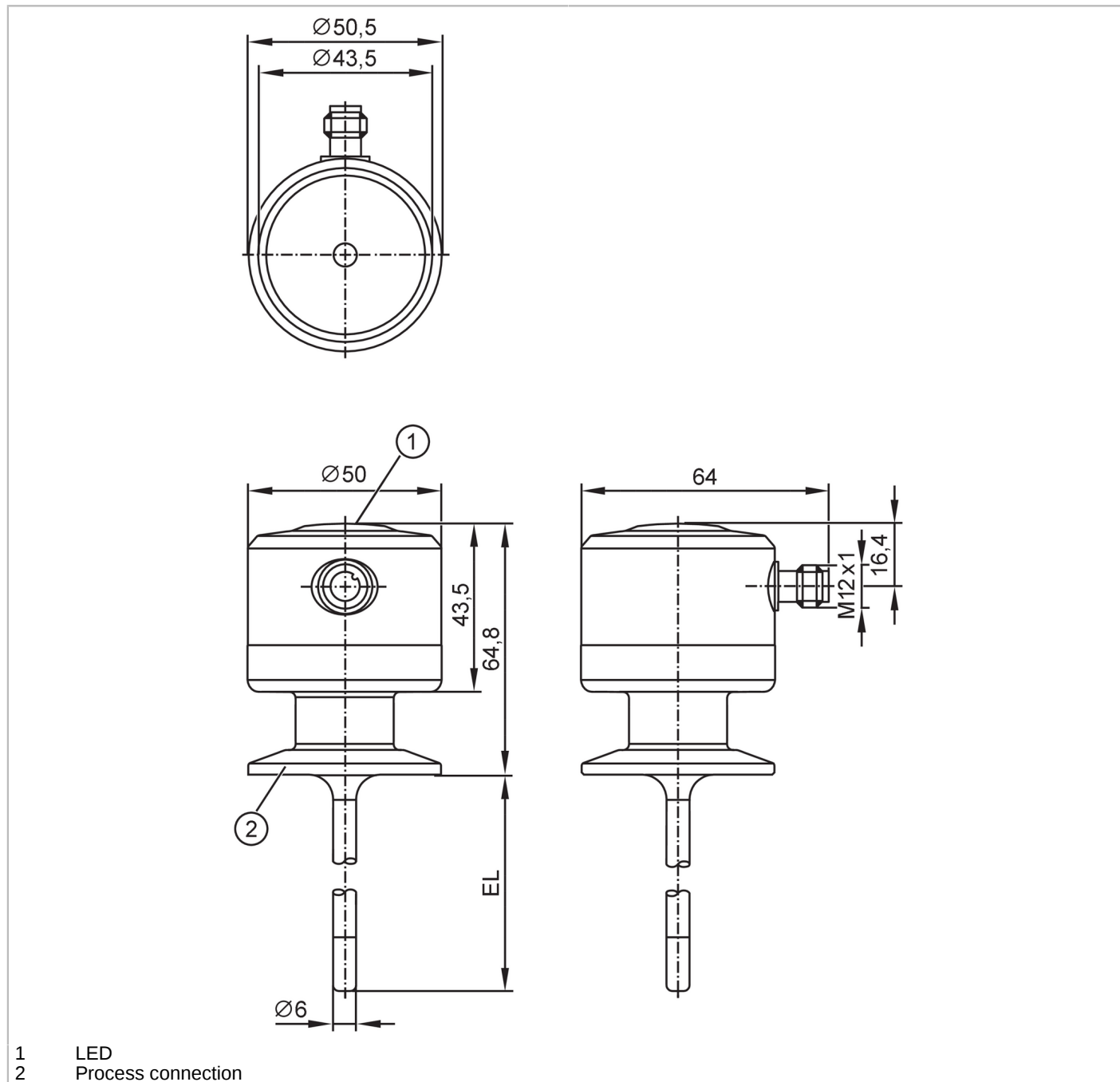


TCC811



Temperature transmitter

TCC050K1EC01-A-DKG/US



- 1 LED
- 2 Process connection



EC 1935/2004

EHEDG Certified

FCM



IO-Link



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
Measuring range	-25...160 °C	-13...320 °F
Communication interface	IO-Link	
Process connection	Clamp DN25...DN40 (1...1,5") DIN 32676 (ISO 2852)	
Installation length EL [mm]	50	

Application

Special feature	gold-plated contacts
Measuring element	1 x Pt 1000



Temperature transmitter

TCC050K1EC01-A-DKG/US

Reference element	1 x NTC	
Media	liquids and gases	
Pressure rating	160 bar	16 MPa
Minimum installation depth [mm]	15	

Electrical data

Operating voltage [V]	18...32 DC; (cULus - Class 2 source required)	
Current consumption [mA]	10; (24 V)	
Protection class	III	
Reverse polarity protection	yes	
Power-on delay time [s]	6	
Integrated watchdog	yes	

Inputs / outputs

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
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Outputs

Total number of outputs	2	
Output signal	analog signal; IO-Link; (calibration check status)	
Electrical design	PNP/NPN	
Number of digital outputs	1	
Output function	normally closed; (diagnostic signal)	
Max. voltage drop switching output DC [V]	2	
Permanent current rating of switching output DC [mA]	100	
Diagnostic output	calibration check status and error diagnostics	
Number of analog outputs	1	
Analog current output [mA]	4...20	
Max. load [Ω]	$(U_b - 15 \text{ V}) \times 50$	
Short-circuit protection	yes	
Type of short-circuit protection	yes (non-latching)	
Overload protection	yes	

Measuring/setting range

Probe length L [mm]	50	
Measuring range	-25...160 °C	-13...320 °F
Note on measuring range	scalable	
Factory setting	-10...150 °C / 14...302 °F	
Calibration check limit [K]	0.5...3	
In steps of [K]	0.05	

Resolution

Resolution of analog output [K]	0.05	
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Accuracy / deviations

Precision analog output [K]	$\pm 0,2$	
Precision IO-Link [K]	$\pm 0,2$	
Temperature coefficient analog output	$< \pm 0,02$; (In case of deviation from the reference condition $25 \pm 5 \text{ °C}$)	

TCC811



Temperature transmitter

TCC050K1EC01-A-DKG/US

[% of the span / 10 K]	
Temperature coefficient IO-Link	< ± 0,01; (In case of deviation from the reference condition 25 ± 5 °C)
[% of the span / 10 K]	

Reaction times

Dynamic response T05 / T09 [s]	1,5 / 4
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Software / programming

Parameter setting options	Display unit; scaling of the analog output; calibration check limit; switching logic diagnostic output; simulation mode
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Interfaces

Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
Profiles	BLOB	Binary Large Object transfer
	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution
SIO mode	yes	
Required master port class	A	
Process data analog	1	
Process data binary	1	
Min. process cycle time [ms]	4.4	
IO-Link resolution temperature [K]	0.01	
Supported DeviceIDs	Type of operation	DeviceID
	default	1129

Operating conditions

Ambient temperature [°C]	-25...70
Note on ambient temperature	max. internal device temperature: 125 °C
Storage temperature [°C]	-40...100
Protection	IP 68; IP 69K

Tests / approvals

EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 68000-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	35 g (10...2000 Hz)
MTTF [years]	329	
Note on approval	Factory certificate available as download at www.factory-certificate.ifm	
UL approval	UL approval number	K021
	File number UL	E217884

Mechanical data

Weight [g]	352.3
Housing	tubular
Dimensions [mm]	Ø 50 / L = 114.8
Material	stainless steel (1.4404 / 316L); PEI; FKM; PFA
Materials (wetted parts)	stainless steel (1.4404 / 316L); PEEK

TCC811



Temperature transmitter

TCC050K1EC01-A-DKG/US

Process connection	Clamp DN25...DN40 (1...1,5") DIN 32676 (ISO 2852)
Surface characteristics Ra/Rz of the wetted parts	Ra < 0.8 µm
Probe diameter [mm]	6
Installation length EL [mm]	50

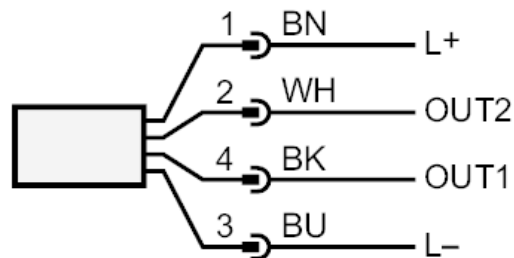
Remarks	
Remarks	MS = set measuring span cULus - Class 2 source required
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4, gold-plated



Connection



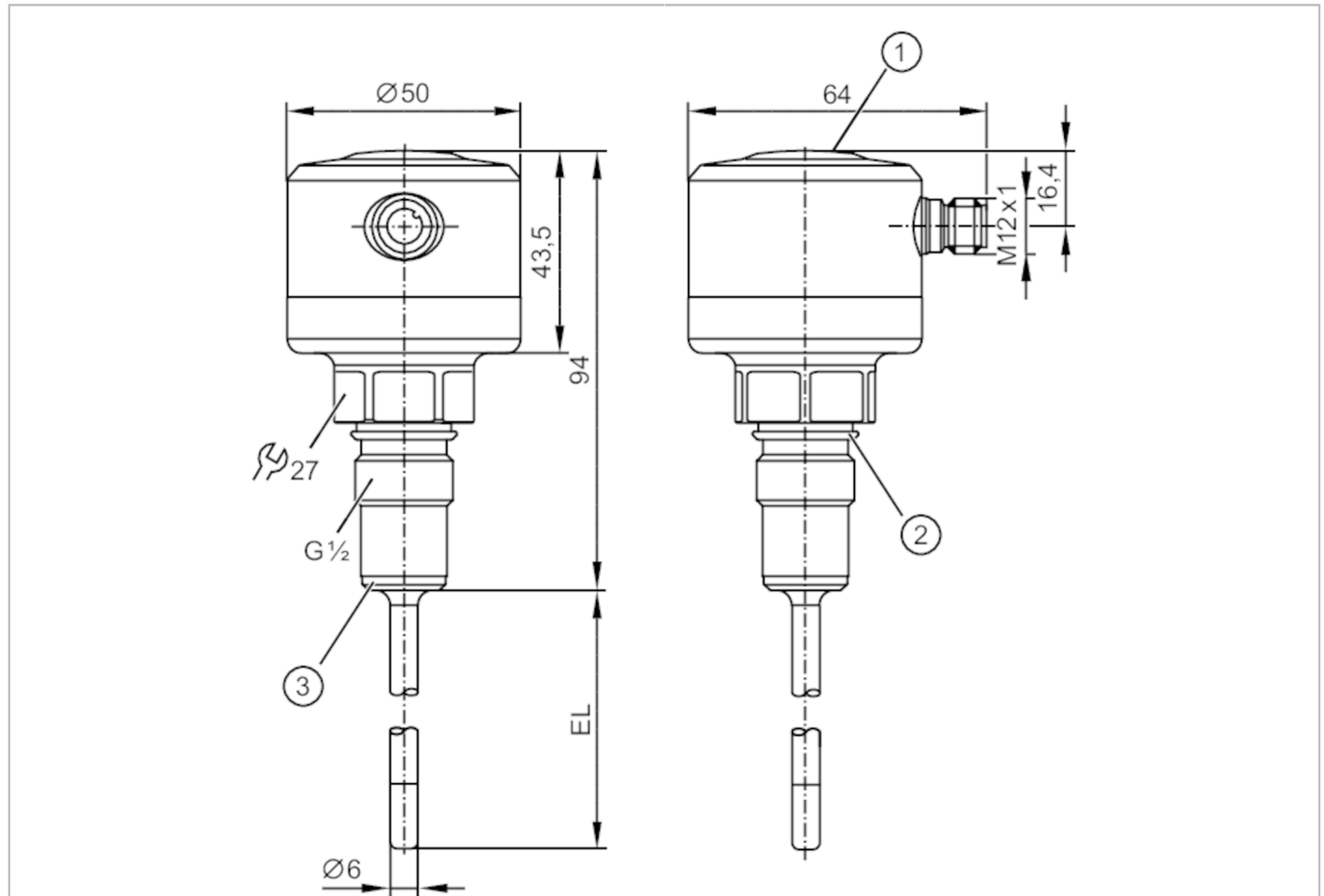
OUT2: analog output
OUT1: Diagnostic output / IO-Link

TCC501



Temperature transmitter

TCC030K1ER12-A-DKG/US



- 1 LED
- 2 Gasket FKM (for sealing on the back - not pressure resistant) / removable
- 3 pre-mounted PEEK sealing ring (removable) / metallic sealing area



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
Measuring range	-25...160 °C	-13...320 °F
Communication interface	IO-Link	
Process connection	threaded connection G 1/2 external thread sealing cone	
Installation length EL [mm]	30	

Application

Special feature	gold-plated contacts	
Measuring element	1 x Pt 1000	
Reference element	1 x NTC	
Media	liquids and gases	
Pressure rating	160 bar	16 MPa
Minimum installation depth [mm]	15	

Electrical data

Operating voltage [V]	18...32 DC; (cULus - Class 2 source required)	
Current consumption [mA]	10; (24 V)	

TCC501



Temperature transmitter

TCC030K1ER12-A-DKG/US

Protection class	III
Reverse polarity protection	yes
Power-on delay time [s]	6
Integrated watchdog	yes
Inputs / outputs	
Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1
Outputs	
Total number of outputs	2
Output signal	analog signal; IO-Link; (calibration check status)
Electrical design	PNP/NPN
Number of digital outputs	1
Output function	normally closed; (diagnostic signal)
Max. voltage drop switching output DC [V]	2
Permanent current rating of switching output DC [mA]	100
Diagnostic output	calibration check status and error diagnostics
Number of analog outputs	1
Analog current output [mA]	4...20
Max. load [Ω]	$(U_b - 15 \text{ V}) \times 50$
Short-circuit protection	yes
Type of short-circuit protection	yes (non-latching)
Overload protection	yes
Measuring/setting range	
Probe length L [mm]	30
Measuring range	-25...160 °C -13...320 °F
Note on measuring range	scalable
Factory setting	-10...150 °C / 14...302 °F
Calibration check limit [K]	0.5...3
In steps of [K]	0.05
Resolution	
Resolution of analog output [K]	0.05
Accuracy / deviations	
Precision analog output [K]	$\pm 0,2$
Precision IO-Link [K]	$\pm 0,2$
Temperature coefficient analog output [% of the span / 10 K]	$< \pm 0,02$; (In case of deviation from the reference condition $25 \pm 5 \text{ }^\circ\text{C}$)
Temperature coefficient IO-Link [% of the span / 10 K]	$< \pm 0,01$; (In case of deviation from the reference condition $25 \pm 5 \text{ }^\circ\text{C}$)
Reaction times	
Dynamic response T05 / T09 [s]	1,5 / 4

TCC501



Temperature transmitter

TCC030K1ER12-A-DKG/US

Software / programming		
Parameter setting options	Display unit; scaling of the analog output; calibration check limit; switching logic diagnostic output; simulation mode	
Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
Profiles	BLOB	Binary Large Object transfer
	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution
SIO mode	yes	
Required master port class	A	
Process data analog	1	
Process data binary	1	
Min. process cycle time [ms]	4.4	
IO-Link resolution temperature [K]	0.01	
Supported DeviceIDs	Type of operation	DeviceID
	default	1129
Operating conditions		
Ambient temperature [°C]	-25...70	
Note on ambient temperature	max. internal device temperature: 125 °C	
Storage temperature [°C]	-40...100	
Protection	IP 68; IP 69K	
Tests / approvals		
EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	35 g (10...2000 Hz)
MTTF [years]	329	
Note on approval	Factory certificate available as download at www.factory-certificate.ifm	
UL approval	UL approval number	K021
	File number UL	E217884
Mechanical data		
Weight [g]	365.1	
Housing	tubular	
Dimensions [mm]	Ø 50 / L = 124	
Material	stainless steel (1.4404 / 316L); PEI; FKM; PFA	
Materials (wetted parts)	stainless steel (1.4404 / 316L); PEEK	
Tightening torque [Nm]	30...50	
Process connection	threaded connection G 1/2 external thread sealing cone	
Surface characteristics Ra/Rz of the wetted parts	Ra < 0.8 µm	
Probe diameter [mm]	6	
Installation length EL [mm]	30	

