

BlueLine I/O Master Type 8980C

- Transmission of digital control signals between machine and BlueLine system
- Galvanic separation from Bus In/Out
- Connection technology via spring terminal blocks with separate GND per Input / Output
- Dual-color LEDs for a clearly arranged status display
- Protection against short circuit, overvoltage and reverse polarity
- Mechanically robust, space-saving and cascadable
- Connection with adjacent I/O modules without any cable connections via top-hat rail



Description

The I/O Master type 8980C has digital inputs and outputs and is the basic module of the BlueLine system. It is used for transmitting control signals between the injection molding machine and the BlueLine system.

The spring terminal blocks of the I/O Master are using a push-in design with separate GND for each input and output, providing a simple connection. All outputs are protected against short-circuits, overvoltage and reverse polarity.

The status of the input and output signals is clearly displayed by dual-colour status LEDs.

The I/O Master logic and the outputs themselves are energized by the voltage inputs. The I/O Master is separated electrically against the rest of the bus. The system structure, although flexible (electric separation from other bus participants), remains simple (no separate feeding of each output is necessary).

All outputs are read and permanently checked by the I/O Master. If the output level deviates from the target state, the I/O Master reports an error at the corresponding output.

The bus signal is transmitted to the I/O Master via the Bus-In connection. The following I/O Expanders, respectively Bus Interfaces are connected via the delivered top-hat rail bus. Therefore, an external cabling between adjacent I/O modules can be omitted.

Technical Data

General

Property	Specification
Dimensions (L × W × H)	107.6 × 61 × 90 mm
Weight	0.432 kg
Working temperature range	0 ... 60 °C
Storage temperature range	-40 ... 80 °C
Conductor connection technology	Spring Terminal Blocks
Hot-plug	Yes
Assembly	Top Hat Rail
ESD protection	4 kV
RoHS-compliant	Yes

Power Supply

Property	Specification
Voltage range	18 ... 36 V
Standby current consumption	< 100 mA
Max. current consumption	8 A
Power supply via bus	No
Electrically separated against Bus In/Out	Yes
Electrically separated against Inputs / Outputs	No

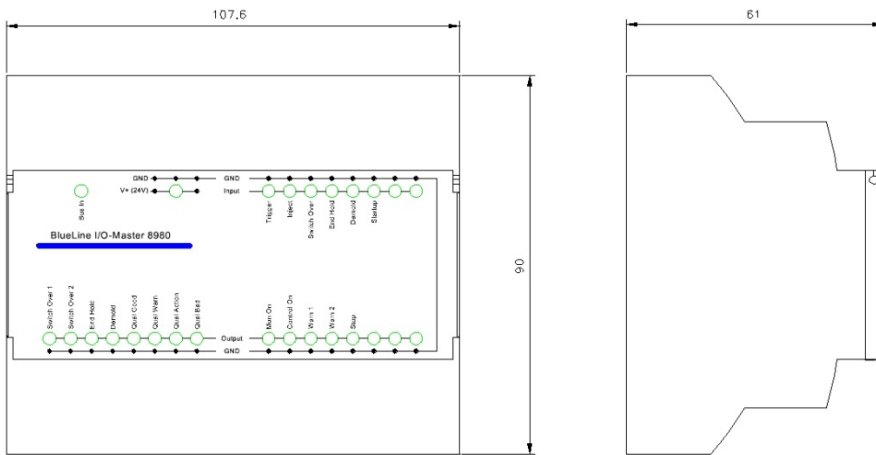
Outputs

Property	Specification
Continuous current (at 25 °C)	2 A
Peak current (self-limiting)	6 A
Short-circuit-proof	Yes
Rated switching voltage	8 ... 36 V
Surge protection (load dump)	52 V
Potential difference (at 2 A load)	0.4 V
Leakage current	< 10 µA
Switch-on delay	< 180 µs
Switch-off delay	< 200 µs
Maximum switchable inductance (at 2 A load)	< 20 mH
Status display on output HIGH	green
Status display on error (short-circuit, overvoltage) against 24 V	red

