

## Type 8640 Turbidity Transmitter



### Product description

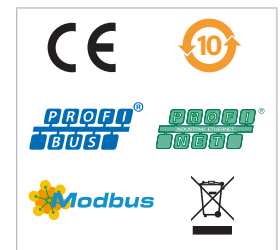
The Type 8640 Turbidity Transmitter is a compact, single-channel transmitter designed specifically for the Type 4170 Turbidity Sensor, delivering precise turbidity measurement in water treatment and industrial process applications. Its high-resolution VGA color touchscreen, rugged IP66 housing, and versatile communication interfaces ensure reliable performance, intuitive operation, and seamless integration into control systems.

#### Features

- Dedicated interface for seamless integration with the Type 4170 Turbidity Sensor
- ¼ VGA color touchscreen for intuitive navigation and real-time display
- Four 4–20 mA outputs, expandable with Modbus RTU, Profibus DP, or Profinet IO via optional interface card
- Onboard microSD for data logging, firmware updates, and diagnostics
- Flexible display modes: numeric, trend graphs, and historical data
- Multi-level password protection for secure access
- Visual alerts and status indicators for process reliability
- Rugged IP66 wall-mount housing for harsh or wet environments

#### Advantages

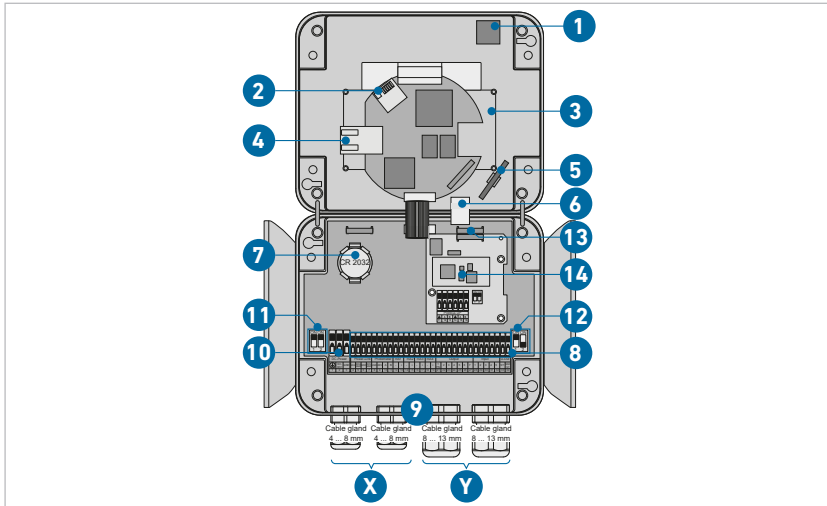
- Seamless Sensor Integration – Purpose-built for the Type 4170 Turbidity Sensor with plug-and-measure functionality
- Intuitive Touchscreen Operation – Simplifies use, reduces errors, and shortens training time
- Reliable Process Monitoring – Real-time values, alarms, and trends for quick decisions and stable control
- Secure and Traceable – Multi-level access, event logging, and calibration history for compliance and audits
- Flexible Connectivity – Field-upgradeable Modbus, Profibus, or Profinet for easy system integration
- Rugged, Space-Saving Design – IP66 housing for harsh environments without extra enclosures
- Long-Term Data Management – microSD card for extended logging, diagnostics, and easy firmware updates



#### Applications

- **Surface & Intake Water** – Clarification, flocculation, and pre-filtration monitoring
- **Drinking Water Distribution** – Turbidity compliance and final water quality assurance
- **Desalination & RO Systems** – Pretreatment monitoring before UF and RO membranes
- **Industrial Wastewater** – Clarifier performance, sludge overflow, and effluent control
- **Mining & Mineral Processing** – Tailing water, sedimentation, and discharge monitoring
- **Cooling & Process Water** – Turbidity control in closed-loop and recirculating systems