TCC501



Temperature transmitter

TCC030K1ER12-A-DKG/US

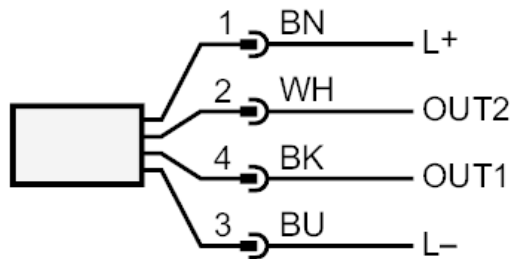
Remarks	
Remarks	MS = set measuring span cULus - Class 2 source required
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



Connection



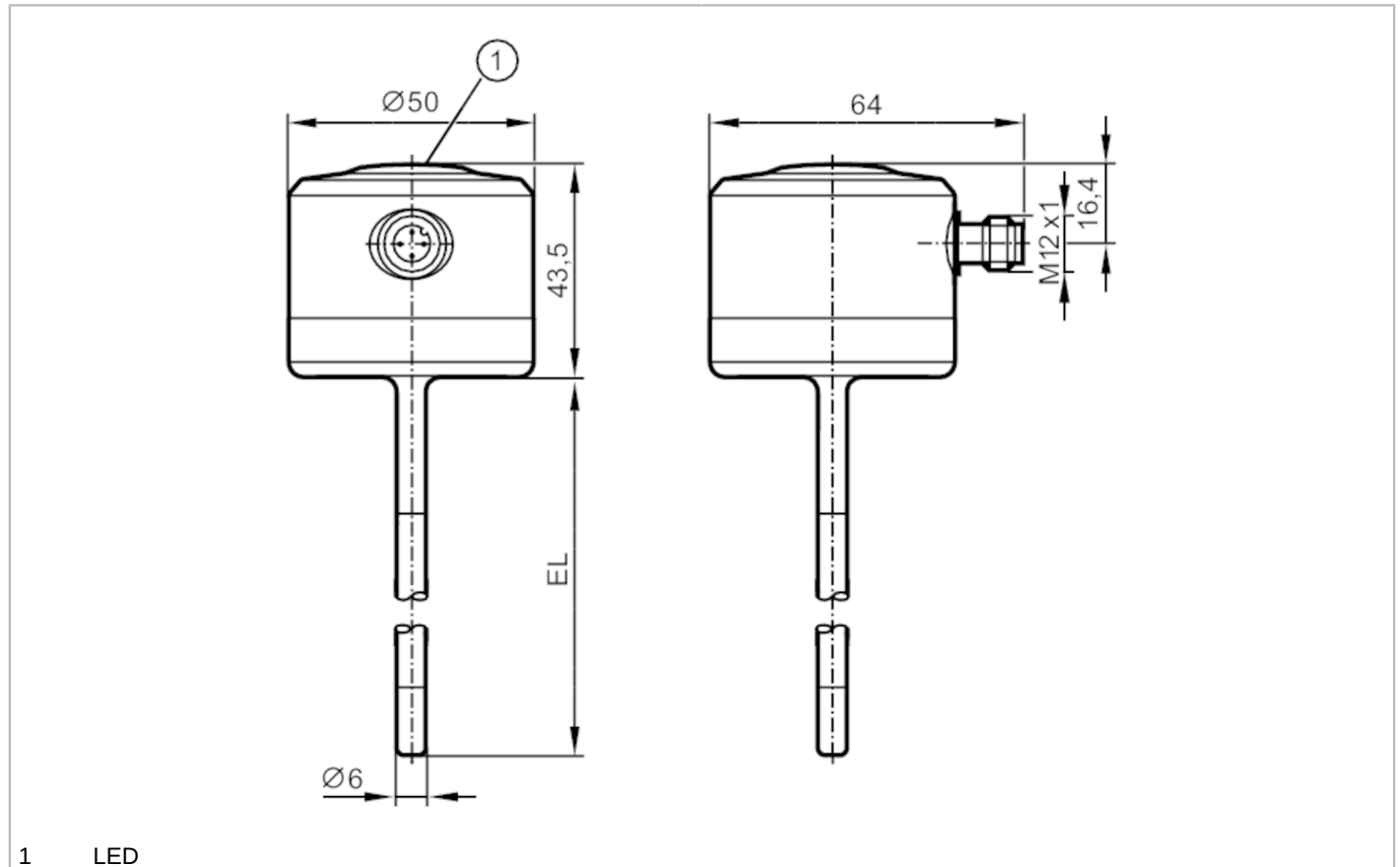
OUT2: analog output
OUT1: Diagnostic output / IO-Link

TCC291



Temperature transmitter

TCC350K1ED06-A-DKG/US



1 LED



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
Measuring range	-25...160 °C	-13...320 °F
Communication interface	IO-Link	
Process connection	Clamp fitting Ø 6 mm	
Installation length EL [mm]	350	

Application

Special feature	gold-plated contacts	
Measuring element	1 x Pt 1000	
Reference element	1 x NTC	
Media	liquids and gases	
Pressure rating	160 bar	16 MPa
Minimum installation depth [mm]	15	

Electrical data

Operating voltage [V]	18...32 DC; (cULus - Class 2 source required)	
Current consumption [mA]	10; (24 V)	
Protection class	III	
Reverse polarity protection	yes	
Power-on delay time [s]	6	
Integrated watchdog	yes	

TCC291



Temperature transmitter

TCC350K1ED06-A-DKG/US

Inputs / outputs	
Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1
Outputs	
Total number of outputs	2
Output signal	analog signal; IO-Link; (calibration check status)
Electrical design	PNP/NPN
Number of digital outputs	1
Output function	normally closed; (diagnostic signal)
Max. voltage drop switching output DC [V]	2
Permanent current rating of switching output DC [mA]	100
Diagnostic output	calibration check status and error diagnostics
Number of analog outputs	1
Analog current output [mA]	4...20
Max. load [Ω]	(U _b - 15 V) x 50
Short-circuit protection	yes
Type of short-circuit protection	yes (non-latching)
Overload protection	yes
Measuring/setting range	
Probe length L [mm]	350
Measuring range	-25...160 °C -13...320 °F
Note on measuring range	scalable
Factory setting	-10...150 °C / 14...302 °F
Calibration check limit [K]	0.5...3
In steps of [K]	0.05
Resolution	
Resolution of analog output [K]	0.05
Accuracy / deviations	
Precision analog output [K]	± 0,2
Precision IO-Link [K]	± 0,2
Temperature coefficient analog output [% of the span / 10 K]	< ± 0,02; (In case of deviation from the reference condition 25 ± 5 °C)
Temperature coefficient IO-Link [% of the span / 10 K]	< ± 0,01; (In case of deviation from the reference condition 25 ± 5 °C)
Reaction times	
Dynamic response T05 / T09 [s]	1,5 / 4
Software / programming	
Parameter setting options	Display unit; scaling of the analog output; calibration check limit; switching logic diagnostic output; simulation mode
Interfaces	
Communication interface	IO-Link

TCC291



Temperature transmitter

TCC350K1ED06-A-DKG/US

Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
Profiles	BLOB	Binary Large Object transfer
	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution
SIO mode	yes	
Required master port class	A	
Process data analog	1	
Process data binary	1	
Min. process cycle time [ms]	4.4	
IO-Link resolution temperature [K]	0.01	
Supported DeviceIDs	Type of operation	DeviceID
	default	1129

Operating conditions

Ambient temperature [°C]	-25...70	
Note on ambient temperature	max. internal device temperature: 125 °C	
Storage temperature [°C]	-40...100	
Protection	IP 68; IP 69K	

Tests / approvals

EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	35 g (10...2000 Hz)
MTTF [years]	329	
Note on approval	Factory certificate available as download at www.factory-certificate.ifm	
UL approval	UL approval number	K021
	File number UL	E217884

Mechanical data

Weight [g]	315.6	
Housing	tubular	
Dimensions [mm]	Ø 50 / L = 393.5	
Material	stainless steel (1.4404 / 316L); PEI; FKM; PFA	
Materials (wetted parts)	stainless steel (1.4404 / 316L)	
Process connection	Clamp fitting Ø 6 mm	
Surface characteristics Ra/Rz of the wetted parts	Ra < 0.8 µm	
Probe diameter [mm]	6	
Installation length EL [mm]	350	

Remarks

Remarks	MS = set measuring span cULus - Class 2 source required	
Pack quantity	1 pcs.	

TCC291



Temperature transmitter

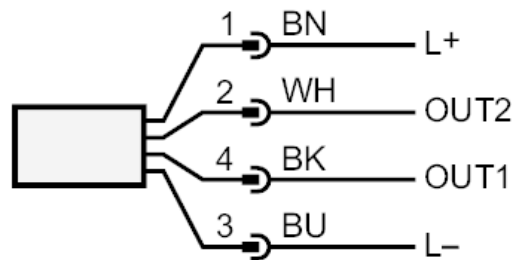
TCC350K1ED06-A-DKG/US

Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



Connection



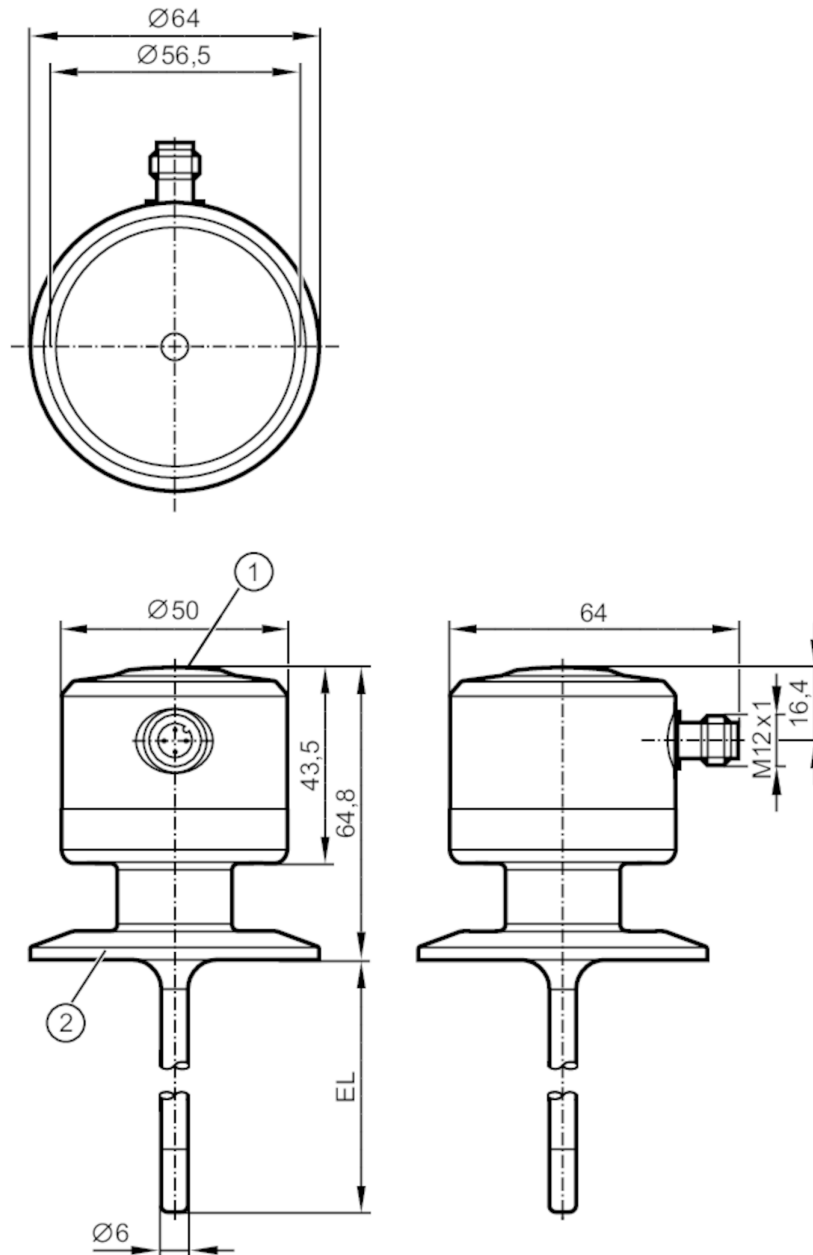
OUT2: analog output
OUT1: Diagnostic output / IO-Link

TCC931



Temperature transmitter

TCC100K1EC02-A-DKG/US



- 1 LED
- 2 Process connection



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
Measuring range	-25...160 °C	-13...320 °F
Communication interface	IO-Link	
Process connection	Clamp DN50 (2") DIN 32676 (ISO 2852)	
Installation length EL [mm]	100	

Application

Special feature	gold-plated contacts
Measuring element	1 x Pt 1000

TCC931



Temperature transmitter

TCC100K1EC02-A-DKG/US

Reference element	1 x NTC
Media	liquids and gases
Pressure rating	160 bar 16 MPa
Minimum installation depth [mm]	15

Electrical data

Operating voltage [V]	18...32 DC; (cULus - Class 2 source required)
Current consumption [mA]	10; (24 V)
Protection class	III
Reverse polarity protection	yes
Power-on delay time [s]	6
Integrated watchdog	yes

Inputs / outputs

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1
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Outputs

Total number of outputs	2
Output signal	analog signal; IO-Link; (calibration check status)
Electrical design	PNP/NPN
Number of digital outputs	1
Output function	normally closed; (diagnostic signal)
Max. voltage drop switching output DC [V]	2
Permanent current rating of switching output DC [mA]	100
Diagnostic output	calibration check status and error diagnostics
Number of analog outputs	1
Analog current output [mA]	4...20
Max. load [Ω]	$(U_b - 15 \text{ V}) \times 50$
Short-circuit protection	yes
Type of short-circuit protection	yes (non-latching)
Overload protection	yes

Measuring/setting range

Probe length L [mm]	100
Measuring range	-25...160 °C -13...320 °F
Note on measuring range	scalable
Factory setting	-10...150 °C / 14...302 °F
Calibration check limit [K]	0.5...3
In steps of [K]	0.05

Resolution

Resolution of analog output [K]	0.05
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Accuracy / deviations

Precision analog output [K]	$\pm 0,2$
Precision IO-Link [K]	$\pm 0,2$
Temperature coefficient analog output	$< \pm 0,02$; (In case of deviation from the reference condition $25 \pm 5 \text{ °C}$)

TCC931



Temperature transmitter

TCC100K1EC02-A-DKG/US

[% of the span / 10 K]	
Temperature coefficient IO-Link	< ± 0,01; (In case of deviation from the reference condition 25 ± 5 °C)
[% of the span / 10 K]	

Reaction times

Dynamic response T05 / T09 [s]	1,5 / 4
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Software / programming

Parameter setting options	Display unit; scaling of the analog output; calibration check limit; switching logic diagnostic output; simulation mode
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Interfaces

Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
Profiles	BLOB	Binary Large Object transfer
	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution
SIO mode	yes	
Required master port class	A	
Process data analog	1	
Process data binary	1	
Min. process cycle time [ms]	4.4	
IO-Link resolution temperature [K]	0.01	
Supported DeviceIDs	Type of operation	DeviceID
	default	1129

Operating conditions

Ambient temperature [°C]	-25...70
Note on ambient temperature	max. internal device temperature: 125 °C
Storage temperature [°C]	-40...100
Protection	IP 68; IP 69K

Tests / approvals

EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	35 g (10...2000 Hz)
MTTF [years]	329	
Note on approval	Factory certificate available as download at www.factory-certificate.ifm	
UL approval	UL approval number	K021
	File number UL	E217884

Mechanical data

Weight [g]	416
Housing	tubular
Dimensions [mm]	Ø 50 / L = 164.8
Material	stainless steel (1.4404 / 316L); PEI; FKM; PFA
Materials (wetted parts)	stainless steel (1.4404 / 316L); PEEK

TCC931



Temperature transmitter

TCC100K1EC02-A-DKG/US

Process connection	Clamp DN50 (2") DIN 32676 (ISO 2852)
Surface characteristics Ra/Rz of the wetted parts	Ra < 0.8 µm
Probe diameter [mm]	6
Installation length EL [mm]	100