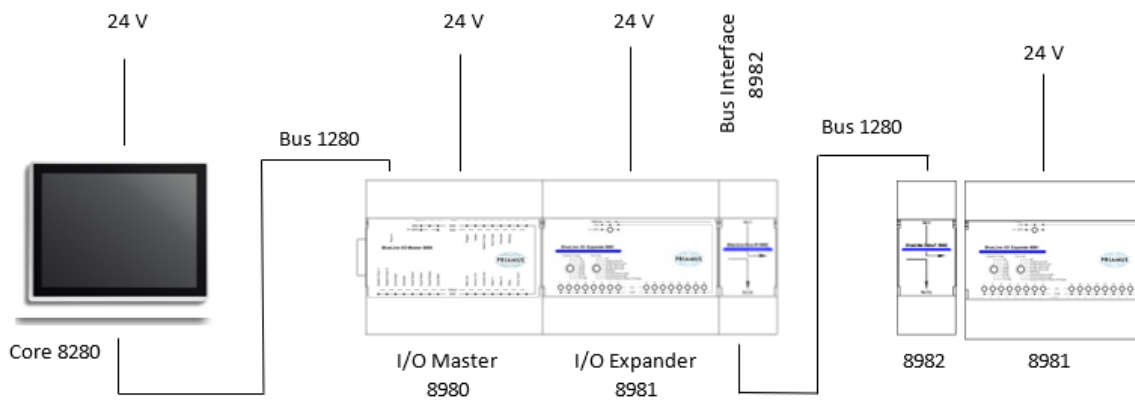
Inputs

Property	Specification
Max. voltage	52 V
Logic level for HIGH	> 3 V
Logic level für LOW	< 1.5 V
Current consumption	> 3 mA
Status display on input HIGH	green

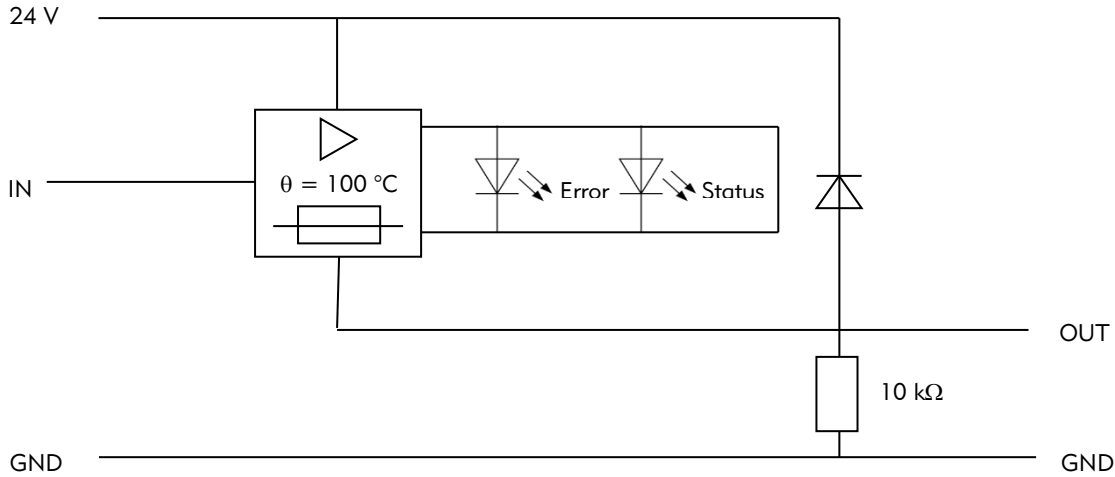
Dimensions (in mm)



Interconnection Example in the Bus



Switching Diagram



Coding Switches for Outputs and Inputs

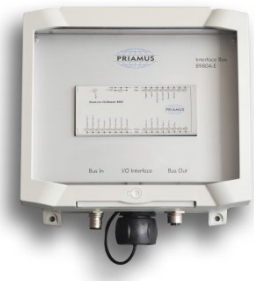
Output Function	Explanation
Switch Over 1	Switchover Output 1
Switch Over 2	Switchover Output 2
End Hold	Holding pressure terminated
Demold	Open the mold (demold part)
Qual Good	Quality Common Output Good Part
Qual Warn	Quality Common Output Warning Limit violated
Qual Action	Quality Common Output Intervention Limit violated
Qual Bad	Quality Common Output Bad Part Limit violated
Mon On	Monitoring functions of the BlueLine system are active
Switch On	Switch functions of the BlueLine system are active
Control On	Control functions of the BlueLine system are active
Warn 1	General Warning Output
Warn 2	General Warning Output
Stop	General Error Output for the machine
Stop Inject	Overmolding protection (Stop inject immediately)

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 Subject to technical amendments
 Projection method: First Angle Projection

Input Function	Explanation
Trigger	Start of measurement
Inject	Injection active
Switch Over	Holding pressure begins
End Hold	Holding pressure terminates
Demold	Open the mold (demold part)
Startup	Start-up circuit

Variant – External Interface

For mounting outside of the control cabinet the separate housing type 8980C-E is available.



