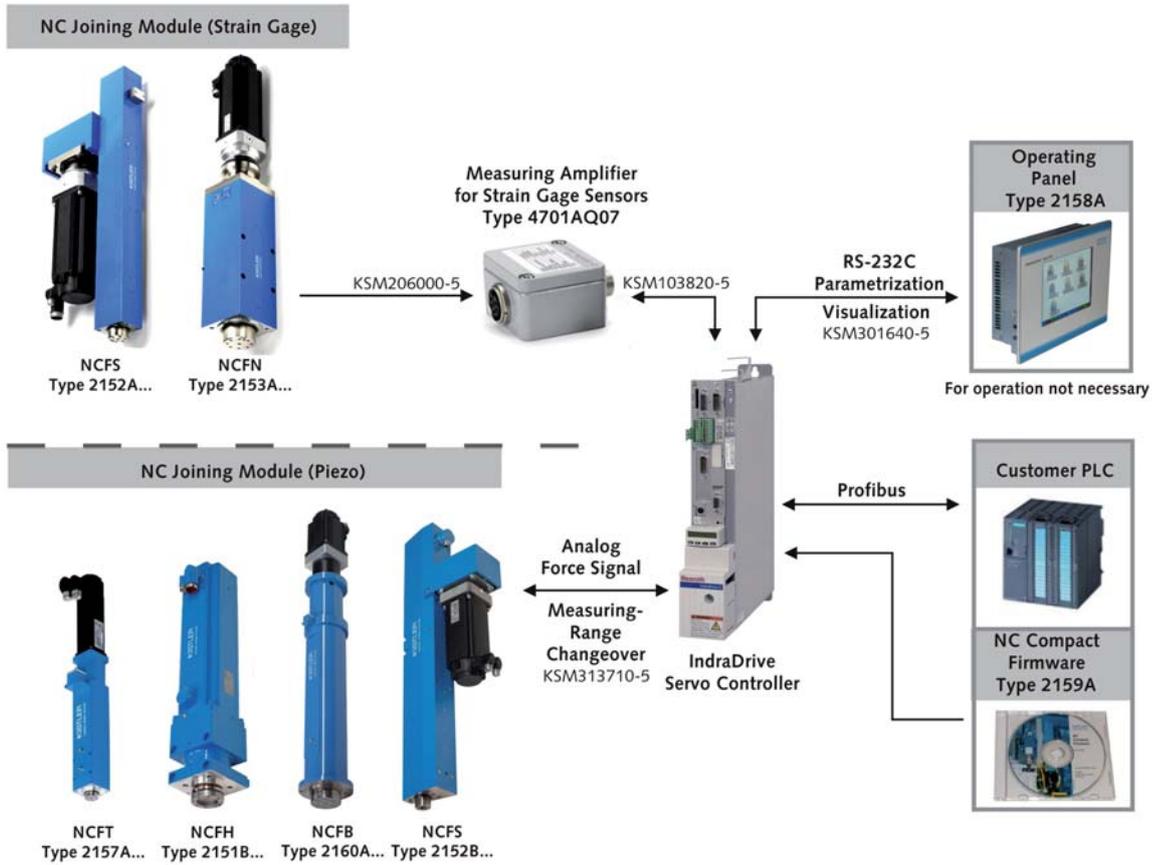
Initial start up of an assembly or joining process with the NC Compact Firmware Type 2159A can be easily and quickly carried out using the Operating Panel Type 2158A with touch screen operation. It displays force/displacement diagrams, windows, window values, parametrization and statistics, and data sets can be stored.