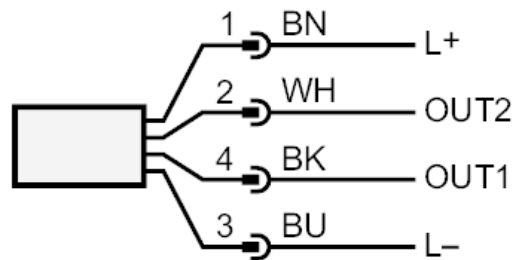
Remarks	
Remarks	MS = set measuring span cULus - Class 2 source required
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



Connection



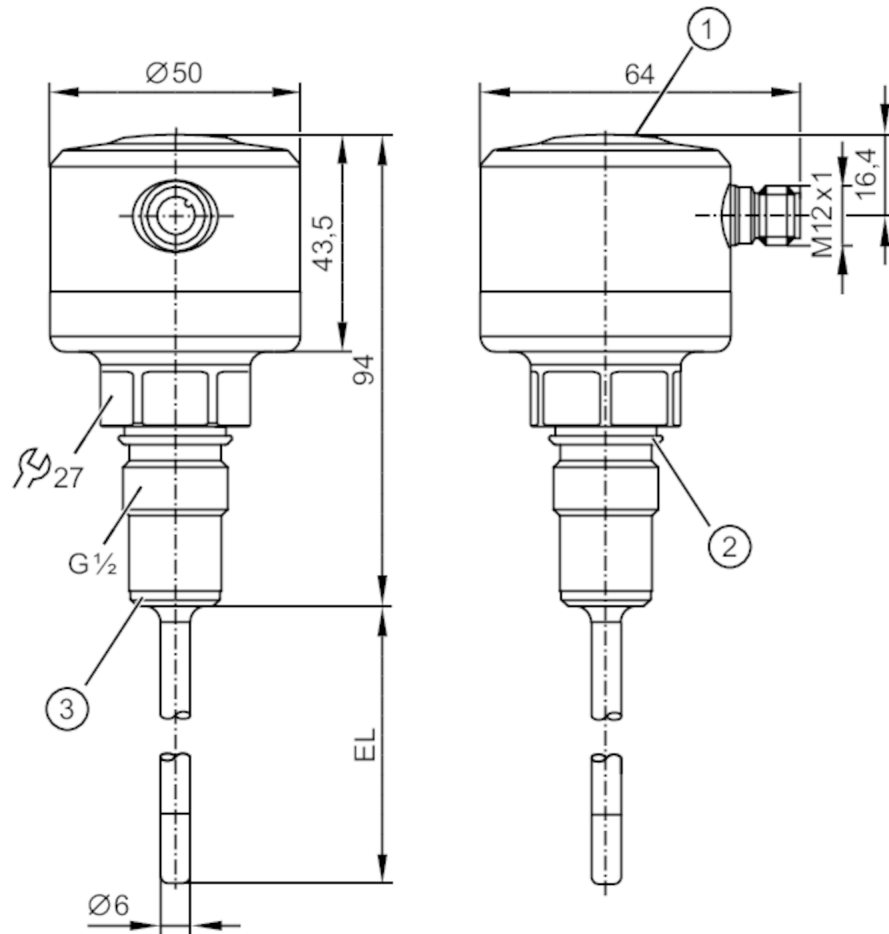
OUT2: analog output
OUT1: Diagnostic output / IO-Link

TCC511



Temperature transmitter

TCC050K1ER12-A-DKG/US



- 1 LED
- 2 Gasket FKM (for sealing on the back - not pressure resistant) / removable
- 3 pre-mounted PEEK sealing ring (removable) / metallic sealing area



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
Measuring range	-25...160 °C	-13...320 °F
Communication interface	IO-Link	
Process connection	threaded connection G 1/2 external thread sealing cone	
Installation length EL [mm]	50	

Application

Special feature	gold-plated contacts	
Measuring element	1 x Pt 1000	
Reference element	1 x NTC	
Media	liquids and gases	
Pressure rating	160 bar	16 MPa
Minimum installation depth [mm]	15	

Electrical data

Operating voltage [V]	18...32 DC; (cULus - Class 2 source required)	
Current consumption [mA]	10; (24 V)	

TCC511



Temperature transmitter

TCC050K1ER12-A-DKG/US

Protection class	III
Reverse polarity protection	yes
Power-on delay time [s]	6
Integrated watchdog	yes
Inputs / outputs	
Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1
Outputs	
Total number of outputs	2
Output signal	analog signal; IO-Link; (calibration check status)
Electrical design	PNP/NPN
Number of digital outputs	1
Output function	normally closed; (diagnostic signal)
Max. voltage drop switching output DC [V]	2
Permanent current rating of switching output DC [mA]	100
Diagnostic output	calibration check status and error diagnostics
Number of analog outputs	1
Analog current output [mA]	4...20
Max. load [Ω]	$(U_b - 15 \text{ V}) \times 50$
Short-circuit protection	yes
Type of short-circuit protection	yes (non-latching)
Overload protection	yes
Measuring/setting range	
Probe length L [mm]	50
Measuring range	-25...160 °C -13...320 °F
Note on measuring range	scalable
Factory setting	-10...150 °C / 14...302 °F
Calibration check limit [K]	0.5...3
In steps of [K]	0.05
Resolution	
Resolution of analog output [K]	0.05
Accuracy / deviations	
Precision analog output [K]	$\pm 0,2$
Precision IO-Link [K]	$\pm 0,2$
Temperature coefficient analog output [% of the span / 10 K]	$< \pm 0,02$; (In case of deviation from the reference condition $25 \pm 5 \text{ }^\circ\text{C}$)
Temperature coefficient IO-Link [% of the span / 10 K]	$< \pm 0,01$; (In case of deviation from the reference condition $25 \pm 5 \text{ }^\circ\text{C}$)
Reaction times	
Dynamic response T05 / T09 [s]	1,5 / 4



Temperature transmitter

TCC050K1ER12-A-DKG/US

Software / programming		
Parameter setting options	Display unit; scaling of the analog output; calibration check limit; switching logic diagnostic output; simulation mode	
Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
Profiles	BLOB	Binary Large Object transfer
	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution
SIO mode	yes	
Required master port class	A	
Process data analog	1	
Process data binary	1	
Min. process cycle time [ms]	4.4	
IO-Link resolution temperature [K]	0.01	
Supported DeviceIDs	Type of operation	DeviceID
	default	1129
Operating conditions		
Ambient temperature [°C]	-25...70	
Note on ambient temperature	max. internal device temperature: 125 °C	
Storage temperature [°C]	-40...100	
Protection	IP 68; IP 69K	
Tests / approvals		
EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 68000-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	35 g (10...2000 Hz)
MTTF [years]	329	
Note on approval	Factory certificate available as download at www.factory-certificate.ifm	
UL approval	UL approval number	K021
	File number UL	E217884
Mechanical data		
Weight [g]	367.7	
Housing	tubular	
Dimensions [mm]	Ø 50 / L = 144	
Material	stainless steel (1.4404 / 316L); PEI; FKM; PFA	
Materials (wetted parts)	stainless steel (1.4404 / 316L); PEEK	
Tightening torque [Nm]	30...50	
Process connection	threaded connection G 1/2 external thread sealing cone	
Surface characteristics Ra/Rz of the wetted parts	Ra < 0.8 µm	
Probe diameter [mm]	6	
Installation length EL [mm]	50	

TCC511



Temperature transmitter

TCC050K1ER12-A-DKG/US

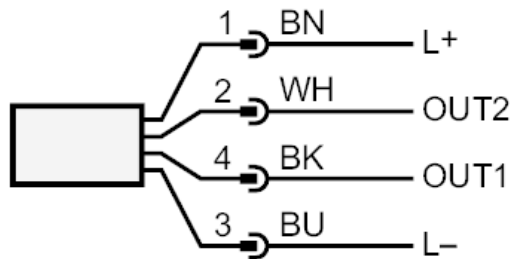
Remarks	
Remarks	MS = set measuring span cULus - Class 2 source required
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



Connection



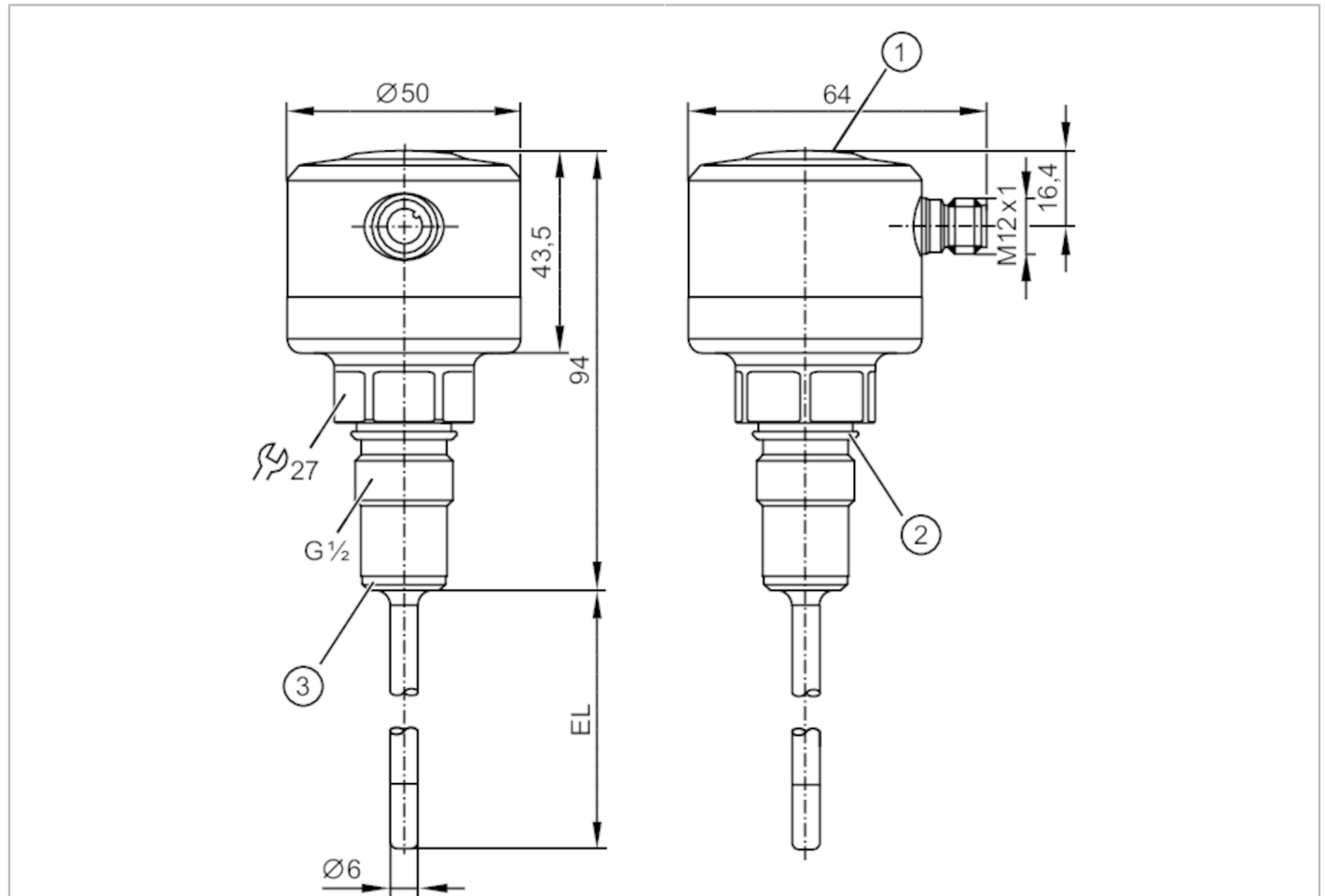
OUT2: analog output
OUT1: Diagnostic output / IO-Link

TCC541



Temperature transmitter

TCC150K1ER12-A-DKG/US



- 1 LED
- 2 Gasket FKM (for sealing on the back - not pressure resistant) / removable
- 3 pre-mounted PEEK sealing ring (removable) / metallic sealing area



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
Measuring range	-25...160 °C	-13...320 °F
Communication interface	IO-Link	
Process connection	threaded connection G 1/2 external thread sealing cone	
Installation length EL [mm]	150	

Application

Special feature	gold-plated contacts	
Measuring element	1 x Pt 1000	
Reference element	1 x NTC	
Media	liquids and gases	
Pressure rating	160 bar	16 MPa
Minimum installation depth [mm]	15	

Electrical data

Operating voltage [V]	18...32 DC; (cULus - Class 2 source required)	
Current consumption [mA]	10; (24 V)	

TCC541



Temperature transmitter

TCC150K1ER12-A-DKG/US

Protection class	III
Reverse polarity protection	yes
Power-on delay time [s]	6
Integrated watchdog	yes
Inputs / outputs	
Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1
Outputs	
Total number of outputs	2
Output signal	analog signal; IO-Link; (calibration check status)
Electrical design	PNP/NPN
Number of digital outputs	1
Output function	normally closed; (diagnostic signal)
Max. voltage drop switching output DC [V]	2
Permanent current rating of switching output DC [mA]	100
Diagnostic output	calibration check status and error diagnostics
Number of analog outputs	1
Analog current output [mA]	4...20
Max. load [Ω]	$(U_b - 15 \text{ V}) \times 50$
Short-circuit protection	yes
Type of short-circuit protection	yes (non-latching)
Overload protection	yes
Measuring/setting range	
Probe length L [mm]	150
Measuring range	-25...160 °C -13...320 °F
Note on measuring range	scalable
Factory setting	-10...150 °C / 14...302 °F
Calibration check limit [K]	0.5...3
In steps of [K]	0.05
Resolution	
Resolution of analog output [K]	0.05
Accuracy / deviations	
Precision analog output [K]	$\pm 0,2$
Precision IO-Link [K]	$\pm 0,2$
Temperature coefficient analog output [% of the span / 10 K]	$< \pm 0,02$; (In case of deviation from the reference condition $25 \pm 5 \text{ °C}$)
Temperature coefficient IO-Link [% of the span / 10 K]	$< \pm 0,01$; (In case of deviation from the reference condition $25 \pm 5 \text{ °C}$)
Reaction times	
Dynamic response T05 / T09 [s]	1,5 / 4



Temperature transmitter

TCC150K1ER12-A-DKG/US

Software / programming		
Parameter setting options	Display unit; scaling of the analog output; calibration check limit; switching logic diagnostic output; simulation mode	
Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
Profiles	BLOB	Binary Large Object transfer
	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution
SIO mode	yes	
Required master port class	A	
Process data analog	1	
Process data binary	1	
Min. process cycle time [ms]	4.4	
IO-Link resolution temperature [K]	0.01	
Supported DeviceIDs	Type of operation	DeviceID
	default	1129
Operating conditions		
Ambient temperature [°C]	-25...70	
Note on ambient temperature	max. internal device temperature: 125 °C	
Storage temperature [°C]	-40...100	
Protection	IP 68; IP 69K	
Tests / approvals		
EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	35 g (10...2000 Hz)
MTTF [years]	329	
Note on approval	Factory certificate available as download at www.factory-certificate.ifm	
UL approval	UL approval number	K021
	File number UL	E217884
Mechanical data		
Weight [g]	463	
Housing	tubular	
Dimensions [mm]	Ø 50 / L = 244	
Material	stainless steel (1.4404 / 316L); PEI; FKM; PFA	
Materials (wetted parts)	stainless steel (1.4404 / 316L); PEEK	
Tightening torque [Nm]	30...50	
Process connection	threaded connection G 1/2 external thread sealing cone	
Surface characteristics Ra/Rz of the wetted parts	Ra < 0.8 µm	
Probe diameter [mm]	6	
Installation length EL [mm]	150	

TCC541



Temperature transmitter

TCC150K1ER12-A-DKG/US

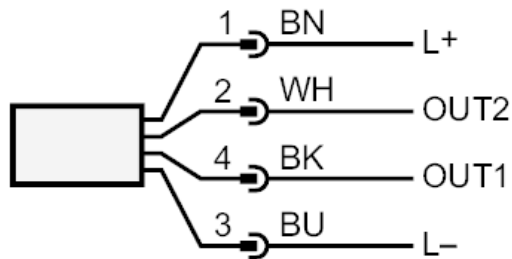
Remarks	
Remarks	MS = set measuring span cULus - Class 2 source required
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