Accessories

Type number	Article
1041Ax	BlueLine connection cable for cavity pressure sensors Single-pin, with plastic sheath Both sides: Fischer connector type S 102 pos. TRIAX
1043Bx	BlueLine extension cable for cavity pressure sensors With metal sheath Side 1: Fischer connector type S 102 pos. TRIAX Side 2: Fischer connector type KBE 102 neg. TRIAX
1045Bx	BlueLine connection cable for cavity pressure sensors Multi-pin, with plastic sheath Side 1: Fischer connector type S 104 neg., 16-pin (Code 1) Side 2: 4 x Fischer connector type S 102 pos. TRIAX
1047Ax	BlueLine connection cable for cavity pressure sensors Multi-pin, with plastic sheath Side 1: Fischer connector type S 104 neg., 16-pin (Code 1) Side 2: Fischer connector type S 102 pos. TRIAX

Type number	Article
1049Bx	BlueLine connection cable for cavity pressure sensors Single-pin, with plastic sheath Both sides: Fischer connector type S 102 pos. TRIAX
1054Bx	BlueLine connection cable for cavity pressure sensors Multi-pin, with plastic sheath Both sides: Fischer connector type S 104 neg., 16-pin (Code 1)
1141Ax	BlueLine connection cable for cavity temperature sensors Single-pin, with plastic sheath Both sides: Fischer connector type S 101 pos. TRIAX
1142Bx	BlueLine extension cable for cavity pressure sensors Single-pin, with metal sheath Side 1: Fischer connector type S 101 pos. TRIAX Side 2: Fischer connector type KBE 101 neg. TRIAX
1144Ax	BlueLine connection cable for cavity temperature sensors Multi-pin, with plastic sheath Both sides: Fischer connector type S 104 neg. 19-pin (Code 2)
1145Ax	BlueLine connection cable for cavity temperature sensors Multi-pin, with plastic sheath Side 1: Fischer connector type S 104 neg. 19-pin (Code 2) Side 2: Fischer connector type S 101 pos. TRIAX
1147Bx	BlueLine connection cable for cavity temperature sensor Multi-pin, with plastic sheath Side 1: Fischer connector type S 104 neg. 19-pin (Code 2) Side 2: 4 × Fischer connector type S 101 pos. TRIAX
1149Bx	BlueLine connection cable for cavity temperature sensors Single-pin, with metal sheath Both sides: Fischer connector type S 101 pos. TRIAX
1194A-8T	BlueLine multi-channel connecting box for temperature signals For connecting a maximum of 8 cavity temperature sensors
1195A-8p	BlueLine multi-channel connecting box for pressure signals For connecting a maximum of 8 cavity pressure sensors
5070A-2p2T- VARAN	BlueLine pressure and temperature amplifier VARAN Pressure: 2 × Single-channel connectors Fischer type 102 TRIAX / BNC Temperature: 2 × Single-channel connectors Fischer type 102 TRIAX
5080A-4p	BlueLine amplifier for cavity pressure signals with 4 channels 4 × single-channel connectors Fischer type 102 TRIAX

Type number	Article
5080A-16p	BlueLine amplifier for cavity pressure signals with 16 channels 2 x multi-channel connectors Fischer type 104, 16-pin
5080A-4T	BlueLine amplifier for cavity temperature signals with 4 channels 4 x single-channel connectors Fischer type 101 TRIAX
5080A-16T	BlueLine amplifier for cavity temperature signals with 16 channels 2 x multi-channel connector Fischer type 104, 19-pin
8280C	BlueLine Core Control unit for monitoring and controlling of the injection molding process
8911A	BlueLine signal tester set Test device for checking cavity temperature and cavity pressure sensors. Complete set with numerous accessories in foam case
8952A	BlueLine signal tester Test device for checking cavity temperature and cavity pressure sensors.
8981A	BlueLine I/O Expander Extension module for transmitting control signals between the injection molding machine and the BlueLine system.
8982A	BlueLine bus interface Coupling module between I/O modules for mounting on top hat rail bus, for transmitting control signals between the injection molding machine and the BlueLine system.
8983A	BlueLine voltage input module For collecting voltage signals of the injection molding machine
8984A	BlueLine control cabinet Control cabinet with transparent front door for maximum 64 switching signals With 1 BlueLine I/O Master type 8980C and optionally 1–4 BlueLine I/O Expander type 8981A
8985A	BlueLine control cabinet Control cabinet with transparent front door for maximum 96 switching signals with 1 BlueLine I/O Master type 8980C and optionally 1–6 BlueLine I/O Expander type 8981A
9015A	BlueLine inductive switch for easy starting and measuring
9016A	BlueLine power supply unit for: - BlueLine amplifiers types 5080A - BlueLine Core type 8280C
9080A	BlueLine top hat rail bus For mounting of several interconnected BlueLine devices such as I/O Master or I/O Expander