### Technical Data

#### Operating Panel with TFT Display

Display diagonal	Inch	5,7
Resolution	Pixels	320x240
Max. colors		65 536
Operating temperature range	°C	0 ... 50
Ambient temperature (storing)	°C	-20 ... 60
Interfaces		
Serial 1		RS-232C
USB		2x 1.1
LAN	MBit	10/100 Ethernet
Current consumption	A	ca. 0,5
Tube lifetime	h	approx. 50 000
Degree of protection DIN EN60529	Front	IP65
Degree of protection DIN EN60529	Back	IP20

**Functional Principle**



**Diagram and Window Evaluation**

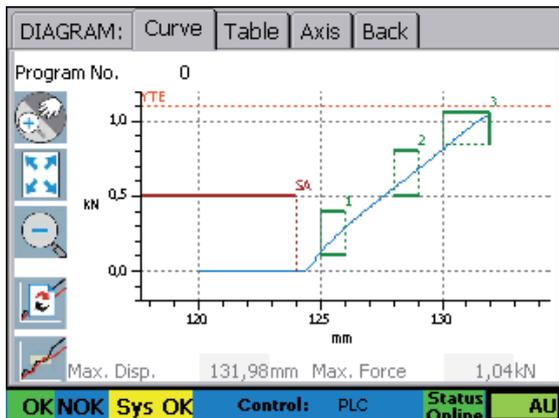


Fig. 1: Diagram menu, display curve with evaluation window

The screenshot shows the **SETPOINT** menu with sub-options: Positions, Stop by, Windows, Back. The main display shows a table with **Program No. 0**. The table has columns for **Windows**, **mm** (Min., Max.), and **kN** (Min., Max.).

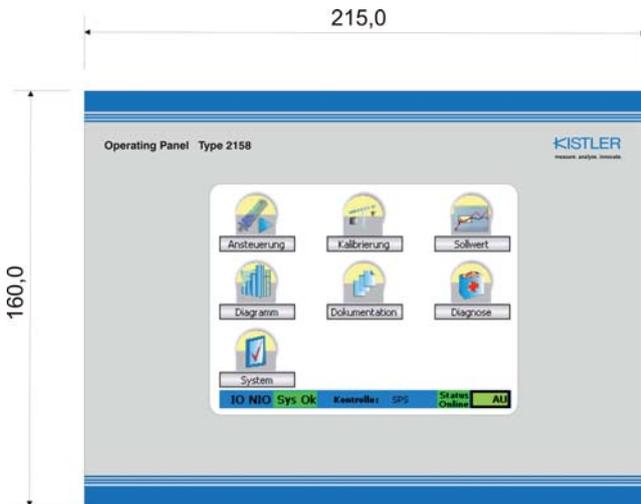
Windows	mm		kN		
	Min.	Max.	Min.	Max.	
1 (Joining)	125,00	126,00	0,10	0,40	↔
2 (Joining)	128,00	129,00	0,50	0,80	↔
3 (End)	130,00	132,00	0,85	1,05	↔

A **Save** button is located at the bottom right of the table. The status bar at the bottom shows **OK NOK Sys OK Control: PLC Status Online AU**.

Fig. 2: Menu set-points, parameter window

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**Dimensions**



**Front panel:**

Outer dimensions LxWxH [mm] 215x160x53  
Cutting dimensions WxH [mm] 197x143

Panel is made of aluminium

**Included Accessories**

- None

**Optional Accessories**

	Type/Art. No.
• NC Joining Module NCFB	2160A...
• NC Joining Module NCFH	2151B...
• NC Joining Module NCFB	2152...
• NC Joining Module NCFN	2153A...
• NC Joining Module NCFH	2157A...
• Measuring amplifier for strain gage sensors	4701AQ07
• NC Compact Firmware	2159A

NC joining module as well as servocontroller and associated motor and feedback cable are listed in the corresponding data sheet for the NC joining module.

**Interfaces**



- 1 Ground connection
- 2 Power supply (24 VDC)
- 3 RS-232C Interface to servo controller
- 4 LAN (Ethernet (interface for csv files))
- 5 USB Interface 1.1 (1) (only storage)
- 6 Compact FLASH Type 1 (with sheet metal cover)
- 7 USB Interface 1.1 (2) (only storage)

**Cable**

- IndraDrive data cable Type/Art. No. KSM301640-5
- Strain gage free/KD6 Tuchel cable KSM103820-5
- NCF force transmitter cable KSM313710-5
- NCFN(S) strain gage force cable KSM206000-5

Other length on request

**Ordering Code**

Operating Panel Type 2158A

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