Connection



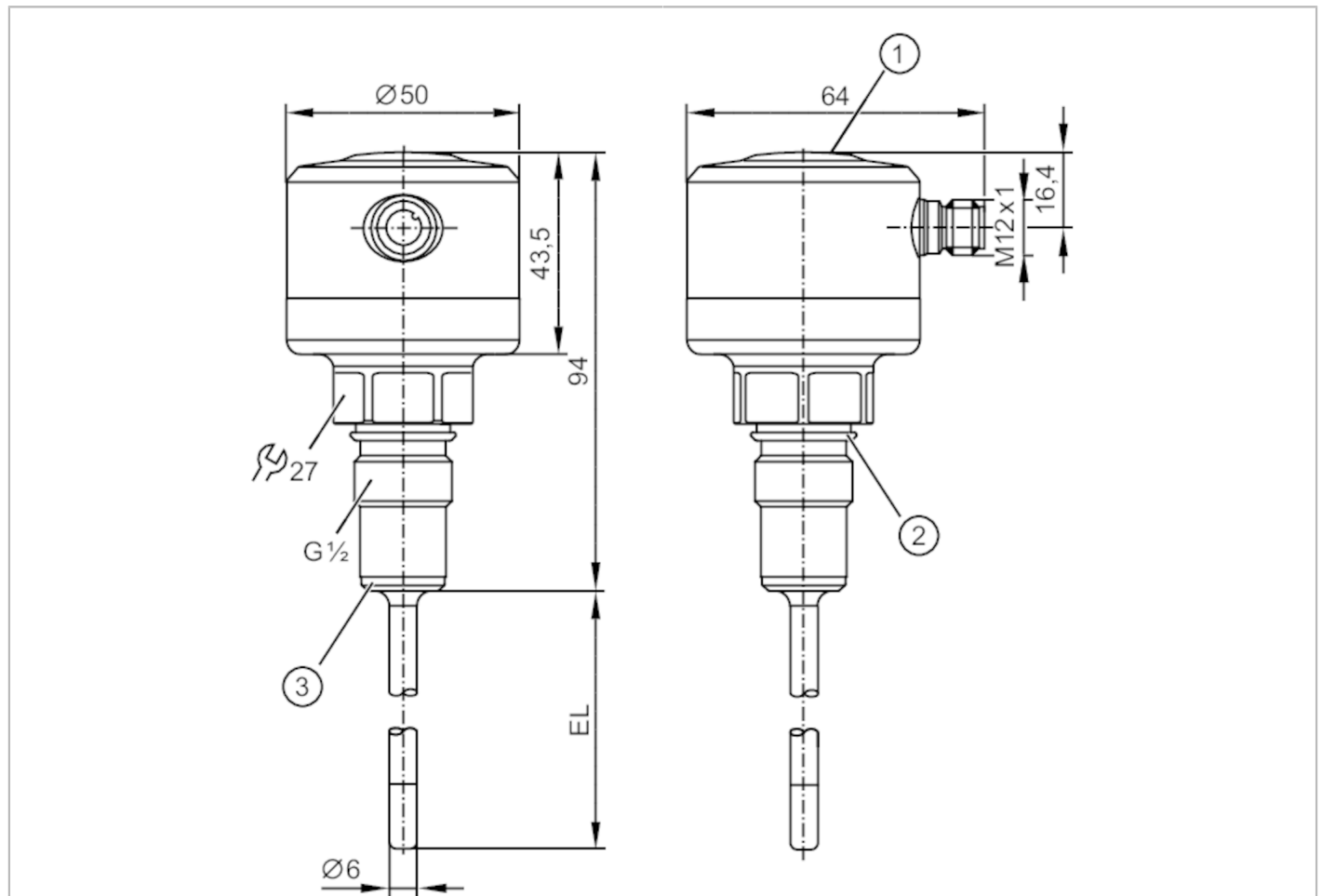
OUT2: analog output
OUT1: Diagnostic output / IO-Link

TCC531



Temperature transmitter

TCC100K1ER12-A-DKG/US



- 1 LED
- 2 Gasket FKM (for sealing on the back - not pressure resistant) / removable
- 3 pre-mounted PEEK sealing ring (removable) / metallic sealing area



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
Measuring range	-25...160 °C	-13...320 °F
Communication interface	IO-Link	
Process connection	threaded connection G 1/2 external thread sealing cone	
Installation length EL [mm]	100	

Application

Special feature	gold-plated contacts	
Measuring element	1 x Pt 1000	
Reference element	1 x NTC	
Media	liquids and gases	
Pressure rating	160 bar	16 MPa
Minimum installation depth [mm]	15	

Electrical data

Operating voltage [V]	18...32 DC; (cULus - Class 2 source required)	
Current consumption [mA]	10; (24 V)	

TCC531



Temperature transmitter

TCC100K1ER12-A-DKG/US

Protection class	III
Reverse polarity protection	yes
Power-on delay time [s]	6
Integrated watchdog	yes
Inputs / outputs	
Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1
Outputs	
Total number of outputs	2
Output signal	analog signal; IO-Link; (calibration check status)
Electrical design	PNP/NPN
Number of digital outputs	1
Output function	normally closed; (diagnostic signal)
Max. voltage drop switching output DC [V]	2
Permanent current rating of switching output DC [mA]	100
Diagnostic output	calibration check status and error diagnostics
Number of analog outputs	1
Analog current output [mA]	4...20
Max. load [Ω]	$(U_b - 15 \text{ V}) \times 50$
Short-circuit protection	yes
Type of short-circuit protection	yes (non-latching)
Overload protection	yes
Measuring/setting range	
Probe length L [mm]	100
Measuring range	-25...160 °C -13...320 °F
Note on measuring range	scalable
Factory setting	-10...150 °C / 14...302 °F
Calibration check limit [K]	0.5...3
In steps of [K]	0.05
Resolution	
Resolution of analog output [K]	0.05
Accuracy / deviations	
Precision analog output [K]	$\pm 0,2$
Precision IO-Link [K]	$\pm 0,2$
Temperature coefficient analog output [% of the span / 10 K]	$< \pm 0,02$; (In case of deviation from the reference condition $25 \pm 5 \text{ }^\circ\text{C}$)
Temperature coefficient IO-Link [% of the span / 10 K]	$< \pm 0,01$; (In case of deviation from the reference condition $25 \pm 5 \text{ }^\circ\text{C}$)
Reaction times	
Dynamic response T05 / T09 [s]	1,5 / 4



Temperature transmitter

TCC100K1ER12-A-DKG/US

Software / programming		
Parameter setting options	Display unit; scaling of the analog output; calibration check limit; switching logic diagnostic output; simulation mode	
Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
Profiles	BLOB	Binary Large Object transfer
	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution
SIO mode	yes	
Required master port class	A	
Process data analog	1	
Process data binary	1	
Min. process cycle time [ms]	4.4	
IO-Link resolution temperature [K]	0.01	
Supported DeviceIDs	Type of operation	DeviceID
	default	1129
Operating conditions		
Ambient temperature [°C]	-25...70	
Note on ambient temperature	max. internal device temperature: 125 °C	
Storage temperature [°C]	-40...100	
Protection	IP 68; IP 69K	
Tests / approvals		
EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	35 g (10...2000 Hz)
MTTF [years]	329	
Note on approval	Factory certificate available as download at www.factory-certificate.ifm	
UL approval	UL approval number	K021
	File number UL	E217884
Mechanical data		
Weight [g]	457.3	
Housing	tubular	
Dimensions [mm]	Ø 50 / L = 194	
Material	stainless steel (1.4404 / 316L); PEI; FKM; PFA	
Materials (wetted parts)	stainless steel (1.4404 / 316L); PEEK	
Tightening torque [Nm]	30...50	
Process connection	threaded connection G 1/2 external thread sealing cone	
Surface characteristics Ra/Rz of the wetted parts	Ra < 0.8 µm	
Probe diameter [mm]	6	
Installation length EL [mm]	100	

TCC531



Temperature transmitter

TCC100K1ER12-A-DKG/US

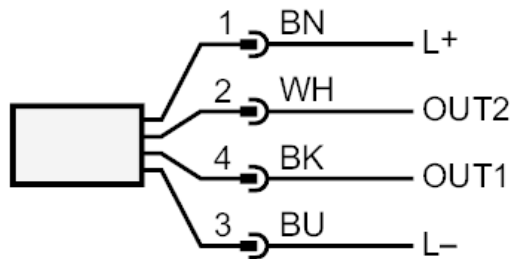
Remarks	
Remarks	MS = set measuring span cULus - Class 2 source required
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



Connection



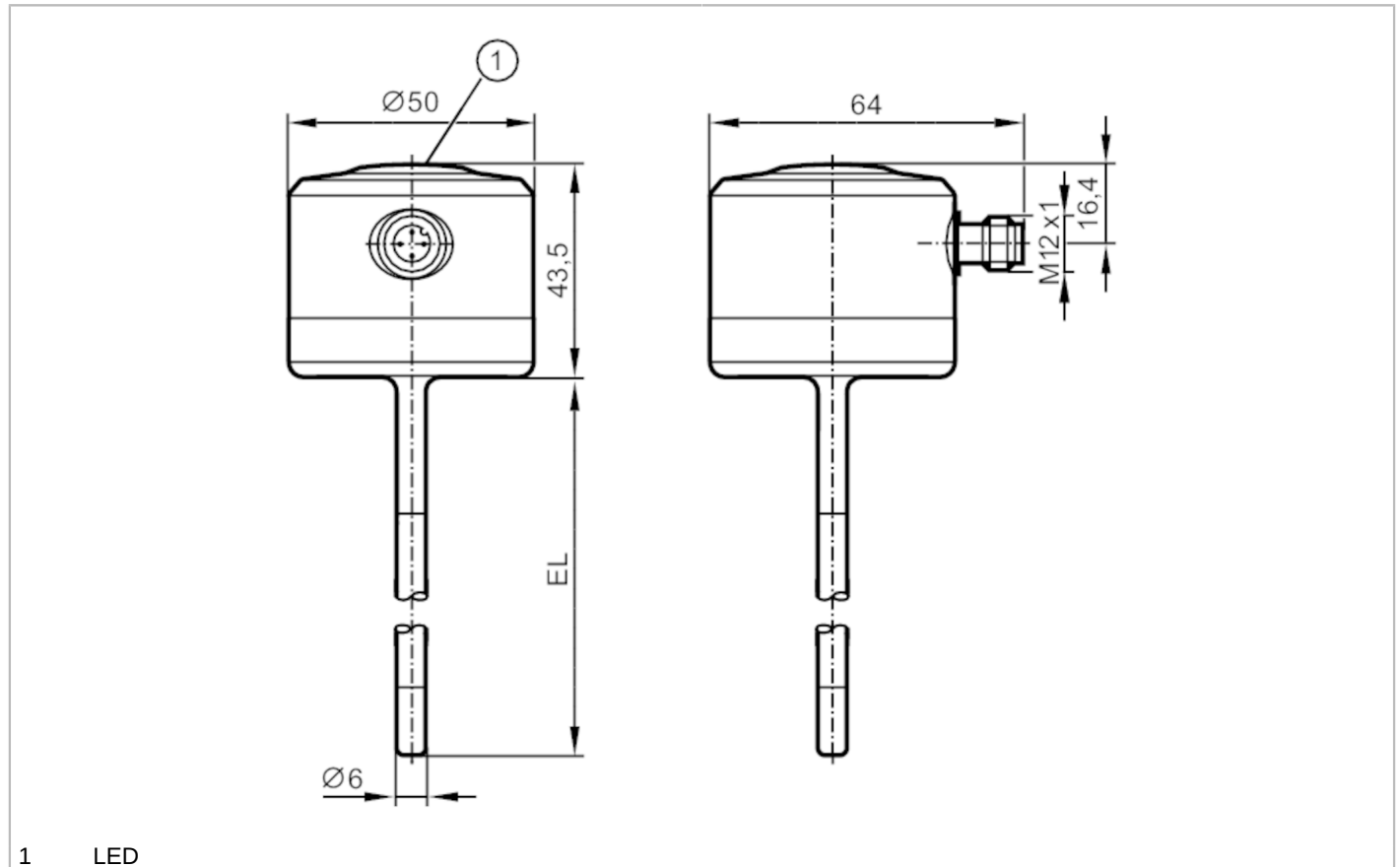
OUT2: analog output
OUT1: Diagnostic output / IO-Link

TCC281



Temperature transmitter

TCC450K1ED06-A-DKG/US



1 LED



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
Measuring range	-25...160 °C	-13...320 °F
Communication interface	IO-Link	
Process connection	Clamp fitting Ø 6 mm	
Installation length EL [mm]	450	

Application

Special feature	gold-plated contacts	
Measuring element	1 x Pt 1000	
Reference element	1 x NTC	
Media	liquids and gases	
Pressure rating	160 bar	16 MPa
Minimum installation depth [mm]	15	

Electrical data

Operating voltage [V]	18...32 DC; (cULus - Class 2 source required)	
Current consumption [mA]	10; (24 V)	
Protection class	III	
Reverse polarity protection	yes	
Power-on delay time [s]	6	
Integrated watchdog	yes	

TCC281



Temperature transmitter

TCC450K1ED06-A-DKG/US

Inputs / outputs	
Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1
Outputs	
Total number of outputs	2
Output signal	analog signal; IO-Link; (calibration check status)
Electrical design	PNP/NPN
Number of digital outputs	1
Output function	normally closed; (diagnostic signal)
Max. voltage drop switching output DC [V]	2
Permanent current rating of switching output DC [mA]	100
Diagnostic output	calibration check status and error diagnostics
Number of analog outputs	1
Analog current output [mA]	4...20
Max. load [Ω]	(U _b - 15 V) x 50
Short-circuit protection	yes
Type of short-circuit protection	yes (non-latching)
Overload protection	yes
Measuring/setting range	
Probe length L [mm]	450
Measuring range	-25...160 °C -13...320 °F
Note on measuring range	scalable
Factory setting	-10...150 °C / 14...302 °F
Calibration check limit [K]	0.5...3
In steps of [K]	0.05
Resolution	
Resolution of analog output [K]	0.05
Accuracy / deviations	
Precision analog output [K]	± 0,2
Precision IO-Link [K]	± 0,2
Temperature coefficient analog output [% of the span / 10 K]	< ± 0,02; (In case of deviation from the reference condition 25 ± 5 °C)
Temperature coefficient IO-Link [% of the span / 10 K]	< ± 0,01; (In case of deviation from the reference condition 25 ± 5 °C)
Reaction times	
Dynamic response T05 / T09 [s]	1,5 / 4
Software / programming	
Parameter setting options	Display unit; scaling of the analog output; calibration check limit; switching logic diagnostic output; simulation mode
Interfaces	
Communication interface	IO-Link

TCC281



Temperature transmitter

TCC450K1ED06-A-DKG/US

Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
Profiles	BLOB	Binary Large Object transfer
	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution
SIO mode	yes	
Required master port class	A	
Process data analog	1	
Process data binary	1	
Min. process cycle time [ms]	4.4	
IO-Link resolution temperature [K]	0.01	
Supported DeviceIDs	Type of operation	DeviceID
	default	1129

Operating conditions

Ambient temperature [°C]	-25...70	
Note on ambient temperature	max. internal device temperature: 125 °C	
Storage temperature [°C]	-40...100	
Protection	IP 68; IP 69K	

Tests / approvals

EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	35 g (10...2000 Hz)
MTTF [years]	329	
Note on approval	Factory certificate available as download at www.factory-certificate.ifm	
UL approval	UL approval number	K021
	File number UL	E217884

Mechanical data

Weight [g]	327.9	
Housing	tubular	
Dimensions [mm]	Ø 50 / L = 493.5	
Material	stainless steel (1.4404 / 316L); PEI; FKM; PFA	
Materials (wetted parts)	stainless steel (1.4404 / 316L)	
Process connection	Clamp fitting Ø 6 mm	
Surface characteristics Ra/Rz of the wetted parts	Ra < 0.8 µm	
Probe diameter [mm]	6	
Installation length EL [mm]	450	

Remarks

Remarks	MS = set measuring span cULus - Class 2 source required	
Pack quantity	1 pcs.	

