

# INDUSTRIAL PRESSURE TRANSMITTER

Swiss based Trafag is a leading international supplier of high quality sensors and monitoring instruments for measurement of pressure and temperature. The industrial pressure transmitter EPI 8287 features the extremely robust and stable thin-film-on-steel sensor element from its well-proven predecessor EPI 8297. In combination with the new inhouse developed ASIC TX it offers a wide temperature range up to 125°C and triple overpressure safety which makes it the perfect solution for a wide range of demanding applications.



## Applications

- Machine tools
- Hydraulics
- Industrial applications

## Features

- Excellent long-term stability
- Completely welded steel sensor system without additional seals
- Accuracy classes 0.3%, 0.5%
- Optional: 5-fold overpressure resistance
- Optionally with housing material AISI316L

Technical Data			
Measuring principle	Thin-film-on-steel	Accuracy @ 25°C typ.	± 0.5 % FS typ. ± 0.3 % FS typ.
Measuring range	0 ... 0.2 bis 0 ... 700 bar 0 ... 3 bis 0 ... 10000 psi	Media temperature	-40°C ... +125°C
Output signal	4 ... 20 mA, 0 ... 5 VDC, 0.5 ... 5 VDC, 1 ... 6 VDC, 0 ... 10 VDC, 0.5 ... 4.5 VDC ratiometric	Ambient temperature	-40°C ... +125°C Cable PVC: -5°C ... +60°C Cable PUR: -20°C ... +70°C Cable Raychem: -20°C ... +100°C
NLH @ 25°C (BSL) typ.	± 0.2 % FS typ.		

11/2021

Data sheet H72317t

Subject to change



<b>Electrical connection</b>	Male electrical connector EN 175301-803-A (DIN 43650-A), Mat. PA				05
	Male electrical connector M12x1, 5-pole, Mat. PBT				35
	Male electrical connector Packard Metri Pack, Mat. PBT				51
	Male electrical connector MIL-C 26482, 6-pole, metal <sup>12)</sup>				02
	Male electrical connector: DIN72585 Code 1, Mat.: PBT (Contacts Mat.: Sn) <sup>13)</sup>				25
	Cable PUR (Screwed cable gland PA 6-3), -20°C ... +70°C <sup>8) 9)</sup>				24
	Cable PVC (Screwed cable gland PA 6-3), -5°C ... +60°C <sup>8) 9) 10)</sup>				22
	Cable Raychem (Screwed cable gland PA 6-3), -20°C ... +100°C <sup>8) 9) 10)</sup>				08
<b>Output signal</b>	<b>Signal output</b>	<b>Load resistance</b>	<b>I (supply)</b>	<b>U (supply)</b>	
	4 ... 20 mA	(U <sub>supply</sub> -9 V) / 20 mA		9 ... 32 VDC	19
	0 ... 5 VDC	> 2.5 kΩ	< 10 mA	9 ... 32 VDC	14
	0.5 ... 5 VDC	> 5.0 kΩ	< 10 mA	9 ... 32 VDC	22
	1 ... 6 VDC	> 5.0 kΩ	< 10 mA	9 ... 32 VDC	16
	0 ... 10 VDC	> 5.0 kΩ	< 10 mA	15 ... 32 VDC	17
	0.5 ... 4.5 VDC ratiometric	> 5.0 kΩ	< 10 mA	5 (4.75 ... 5.25) VDC	23
<b>Accessories</b>	Seal FPM, -18°C ... +125°C				61
	Seal EPDM, -40°C ... +125°C <sup>3)</sup>				63
	Seal NBR, -25°C ... +100°C <sup>3)</sup>				83
	Pressure peak damping element ø 1.0 mm, material 1.4305 <sup>4)</sup>				40
	Pressure peak damping element ø 0.4 mm, material 1.4305 (sensors 23, 25) resp. 1.4404 (sensors 33, 35) <sup>4)</sup>				44
	Female electrical plug EN 175301-803-A (DIN43650-A)/NBR, -40°C ... +90°C, for cable diameter 4 ... 9 mm, flammability standard UL94-V0				46
	Female electrical plug EN 175301-803-A (DIN 43650-A)/silicone, -40°C ... +125°C, for cable diameter 4 ... 9 mm, flammability standard UL94-V0				56
	Female electrical plug EN 175301-803-A (DIN43650-A)/NBR, -40°C ... +90°C, for cable diameter 4 ... 9.5 mm, flammability standard UL94-V2				58
	Female electrical plug M12x1, 5-pole				33
	Special electrical connection: Pin 1 +, Pin 2 - (only for output signal 4 ... 20 mA and male electrical connector EN175301-803-A / DIN43650-A)				92
	Special electrical connection: Pin 1 Out, Pin 2 -, Pin 3 + (only for output 14, 16, 17 and male electrical connector EN175301-803-A / DIN43650-A)				98
	Special electrical connection: Pin 1 +, Pin 2 -, Pin 3 Out (only for output 14, 16, 17 and male electrical connector EN175301-803-A / DIN43650-A)				97
	Special electrical connection: Pin 1 +, Pin 3 -, Pin 5 GR (only for output 4...20mA and male electrical connector M12x1, 5-pol.)				94
	Special electrical connection: Pin 1 +, Pin 3 - (only for output 4 ... 20 mA and male electrical connector Packard Metri Pack 3-poles)				E4
	Special electrical connection: Pin 1 +, Pin 2 out Pin 3 - (only for output signals 14, 16, 17 and male electrical connector Packard Metri Pack 3-poles)				99
	Housing nut for electrical connection EN175301-803-A (DIN43650-A) secured with Loctite (max. 85°C)				L9
	Cable length 1.5 m				1M
	Cable length 3.0 m				3M
	Cable length 5.0 m				5M
	Multiple packaging <sup>11)</sup>				VM