## Technical data

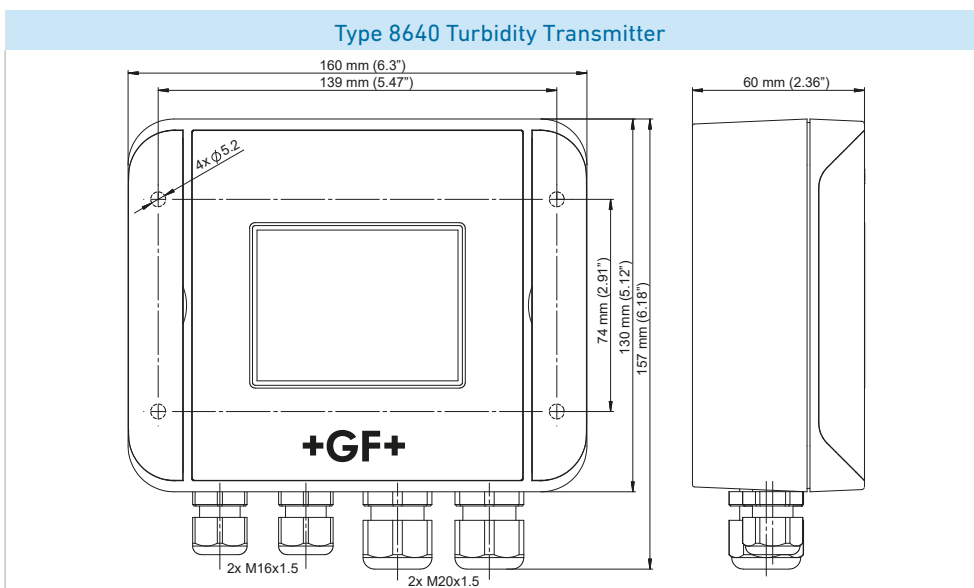


- 1 Park position for cover clamp
- 2 microSD card (card for log data)
- 3 USB connection
- 4 Ethernet connection
- 5 SD card adapter with holder
- 6 Cover clamp in holding position
- 7 Battery (type CR2032)
- 8 External connections
- 9 Cable gland  
X: 4 to 8 mm  
Y: 8 to 13 mm
- 10 Service voltage input (DC Only)
- 11 Dip Switches 1
- 12 Dip Switches 2
- 13 Fieldbus interface card slot
- 14 Fieldbus interface card (optional)

### Technical Data

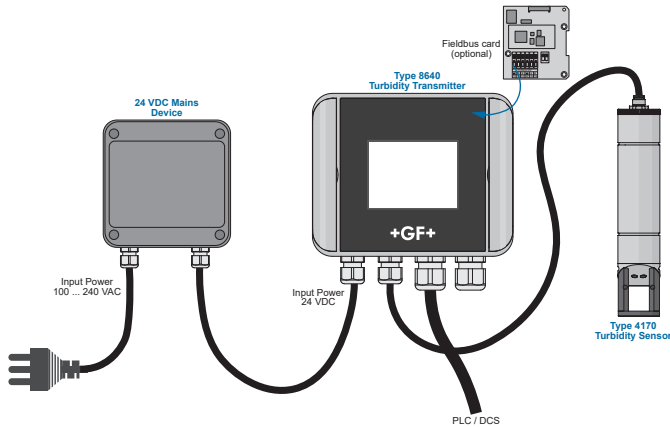
<b>Electrical</b>	Power supply	9 ... 30 VDC
	Power consumption	5 W
<b>Resolution</b>		0.001 FNU
<b>Display</b>	Characteristics	¼ VGA with touchscreen
	Resolution	320 x 240 pixels, 3.5" diagonal
<b>Outputs</b>	Analog	4 x 0/4 ... 20 mA outputs, galvanically isolated up to max. 50 V to earth and max. 500 Ω load
	Digital	7 x digital outputs up to max. 30 VDC, freely configurable, of which 1 output as relay normally closed
<b>Inputs</b>	Analog	1x Type 4170 Turbidity Sensor
	Digital	5 x digital inputs up to max. 30 VDC, freely configurable
<b>Fieldbus</b>	Standard	Modbus TCP / Ethernet
	Optional	Modbus RTU, Profibus DP, Profinet I/O
<b>Materials</b>	Housing	ABS
<b>Protection class</b>		IP66
<b>Dimensions</b>		160 x 157 x 60 mm
<b>Weight</b>		Approx. 0.6 kg
<b>Approvals and Standards</b>		CE, RoHS

### Dimensions



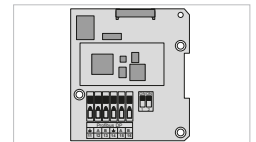
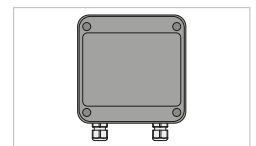
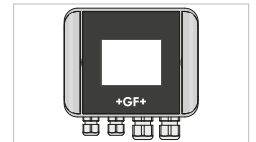
# Ordering Information

## System overview



## Transmitters

Mfr. Part No.	Code	Description
3-8640-1	159 002 293	Type 8640 Turbidity Transmitter
3-4170-21	159 002 294	Power supply 230V AC 24V DC 24 VDC mains device 20 W, input 100 ... 240 VAC, 47 to 63 Hz, IP66, Polycarbonate, 130 x 155 x 55 mm
3-8640-10.401	159 002 295	Type 8640 Turbidity Transmitter Profibus DP interface printed circuit board
3-8640-10.402	159 002 296	Type 8640 Turbidity Transmitter Profinet IO interface printed circuit board
3-8640-10.403	159 002 297	Type 8640 Turbidity Transmitter Modbus RTU interface printed circuit board



## Type 4170 Turbidity Sensor

Mfr. Part No.	Code	Description
3-4170-1	159 002 290	Type 4170 Turbidity Sensor, M12-Connector Version 10 m device cable provided
3-4170-2	159 002 291	Type 4170 Turbidity Sensor, 10 m Fixed cable version
3-4170-20	159 002 292	Mobile Unit, contains Type 4170 Turbidity Sensor (5m fixed cable), Type 8640 Turbidity Transmitter, power bank and wall socket for charging