TCC281



Temperature transmitter

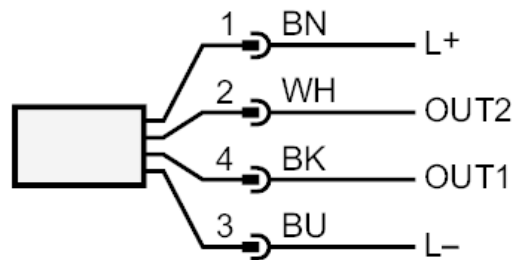
TCC450K1ED06-A-DKG/US

Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



Connection



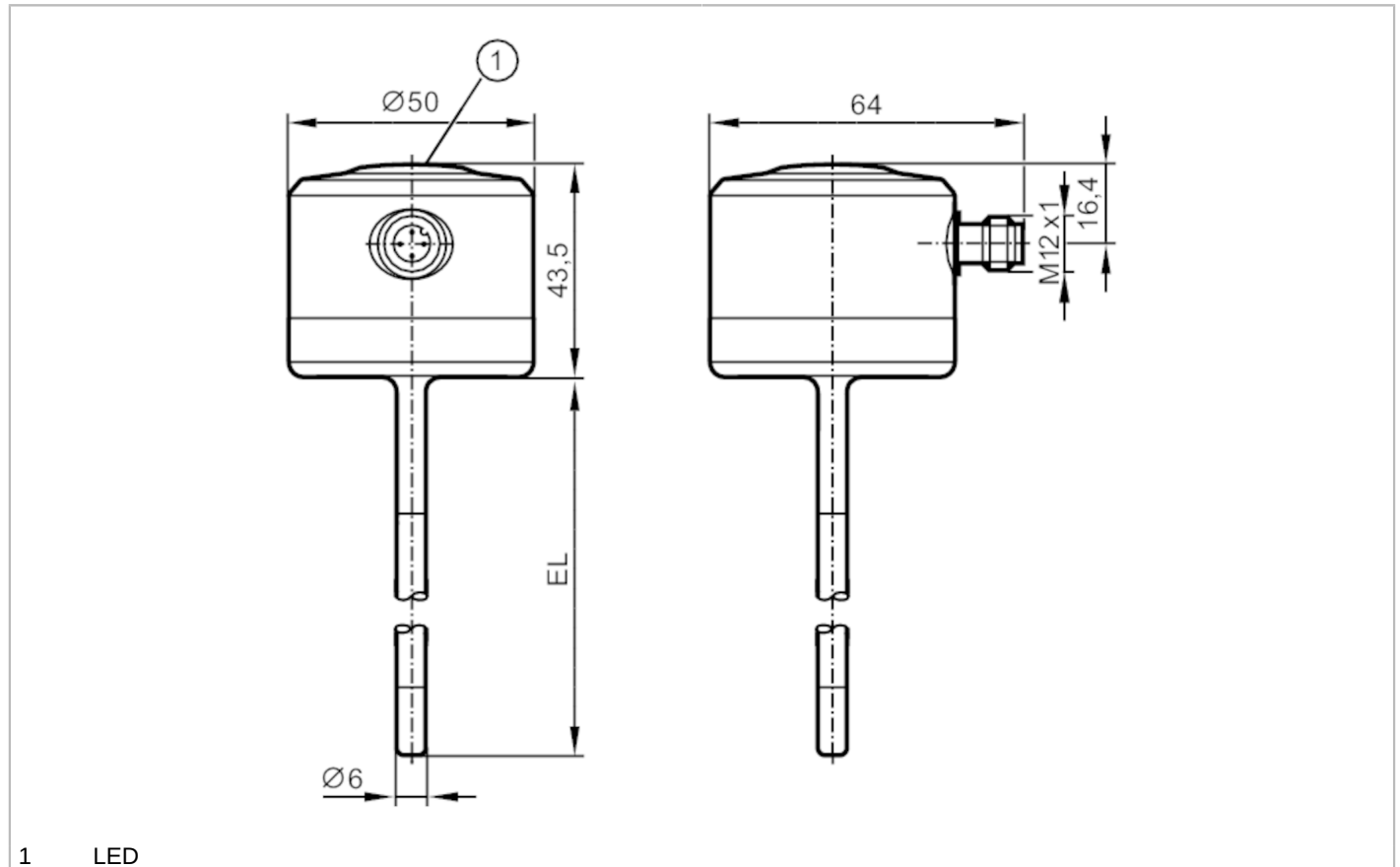
OUT2: analog output
OUT1: Diagnostic output / IO-Link

TCC261



Temperature transmitter

TCC250K1ED06-A-DKG/US



1 LED



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
Measuring range	-25...160 °C	-13...320 °F
Communication interface	IO-Link	
Process connection	Clamp fitting Ø 6 mm	
Installation length EL [mm]	250	

Application

Special feature	gold-plated contacts	
Measuring element	1 x Pt 1000	
Reference element	1 x NTC	
Media	liquids and gases	
Pressure rating	160 bar	16 MPa
Minimum installation depth [mm]	15	

Electrical data

Operating voltage [V]	18...32 DC; (cULus - Class 2 source required)	
Current consumption [mA]	10; (24 V)	
Protection class	III	
Reverse polarity protection	yes	
Power-on delay time [s]	6	
Integrated watchdog	yes	

TCC261



Temperature transmitter

TCC250K1ED06-A-DKG/US

Inputs / outputs	
Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1
Outputs	
Total number of outputs	2
Output signal	analog signal; IO-Link; (calibration check status)
Electrical design	PNP/NPN
Number of digital outputs	1
Output function	normally closed; (diagnostic signal)
Max. voltage drop switching output DC [V]	2
Permanent current rating of switching output DC [mA]	100
Diagnostic output	calibration check status and error diagnostics
Number of analog outputs	1
Analog current output [mA]	4...20
Max. load [Ω]	(U _b - 15 V) x 50
Short-circuit protection	yes
Type of short-circuit protection	yes (non-latching)
Overload protection	yes
Measuring/setting range	
Probe length L [mm]	250
Measuring range	-25...160 °C -13...320 °F
Note on measuring range	scalable
Factory setting	-10...150 °C / 14...302 °F
Calibration check limit [K]	0.5...3
In steps of [K]	0.05
Resolution	
Resolution of analog output [K]	0.05
Accuracy / deviations	
Precision analog output [K]	± 0,2
Precision IO-Link [K]	± 0,2
Temperature coefficient analog output [% of the span / 10 K]	< ± 0,02; (In case of deviation from the reference condition 25 ± 5 °C)
Temperature coefficient IO-Link [% of the span / 10 K]	< ± 0,01; (In case of deviation from the reference condition 25 ± 5 °C)
Reaction times	
Dynamic response T05 / T09 [s]	1,5 / 4
Software / programming	
Parameter setting options	Display unit; scaling of the analog output; calibration check limit; switching logic diagnostic output; simulation mode
Interfaces	
Communication interface	IO-Link

TCC261



Temperature transmitter

TCC250K1ED06-A-DKG/US

Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
Profiles	BLOB	Binary Large Object transfer
	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution
SIO mode	yes	
Required master port class	A	
Process data analog	1	
Process data binary	1	
Min. process cycle time [ms]	4.4	
IO-Link resolution temperature [K]	0.01	
Supported DeviceIDs	Type of operation	DeviceID
	default	1129

Operating conditions

Ambient temperature [°C]	-25...70
Note on ambient temperature	max. internal device temperature: 125 °C
Storage temperature [°C]	-40...100
Protection	IP 68; IP 69K

Tests / approvals

EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	35 g (10...2000 Hz)
MTTF [years]	329	
Note on approval	Factory certificate available as download at www.factory-certificate.ifm	
UL approval	UL approval number	K021
	File number UL	E217884

Mechanical data

Weight [g]	271.9
Housing	tubular
Dimensions [mm]	Ø 50 / L = 293.5
Material	stainless steel (1.4404 / 316L); PEI; FKM; PFA
Materials (wetted parts)	stainless steel (1.4404 / 316L)
Process connection	Clamp fitting Ø 6 mm
Surface characteristics Ra/Rz of the wetted parts	Ra < 0.8 µm
Probe diameter [mm]	6
Installation length EL [mm]	250

Remarks

Remarks	MS = set measuring span cULus - Class 2 source required
Pack quantity	1 pcs.

TCC261



Temperature transmitter

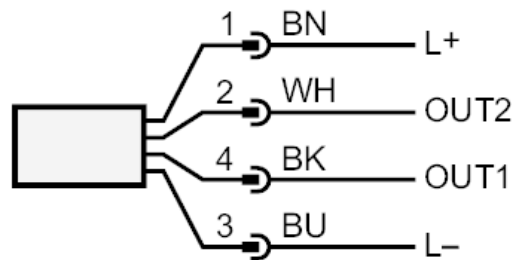
TCC250K1ED06-A-DKG/US

Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



Connection



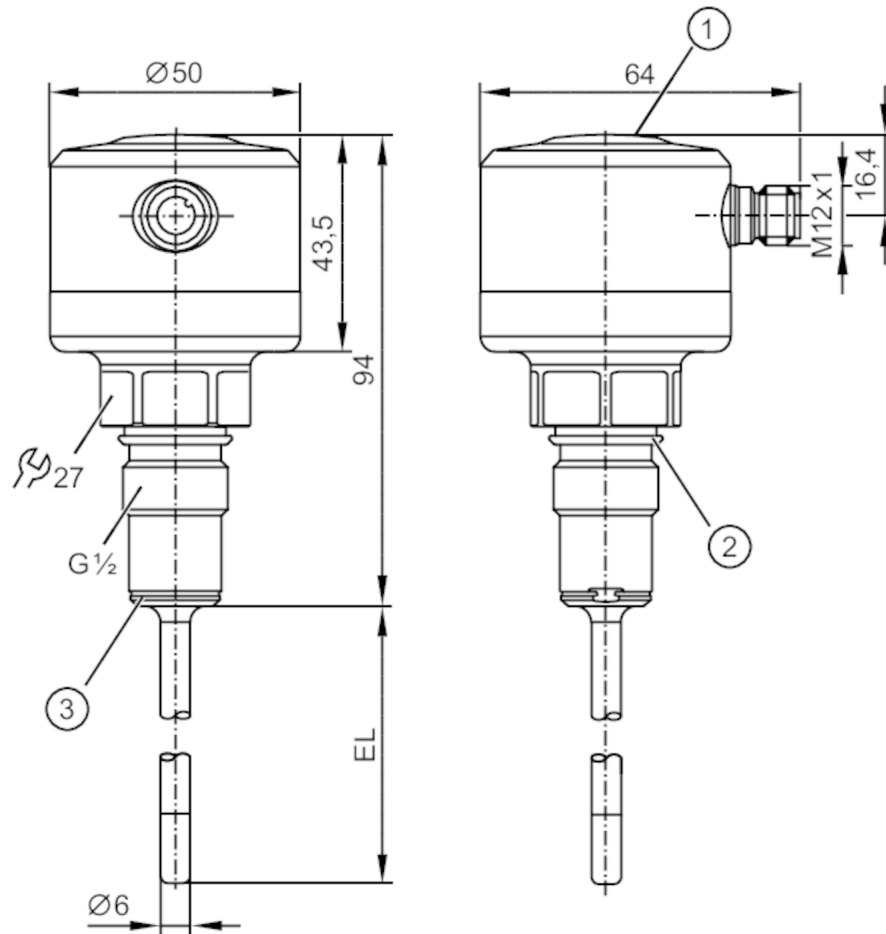
OUT2: analog output
OUT1: Diagnostic output / IO-Link

TCC551



Temperature transmitter

TCC999K1ER12-A-DKG/US



- 1 LED
- 2 Gasket FKM (for sealing on the back - not pressure resistant) / removable
- 3 metallic sealing area



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
Measuring range	-25...160 °C	-13...320 °F
Communication interface	IO-Link	
Process connection	threaded connection G 1/2 external thread sealing cone	
Installation length EL [mm]	1000	

Application

Special feature	gold-plated contacts	
Measuring element	1 x Pt 1000	
Reference element	1 x NTC	
Installation	a thermowell is required for use in hygienic applications	
Media	liquids and gases	
Pressure rating	160 bar	16 MPa
Minimum installation depth [mm]	15	

Electrical data

Operating voltage [V]	18...32 DC; (cULus - Class 2 source required)	
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TCC551



Temperature transmitter

TCC999K1ER12-A-DKG/US

Current consumption	[mA]	10; (24 V)
Protection class		III
Reverse polarity protection		yes
Power-on delay time	[s]	6
Integrated watchdog		yes

Inputs / outputs

Number of inputs and outputs

Number of digital outputs: 1; Number of analog outputs: 1

Outputs

Total number of outputs		2
Output signal		analog signal; IO-Link; (calibration check status)
Electrical design		PNP/NPN
Number of digital outputs		1
Output function		normally closed; (diagnostic signal)
Max. voltage drop switching output DC	[V]	2
Permanent current rating of switching output DC	[mA]	100
Diagnostic output		calibration check status and error diagnostics
Number of analog outputs		1
Analog current output	[mA]	4...20
Max. load	[Ω]	(U _b - 15 V) x 50
Short-circuit protection		yes
Type of short-circuit protection		yes (non-latching)
Overload protection		yes

Measuring/setting range

Probe length L	[mm]	1000
Measuring range		-25...160 °C -13...320 °F
Note on measuring range		scalable
Factory setting		-10...150 °C / 14...302 °F
Calibration check limit	[K]	0.5...3
In steps of	[K]	0.05

Resolution

Resolution of analog output	[K]	0.05
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Accuracy / deviations

Precision analog output	[K]	± 0,2
Precision IO-Link	[K]	± 0,2
Temperature coefficient analog output	[% of the span / 10 K]	< ± 0,02; (In case of deviation from the reference condition 25 ± 5 °C)
Temperature coefficient IO-Link	[% of the span / 10 K]	< ± 0,01; (In case of deviation from the reference condition 25 ± 5 °C)

Reaction times

Dynamic response T05 / T09	[s]	1,5 / 4
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TCC551



Temperature transmitter

TCC999K1ER12-A-DKG/US

Software / programming		
Parameter setting options	Display unit; scaling of the analog output; calibration check limit; switching logic diagnostic output; simulation mode	
Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
Profiles	BLOB	Binary Large Object transfer
	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution
SIO mode	yes	
Required master port class	A	
Process data analog	1	
Process data binary	1	
Min. process cycle time [ms]	4.4	
IO-Link resolution temperature [K]	0.01	
Supported DeviceIDs	Type of operation	DeviceID
	default	1129
Operating conditions		
Ambient temperature [°C]	-25...70	
Note on ambient temperature	max. internal device temperature: 125 °C	
Storage temperature [°C]	-40...100	
Protection	IP 68; IP 69K	
Tests / approvals		
EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	35 g (10...2000 Hz)
MTTF [years]	329	
Mechanical data		
Weight [g]	820	
Housing	tubular	
Dimensions [mm]	Ø 50 / L = 1094	
Material	stainless steel (1.4404 / 316L); PEI; FKM; PFA	
Materials (wetted parts)	stainless steel (1.4404 / 316L)	
Tightening torque [Nm]	30...50	
Process connection	threaded connection G 1/2 external thread sealing cone	
Probe diameter [mm]	6	
Installation length EL [mm]	1000	
Remarks		
Remarks	MS = set measuring span	
	cULus - Class 2 source required	
Pack quantity	1 pcs.	

TCC551



Temperature transmitter

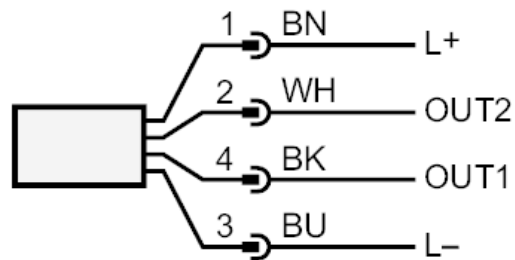
TCC999K1ER12-A-DKG/US

Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



Connection



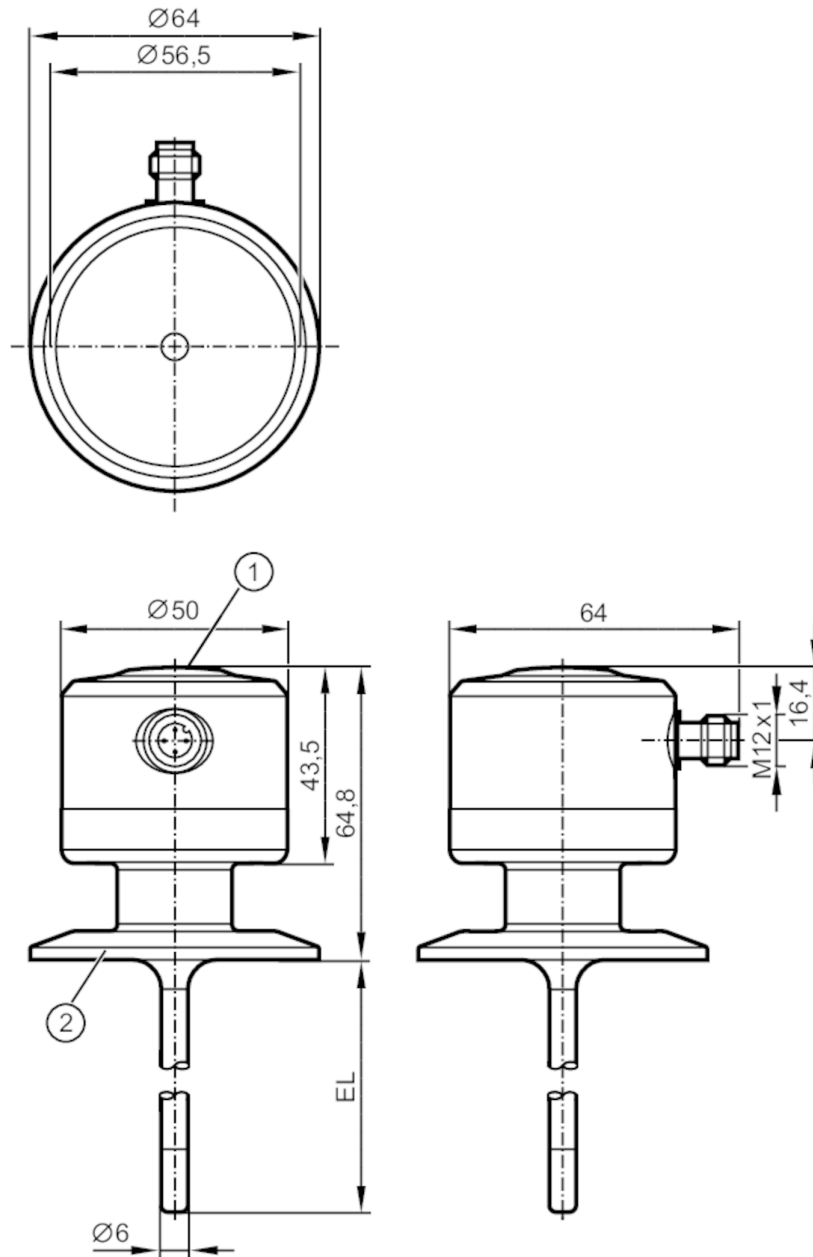
OUT2: analog output
OUT1: Diagnostic output / IO-Link

TCC911



Temperature transmitter

TCC050K1EC02-A-DKG/US



- 1 LED
- 2 Process connection



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
Measuring range	-25...160 °C	-13...320 °F
Communication interface	IO-Link	
Process connection	Clamp DN50 (2") DIN 32676 (ISO 2852)	
Installation length EL [mm]	50	

Application

Special feature	gold-plated contacts
Measuring element	1 x Pt 1000

TCC911



Temperature transmitter

TCC050K1EC02-A-DKG/US

Reference element	1 x NTC	
Media	liquids and gases	
Pressure rating	160 bar	16 MPa
Minimum installation depth [mm]	15	

Electrical data

Operating voltage [V]	18...32 DC; (cULus - Class 2 source required)	
Current consumption [mA]	10; (24 V)	
Protection class	III	
Reverse polarity protection	yes	
Power-on delay time [s]	6	
Integrated watchdog	yes	

Inputs / outputs

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
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Outputs

Total number of outputs	2	
Output signal	analog signal; IO-Link; (calibration check status)	
Electrical design	PNP/NPN	
Number of digital outputs	1	
Output function	normally closed; (diagnostic signal)	
Max. voltage drop switching output DC [V]	2	
Permanent current rating of switching output DC [mA]	100	
Diagnostic output	calibration check status and error diagnostics	
Number of analog outputs	1	
Analog current output [mA]	4...20	
Max. load [Ω]	$(U_b - 15 \text{ V}) \times 50$	
Short-circuit protection	yes	
Type of short-circuit protection	yes (non-latching)	
Overload protection	yes	

Measuring/setting range

Probe length L [mm]	50	
Measuring range	-25...160 °C	-13...320 °F
Note on measuring range	scalable	
Factory setting	-10...150 °C / 14...302 °F	
Calibration check limit [K]	0.5...3	
In steps of [K]	0.05	

Resolution

Resolution of analog output [K]	0.05	
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Accuracy / deviations

Precision analog output [K]	$\pm 0,2$	
Precision IO-Link [K]	$\pm 0,2$	
Temperature coefficient analog output	$< \pm 0,02$; (In case of deviation from the reference condition $25 \pm 5 \text{ °C}$)	



Temperature transmitter

TCC050K1EC02-A-DKG/US

[% of the span / 10 K]	
Temperature coefficient IO-Link	< ± 0,01; (In case of deviation from the reference condition 25 ± 5 °C)
[% of the span / 10 K]	

Reaction times

Dynamic response T05 / T09 [s]	1,5 / 4
--------------------------------	---------

Software / programming

Parameter setting options	Display unit; scaling of the analog output; calibration check limit; switching logic diagnostic output; simulation mode
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Interfaces

Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
Profiles	BLOB	Binary Large Object transfer
	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution
SIO mode	yes	
Required master port class	A	
Process data analog	1	
Process data binary	1	
Min. process cycle time [ms]	4.4	
IO-Link resolution temperature [K]	0.01	
Supported DeviceIDs	Type of operation	DeviceID
	default	1129

Operating conditions

Ambient temperature [°C]	-25...70
Note on ambient temperature	max. internal device temperature: 125 °C
Storage temperature [°C]	-40...100
Protection	IP 68; IP 69K

Tests / approvals

EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	35 g (10...2000 Hz)
MTTF [years]	329	
Note on approval	Factory certificate available as download at www.factory-certificate.ifm	
UL approval	UL approval number	K021
	File number UL	E217884

Mechanical data

Weight [g]	408.2
Housing	tubular
Dimensions [mm]	Ø 50 / L = 114.8
Material	stainless steel (1.4404 / 316L); PEI; FKM; PFA
Materials (wetted parts)	stainless steel (1.4404 / 316L); PEEK

TCC911



Temperature transmitter

TCC050K1EC02-A-DKG/US

Process connection	Clamp DN50 (2") DIN 32676 (ISO 2852)
Surface characteristics Ra/Rz of the wetted parts	Ra < 0.8 µm
Probe diameter [mm]	6
Installation length EL [mm]	50

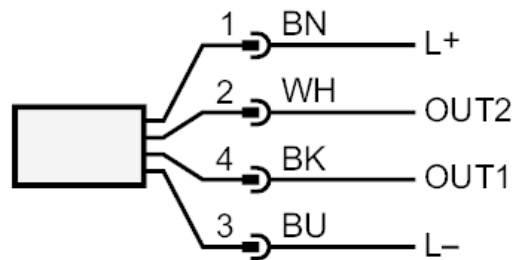
Remarks	
Remarks	MS = set measuring span cULus - Class 2 source required
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



Connection



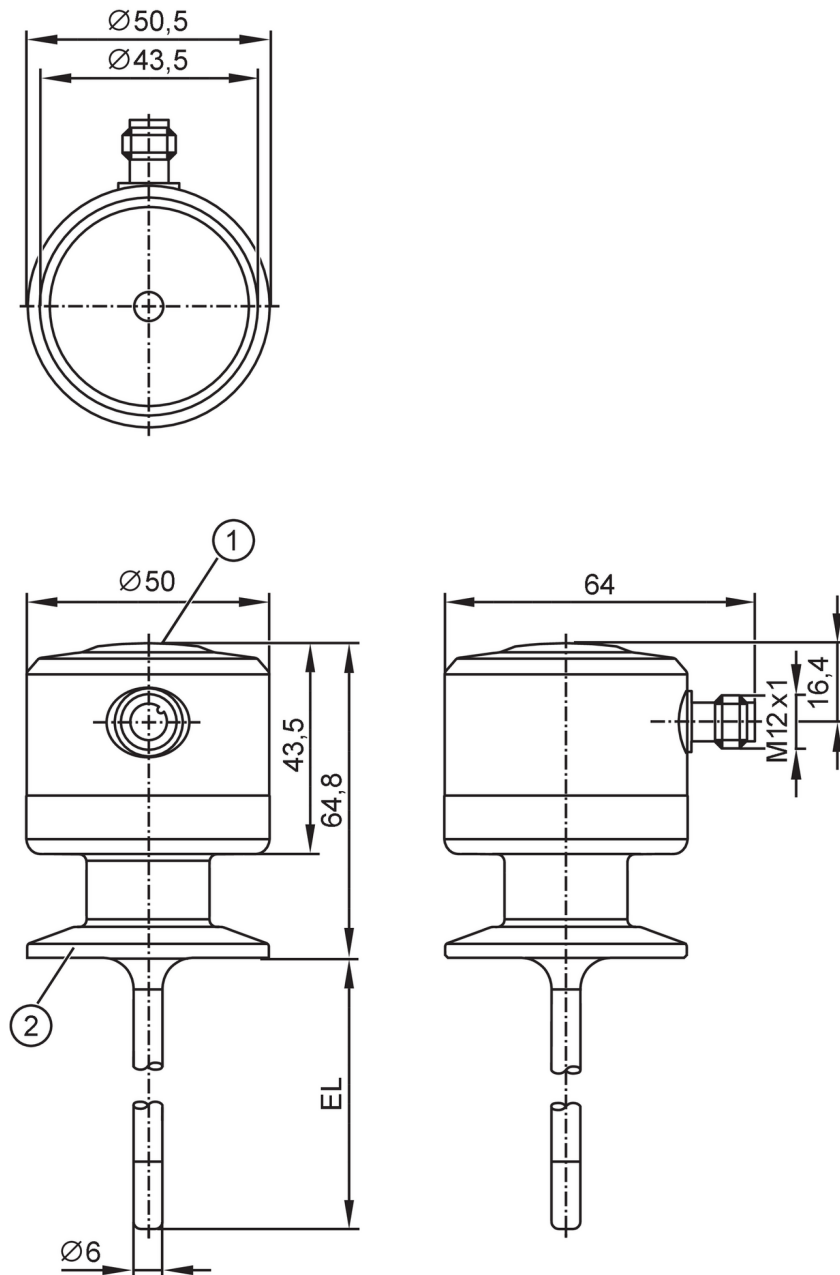
OUT2: analog output
OUT1: Diagnostic output / IO-Link

TCC811



Temperature transmitter

TCC050K1EC01-A-DKG/US



- 1 LED
- 2 Process connection



EC 1935/2004

EHDG Certified

FCM



IO-Link



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
Measuring range	-25...160 °C	-13...320 °F
Communication interface	IO-Link	
Process connection	Clamp DN25...DN40 (1...1,5") DIN 32676 (ISO 2852)	
Installation length EL [mm]	50	

Application

Special feature	gold-plated contacts
Measuring element	1 x Pt 1000

TCC811



Temperature transmitter

TCC050K1EC01-A-DKG/US

Reference element	1 x NTC
Media	liquids and gases
Pressure rating	160 bar 16 MPa
Minimum installation depth [mm]	15

Electrical data

Operating voltage [V]	18...32 DC; (cULus - Class 2 source required)
Current consumption [mA]	10; (24 V)
Protection class	III
Reverse polarity protection	yes
Power-on delay time [s]	6
Integrated watchdog	yes

Inputs / outputs

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1
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Outputs

Total number of outputs	2
Output signal	analog signal; IO-Link; (calibration check status)
Electrical design	PNP/NPN
Number of digital outputs	1
Output function	normally closed; (diagnostic signal)
Max. voltage drop switching output DC [V]	2
Permanent current rating of switching output DC [mA]	100
Diagnostic output	calibration check status and error diagnostics
Number of analog outputs	1
Analog current output [mA]	4...20
Max. load [Ω]	$(U_b - 15 \text{ V}) \times 50$
Short-circuit protection	yes
Type of short-circuit protection	yes (non-latching)
Overload protection	yes

Measuring/setting range

Probe length L [mm]	50
Measuring range	-25...160 °C -13...320 °F
Note on measuring range	scalable
Factory setting	-10...150 °C / 14...302 °F
Calibration check limit [K]	0.5...3
In steps of [K]	0.05

Resolution

Resolution of analog output [K]	0.05
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Accuracy / deviations

Precision analog output [K]	$\pm 0,2$
Precision IO-Link [K]	$\pm 0,2$
Temperature coefficient analog output	$< \pm 0,02$; (In case of deviation from the reference condition $25 \pm 5 \text{ °C}$)

TCC811



Temperature transmitter

TCC050K1EC01-A-DKG/US

[% of the span / 10 K]	
Temperature coefficient IO-Link	< ± 0,01; (In case of deviation from the reference condition 25 ± 5 °C)
[% of the span / 10 K]	

Reaction times

Dynamic response T05 / T09 [s]	1,5 / 4
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Software / programming

Parameter setting options	Display unit; scaling of the analog output; calibration check limit; switching logic diagnostic output; simulation mode
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Interfaces

Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
Profiles	BLOB	Binary Large Object transfer
	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution
SIO mode	yes	
Required master port class	A	
Process data analog	1	
Process data binary	1	
Min. process cycle time [ms]	4.4	
IO-Link resolution temperature [K]	0.01	
Supported DeviceIDs	Type of operation	DeviceID
	default	1129

Operating conditions

Ambient temperature [°C]	-25...70
Note on ambient temperature	max. internal device temperature: 125 °C
Storage temperature [°C]	-40...100
Protection	IP 68; IP 69K

Tests / approvals

EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 68000-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	35 g (10...2000 Hz)
MTTF [years]	329	
Note on approval	Factory certificate available as download at www.factory-certificate.ifm	
UL approval	UL approval number	K021
	File number UL	E217884

Mechanical data

Weight [g]	352.3
Housing	tubular
Dimensions [mm]	Ø 50 / L = 114.8
Material	stainless steel (1.4404 / 316L); PEI; FKM; PFA
Materials (wetted parts)	stainless steel (1.4404 / 316L); PEEK

TCC811



Temperature transmitter

TCC050K1EC01-A-DKG/US

Process connection	Clamp DN25...DN40 (1...1,5") DIN 32676 (ISO 2852)
Surface characteristics Ra/Rz of the wetted parts	Ra < 0.8 µm
Probe diameter [mm]	6
Installation length EL [mm]	50

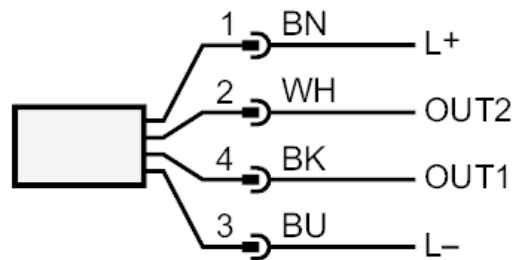
Remarks	
Remarks	MS = set measuring span cULus - Class 2 source required
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4, gold-plated



Connection



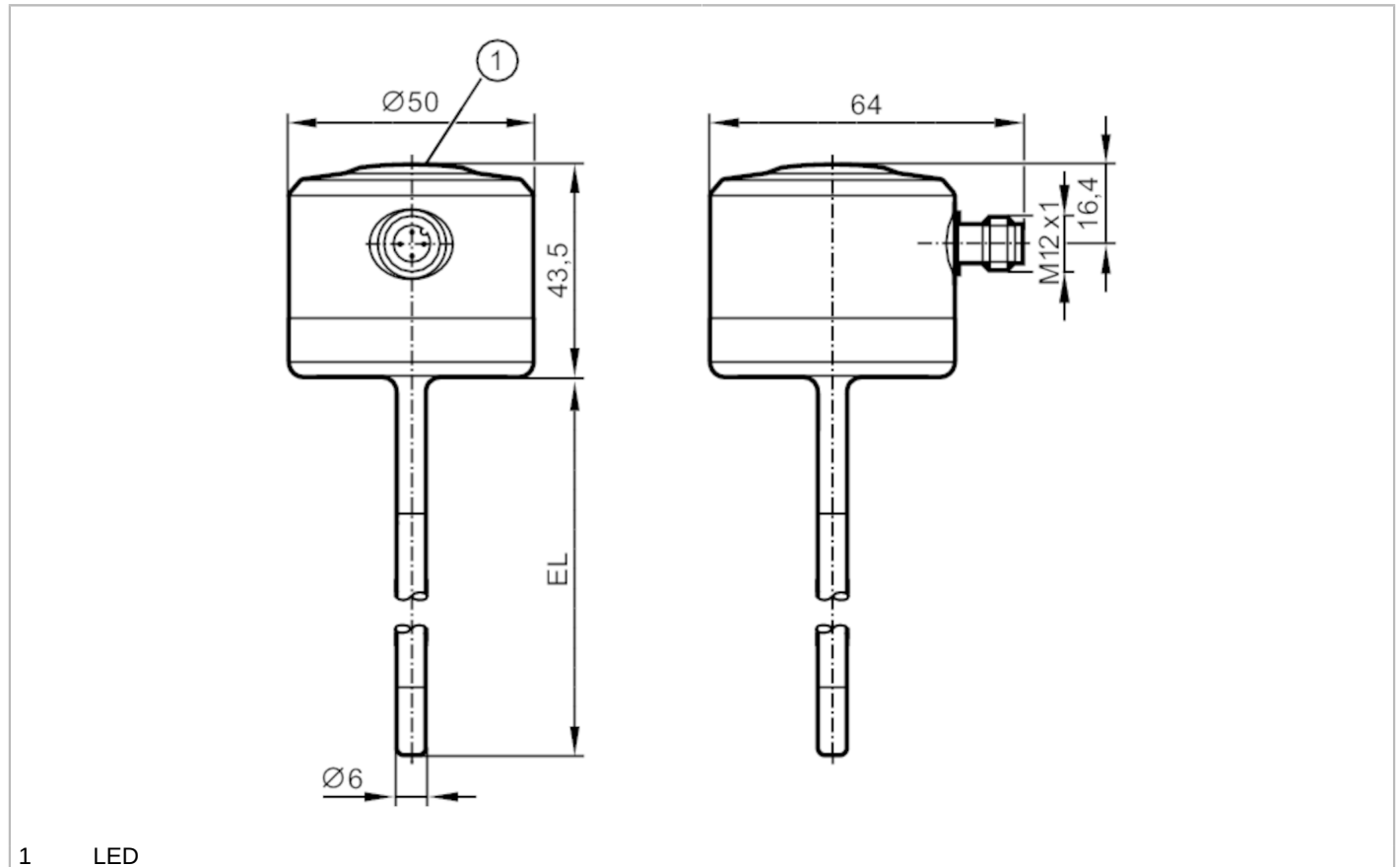
OUT2: analog output
OUT1: Diagnostic output / IO-Link

TCC201



Temperature transmitter

TCC550K1ED06-A-DKG/US



1 LED



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
Measuring range	-25...160 °C	-13...320 °F
Communication interface	IO-Link	
Process connection	Clamp fitting Ø 6 mm	
Installation length EL [mm]	550	

Application

Special feature	gold-plated contacts	
Measuring element	1 x Pt 1000	
Reference element	1 x NTC	
Media	liquids and gases	
Pressure rating	160 bar	16 MPa
Minimum installation depth [mm]	15	

Electrical data

Operating voltage [V]	18...32 DC; (cULus - Class 2 source required)	
Current consumption [mA]	10; (24 V)	
Protection class	III	
Reverse polarity protection	yes	
Power-on delay time [s]	6	
Integrated watchdog	yes	

TCC201



Temperature transmitter

TCC550K1ED06-A-DKG/US

Inputs / outputs	
Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1
Outputs	
Total number of outputs	2
Output signal	analog signal; IO-Link; (calibration check status)
Electrical design	PNP/NPN
Number of digital outputs	1
Output function	normally closed; (diagnostic signal)
Max. voltage drop switching output DC [V]	2
Permanent current rating of switching output DC [mA]	100
Diagnostic output	calibration check status and error diagnostics
Number of analog outputs	1
Analog current output [mA]	4...20
Max. load [Ω]	$(U_b - 15 \text{ V}) \times 50$
Short-circuit protection	yes
Type of short-circuit protection	yes (non-latching)
Overload protection	yes
Measuring/setting range	
Probe length L [mm]	550
Measuring range	-25...160 °C -13...320 °F
Note on measuring range	scalable
Factory setting	-10...150 °C / 14...302 °F
Calibration check limit [K]	0.5...3
In steps of [K]	0.05
Resolution	
Resolution of analog output [K]	0.05
Accuracy / deviations	
Precision analog output [K]	$\pm 0,2$
Precision IO-Link [K]	$\pm 0,2$
Temperature coefficient analog output [% of the span / 10 K]	$< \pm 0,02$; (In case of deviation from the reference condition $25 \pm 5 \text{ °C}$)
Temperature coefficient IO-Link [% of the span / 10 K]	$< \pm 0,01$; (In case of deviation from the reference condition $25 \pm 5 \text{ °C}$)
Reaction times	
Dynamic response T05 / T09 [s]	1,5 / 4
Software / programming	
Parameter setting options	Display unit; scaling of the analog output; calibration check limit; switching logic diagnostic output; simulation mode
Interfaces	
Communication interface	IO-Link

TCC201



Temperature transmitter

TCC550K1ED06-A-DKG/US

Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
Profiles	BLOB	Binary Large Object transfer
	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution
SIO mode	yes	
Required master port class	A	
Process data analog	1	
Process data binary	1	
Min. process cycle time [ms]	4.4	
IO-Link resolution temperature [K]	0.01	
Supported DeviceIDs	Type of operation	DeviceID
	default	1129

Operating conditions

Ambient temperature [°C]	-25...70
Note on ambient temperature	max. internal device temperature: 125 °C
Storage temperature [°C]	-40...100
Protection	IP 68; IP 69K

Tests / approvals

EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	35 g (10...2000 Hz)
MTTF [years]	329	
Note on approval	Factory certificate available as download at www.factory-certificate.ifm	
UL approval	UL approval number	K021
	File number UL	E217884

Mechanical data

Weight [g]	386.6
Housing	tubular
Dimensions [mm]	Ø 50 / L = 593.5
Material	stainless steel (1.4404 / 316L); PEI; FKM; PFA
Materials (wetted parts)	stainless steel (1.4404 / 316L)
Process connection	Clamp fitting Ø 6 mm
Surface characteristics Ra/Rz of the wetted parts	Ra < 0.8 µm
Probe diameter [mm]	6
Installation length EL [mm]	550

Remarks

Remarks	MS = set measuring span cULus - Class 2 source required
Pack quantity	1 pcs.

TCC201



Temperature transmitter

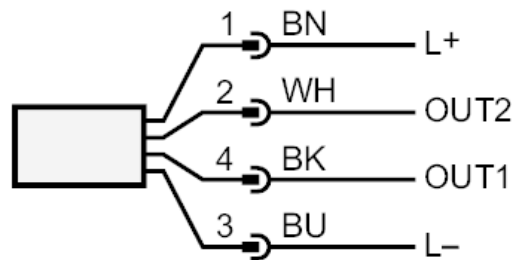
TCC550K1ED06-A-DKG/US

Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



Connection



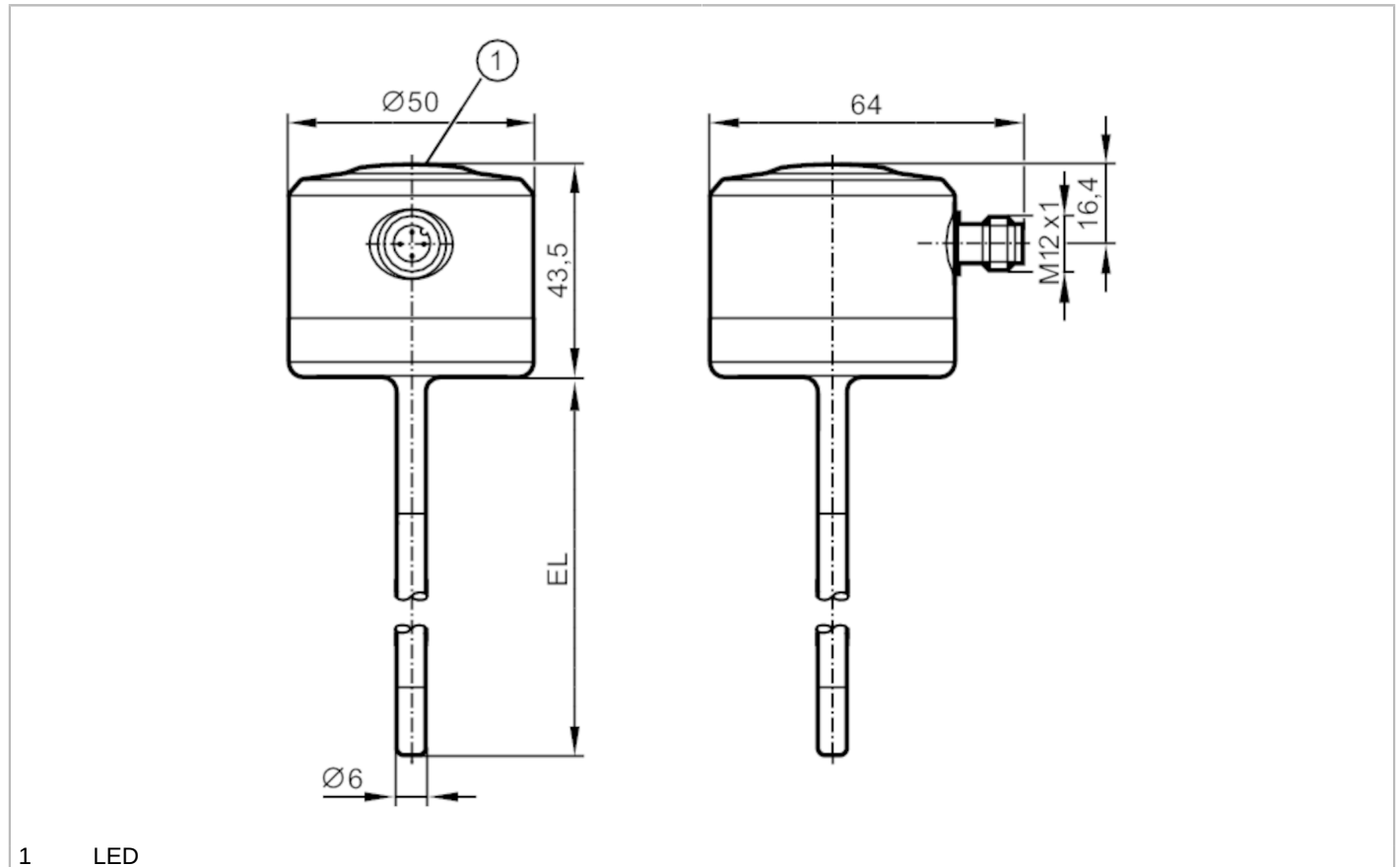
OUT2: analog output
OUT1: Diagnostic output / IO-Link

TCC231



Temperature transmitter

TCC100K1ED06-A-DKG/US



1 LED



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
Measuring range	-25...160 °C	-13...320 °F
Communication interface	IO-Link	
Process connection	Clamp fitting Ø 6 mm	
Installation length EL [mm]	100	

Application

Special feature	gold-plated contacts	
Measuring element	1 x Pt 1000	
Reference element	1 x NTC	
Media	liquids and gases	
Pressure rating	160 bar	16 MPa
Minimum installation depth [mm]	15	

Electrical data

Operating voltage [V]	18...32 DC; (cULus - Class 2 source required)	
Current consumption [mA]	10; (24 V)	
Protection class	III	
Reverse polarity protection	yes	
Power-on delay time [s]	6	
Integrated watchdog	yes	

TCC231



Temperature transmitter

TCC100K1ED06-A-DKG/US

Inputs / outputs	
Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1
Outputs	
Total number of outputs	2
Output signal	analog signal; IO-Link; (calibration check status)
Electrical design	PNP/NPN
Number of digital outputs	1
Output function	normally closed; (diagnostic signal)
Max. voltage drop switching output DC [V]	2
Permanent current rating of switching output DC [mA]	100
Diagnostic output	calibration check status and error diagnostics
Number of analog outputs	1
Analog current output [mA]	4...20
Max. load [Ω]	(U _b - 15 V) x 50
Short-circuit protection	yes
Type of short-circuit protection	yes (non-latching)
Overload protection	yes
Measuring/setting range	
Probe length L [mm]	100
Measuring range	-25...160 °C -13...320 °F
Note on measuring range	scalable
Factory setting	-10...150 °C / 14...302 °F
Calibration check limit [K]	0.5...3
In steps of [K]	0.05
Resolution	
Resolution of analog output [K]	0.05
Accuracy / deviations	
Precision analog output [K]	± 0,2
Precision IO-Link [K]	± 0,2
Temperature coefficient analog output [% of the span / 10 K]	< ± 0,02; (In case of deviation from the reference condition 25 ± 5 °C)
Temperature coefficient IO-Link [% of the span / 10 K]	< ± 0,01; (In case of deviation from the reference condition 25 ± 5 °C)
Reaction times	
Dynamic response T05 / T09 [s]	1,5 / 4
Software / programming	
Parameter setting options	Display unit; scaling of the analog output; calibration check limit; switching logic diagnostic output; simulation mode
Interfaces	
Communication interface	IO-Link

TCC231



Temperature transmitter

TCC100K1ED06-A-DKG/US

Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
Profiles	BLOB	Binary Large Object transfer
	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution
SIO mode	yes	
Required master port class	A	
Process data analog	1	
Process data binary	1	
Min. process cycle time [ms]	4.4	
IO-Link resolution temperature [K]	0.01	
Supported DeviceIDs	Type of operation	DeviceID
	default	1129

Operating conditions

Ambient temperature [°C]	-25...70
Note on ambient temperature	max. internal device temperature: 125 °C
Storage temperature [°C]	-40...100
Protection	IP 68; IP 69K

Tests / approvals

EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	35 g (10...2000 Hz)
MTTF [years]	329	
Note on approval	Factory certificate available as download at www.factory-certificate.ifm	
UL approval	UL approval number	K021
	File number UL	E217884

Mechanical data

Weight [g]	275.6
Housing	tubular
Dimensions [mm]	Ø 50 / L = 143.5
Material	stainless steel (1.4404 / 316L); PEI; FKM; PFA
Materials (wetted parts)	stainless steel (1.4404 / 316L)
Process connection	Clamp fitting Ø 6 mm
Surface characteristics Ra/Rz of the wetted parts	Ra < 0.8 µm
Probe diameter [mm]	6
Installation length EL [mm]	100

Remarks

Remarks	MS = set measuring span cULus - Class 2 source required
Pack quantity	1 pcs.

TCC231



Temperature transmitter

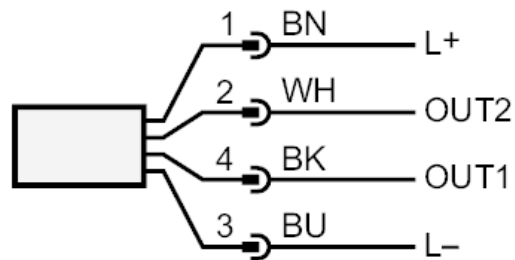
TCC100K1ED06-A-DKG/US

Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



Connection



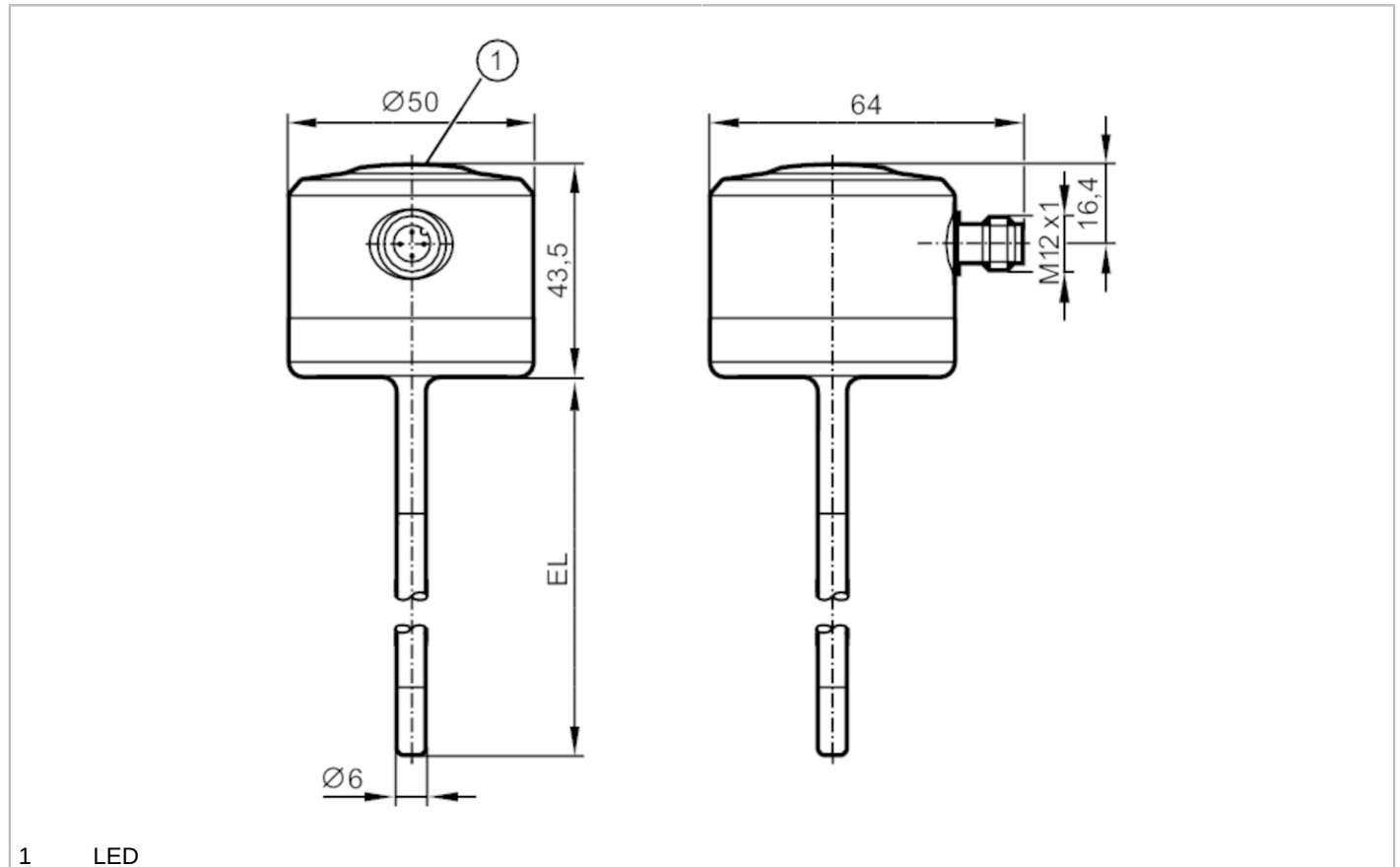
OUT2: analog output
OUT1: Diagnostic output / IO-Link

TCC261



Temperature transmitter

TCC250K1ED06-A-DKG/US



1 LED



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
Measuring range	-25...160 °C	-13...320 °F
Communication interface	IO-Link	
Process connection	Clamp fitting Ø 6 mm	
Installation length EL [mm]	250	

Application

Special feature	gold-plated contacts	
Measuring element	1 x Pt 1000	
Reference element	1 x NTC	
Media	liquids and gases	
Pressure rating	160 bar	16 MPa
Minimum installation depth [mm]	15	

Electrical data

Operating voltage [V]	18...32 DC; (cULus - Class 2 source required)	
Current consumption [mA]	10; (24 V)	
Protection class	III	
Reverse polarity protection	yes	
Power-on delay time [s]	6	
Integrated watchdog	yes	

TCC261



Temperature transmitter

TCC250K1ED06-A-DKG/US

Inputs / outputs	
Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1
Outputs	
Total number of outputs	2
Output signal	analog signal; IO-Link; (calibration check status)
Electrical design	PNP/NPN
Number of digital outputs	1
Output function	normally closed; (diagnostic signal)
Max. voltage drop switching output DC [V]	2
Permanent current rating of switching output DC [mA]	100
Diagnostic output	calibration check status and error diagnostics
Number of analog outputs	1
Analog current output [mA]	4...20
Max. load [Ω]	(U _b - 15 V) x 50
Short-circuit protection	yes
Type of short-circuit protection	yes (non-latching)
Overload protection	yes
Measuring/setting range	
Probe length L [mm]	250
Measuring range	-25...160 °C -13...320 °F
Note on measuring range	scalable
Factory setting	-10...150 °C / 14...302 °F
Calibration check limit [K]	0.5...3
In steps of [K]	0.05
Resolution	
Resolution of analog output [K]	0.05
Accuracy / deviations	
Precision analog output [K]	± 0,2
Precision IO-Link [K]	± 0,2
Temperature coefficient analog output [% of the span / 10 K]	< ± 0,02; (In case of deviation from the reference condition 25 ± 5 °C)
Temperature coefficient IO-Link [% of the span / 10 K]	< ± 0,01; (In case of deviation from the reference condition 25 ± 5 °C)
Reaction times	
Dynamic response T05 / T09 [s]	1,5 / 4
Software / programming	
Parameter setting options	Display unit; scaling of the analog output; calibration check limit; switching logic diagnostic output; simulation mode
Interfaces	
Communication interface	IO-Link

TCC261



Temperature transmitter

TCC250K1ED06-A-DKG/US

Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
Profiles	BLOB	Binary Large Object transfer
	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution
SIO mode	yes	
Required master port class	A	
Process data analog	1	
Process data binary	1	
Min. process cycle time [ms]	4.4	
IO-Link resolution temperature [K]	0.01	
Supported DeviceIDs	Type of operation	DeviceID
	default	1129

Operating conditions

Ambient temperature [°C]	-25...70
Note on ambient temperature	max. internal device temperature: 125 °C
Storage temperature [°C]	-40...100
Protection	IP 68; IP 69K

Tests / approvals

EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	35 g (10...2000 Hz)
MTTF [years]	329	
Note on approval	Factory certificate available as download at www.factory-certificate.ifm	
UL approval	UL approval number	K021
	File number UL	E217884

Mechanical data

Weight [g]	271.9
Housing	tubular
Dimensions [mm]	Ø 50 / L = 293.5
Material	stainless steel (1.4404 / 316L); PEI; FKM; PFA
Materials (wetted parts)	stainless steel (1.4404 / 316L)
Process connection	Clamp fitting Ø 6 mm
Surface characteristics Ra/Rz of the wetted parts	Ra < 0.8 µm
Probe diameter [mm]	6
Installation length EL [mm]	250

Remarks

Remarks	MS = set measuring span cULus - Class 2 source required
Pack quantity	1 pcs.

TCC261



Temperature transmitter

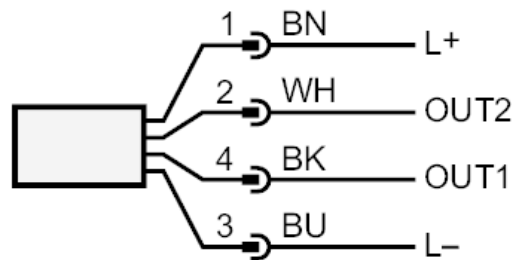
TCC250K1ED06-A-DKG/US

Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



Connection



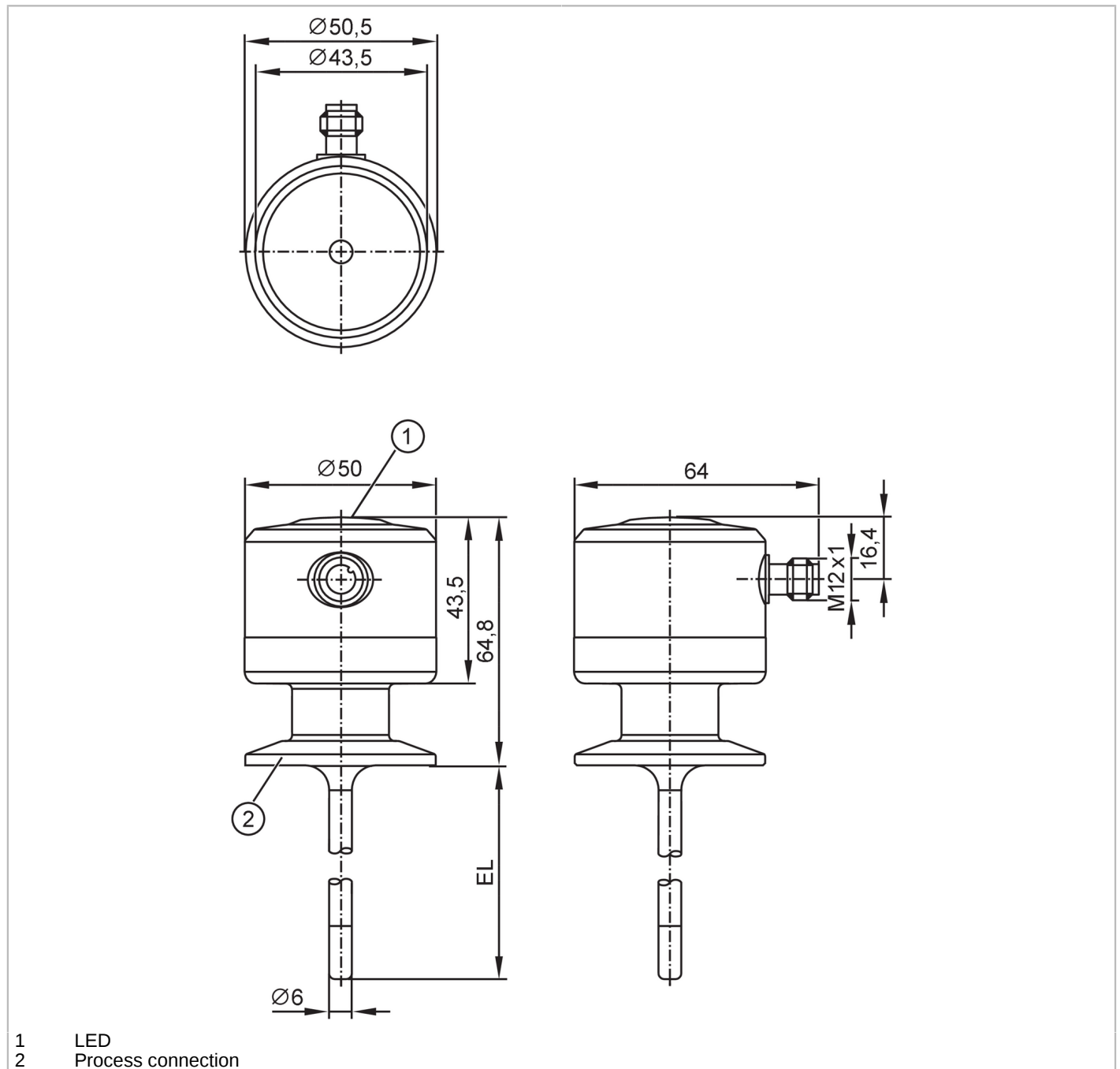
OUT2: analog output
OUT1: Diagnostic output / IO-Link

TCC831



Temperature transmitter

TCC100K1EC01-A-DKG/US



EC 1935/2004

EHDG Certified

FCM



IO-Link



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
Measuring range	-25...160 °C	-13...320 °F
Communication interface	IO-Link	
Process connection	Clamp DN25...DN40 (1...1,5") DIN 32676 (ISO 2852)	
Installation length EL [mm]	100	

Application

Special feature	gold-plated contacts
Measuring element	1 x Pt 1000

TCC831



Temperature transmitter

TCC100K1EC01-A-DKG/US

Reference element	1 x NTC	
Media	liquids and gases	
Pressure rating	160 bar	16 MPa
Minimum installation depth [mm]	15	

Electrical data

Operating voltage [V]	18...32 DC; (cULus - Class 2 source required)	
Current consumption [mA]	10; (24 V)	
Protection class	III	
Reverse polarity protection	yes	
Power-on delay time [s]	6	
Integrated watchdog	yes	

Inputs / outputs

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
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Outputs

Total number of outputs	2	
Output signal	analog signal; IO-Link; (calibration check status)	
Electrical design	PNP/NPN	
Number of digital outputs	1	
Output function	normally closed; (diagnostic signal)	
Max. voltage drop switching output DC [V]	2	
Permanent current rating of switching output DC [mA]	100	
Diagnostic output	calibration check status and error diagnostics	
Number of analog outputs	1	
Analog current output [mA]	4...20	
Max. load [Ω]	$(U_b - 15 \text{ V}) \times 50$	
Short-circuit protection	yes	
Type of short-circuit protection	yes (non-latching)	
Overload protection	yes	

Measuring/setting range

Probe length L [mm]	100	
Measuring range	-25...160 °C	-13...320 °F
Note on measuring range	scalable	
Factory setting	-10...150 °C / 14...302 °F	
Calibration check limit [K]	0.5...3	
In steps of [K]	0.05	

Resolution

Resolution of analog output [K]	0.05	
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Accuracy / deviations

Precision analog output [K]	$\pm 0,2$	
Precision IO-Link [K]	$\pm 0,2$	
Temperature coefficient analog output	$< \pm 0,02$; (In case of deviation from the reference condition $25 \pm 5 \text{ °C}$)	

TCC831



Temperature transmitter

TCC100K1EC01-A-DKG/US

[% of the span / 10 K]	
Temperature coefficient IO-Link	< ± 0,01; (In case of deviation from the reference condition 25 ± 5 °C)
[% of the span / 10 K]	

Reaction times

Dynamic response T05 / T09 [s]	1,5 / 4
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Software / programming

Parameter setting options	Display unit; scaling of the analog output; calibration check limit; switching logic diagnostic output; simulation mode
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Interfaces

Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
Profiles	BLOB	Binary Large Object transfer
	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution
SIO mode	yes	
Required master port class	A	
Process data analog	1	
Process data binary	1	
Min. process cycle time [ms]	4.4	
IO-Link resolution temperature [K]	0.01	
Supported DeviceIDs	Type of operation	DeviceID
	default	1129

Operating conditions

Ambient temperature [°C]	-25...70
Note on ambient temperature	max. internal device temperature: 125 °C
Storage temperature [°C]	-40...100
Protection	IP 68; IP 69K

Tests / approvals

EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	35 g (10...2000 Hz)
MTTF [years]	329	
Note on approval	Factory certificate available as download at www.factory-certificate.ifm	
UL approval	UL approval number	K021
	File number UL	E217884

Mechanical data

Weight [g]	358.9
Housing	tubular
Dimensions [mm]	Ø 50 / L = 164.8
Material	stainless steel (1.4404 / 316L); PEI; FKM; PFA
Materials (wetted parts)	stainless steel (1.4404 / 316L); PEEK

TCC831



Temperature transmitter

TCC100K1EC01-A-DKG/US

Process connection	Clamp DN25...DN40 (1...1,5") DIN 32676 (ISO 2852)
Surface characteristics Ra/Rz of the wetted parts	Ra < 0.8 µm
Probe diameter [mm]	6
Installation length EL [mm]	100

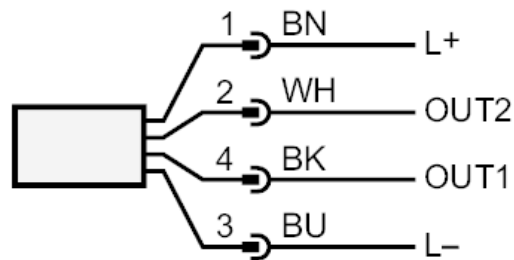
Remarks	
Remarks	MS = set measuring span cULus - Class 2 source required
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4, gold-plated



Connection



OUT2: analog output
OUT1: Diagnostic output / IO-Link