<sup>1)</sup> Customized pressure ranges upon request

<sup>2)</sup> Upon request

<sup>3)</sup> Only with pressure connection 17 (G1/4")

<sup>4)</sup> Not for pressure connections 10, 11, 13, 18, 24

<sup>5)</sup> Only for pressure ranges ≥ 10 bar

<sup>6)</sup> Max. allowable pressure range 60 bar at 180 bar overpressure

<sup>7)</sup> Only for pressure connections 17, 19, 31 (upon request: 30, 42, 61) and only for sensor 23

<sup>8)</sup> Cable length see accessories (max. length 50 m, in 5-meter sections)

<sup>9)</sup> IP68, max. 3 m, Media +10°C ... +35°C

<sup>10)</sup> Cable length max. 3 m for pressure ranges ≤ 16 bar

<sup>11)</sup> The order quantity must be a multiple of 50, only for electrical connections 05 and 35

<sup>12)</sup> Only for sensors 23 and 25, only for pressure connections 13, 17, 19, 53, only for output signal 4 ... 20 mA (code 19)

<sup>13)</sup> Only for sensors 23 and 25, only for pressure connections 13, 17, 19, 53, only for output signal 0.5 ... 4.5 VDC ratiometric (code 23)

<sup>14)</sup> Only for sensors 23 and 25

<sup>15)</sup> Only for pressure connections 13, 30 and 51

## Standard products (extra short lead time)

Product No.	Type Code	Pressure range [bar]	Over pressure max. [bar]	Signal output	Supply [VDC]
EPI2.5A	8287 75 2517 05 0000 0000 19 44 58 61	0 ... 2.5	7.5	4 ... 20 mA	9 ... 32
EPI4.0A	8287 76 2517 05 0000 0000 19 44 58 61	0 ... 4	12	4 ... 20 mA	9 ... 32
EPI6.0A	8287 77 2517 05 0000 0000 19 44 58 61	0 ... 6	18	4 ... 20 mA	9 ... 32
EPI10.0A	8287 78 2517 05 0000 0000 19 44 58 61	0 ... 10	30	4 ... 20 mA	9 ... 32
EPI16.0A	8287 79 2517 05 0000 0000 19 44 58 61	0 ... 16	48	4 ... 20 mA	9 ... 32
EPI25.0A	8287 80 2517 05 0000 0000 19 44 58 61	0 ... 25	75	4 ... 20 mA	9 ... 32
EPI40.0A	8287 81 2517 05 0000 0000 19 44 58 61	0 ... 40	120	4 ... 20 mA	9 ... 32
EPI60.0A	8287 82 2517 05 0000 0000 19 44 58 61	0 ... 60	180	4 ... 20 mA	9 ... 32
EPI100.0A	8287 83 2517 05 0000 0000 19 44 58 61	0 ... 100	300	4 ... 20 mA	9 ... 32
EPI160.0A	8287 85 2517 05 0000 0000 19 44 58 61	0 ... 160	480	4 ... 20 mA	9 ... 32
EPI250.0A	8287 74 2517 05 0000 0000 19 44 58 61	0 ... 250	750	4 ... 20 mA	9 ... 32
EPI400.0A	8287 84 2517 05 0000 0000 19 44 58 61	0 ... 400	1000	4 ... 20 mA	9 ... 32
EPI600.0A	8287 86 2517 05 0000 0000 19 44 58 61	0 ... 600	1500	4 ... 20 mA	9 ... 32
EPI2.5V	8287 75 2517 05 0000 0000 17 44 58 61	0 ... 2.5	7.5	0 ... 10 VDC	15 ... 32
EPI4.0V	8287 76 2517 05 0000 0000 17 44 58 61	0 ... 4	12	0 ... 10 VDC	15 ... 32
EPI6.0V	8287 77 2517 05 0000 0000 17 44 58 61	0 ... 6	18	0 ... 10 VDC	15 ... 32
EPI10.0V	8287 78 2517 05 0000 0000 17 44 58 61	0 ... 10	30	0 ... 10 VDC	15 ... 32
EPI16.0V	8287 79 2517 05 0000 0000 17 44 58 61	0 ... 16	48	0 ... 10 VDC	15 ... 32
EPI25.0V	8287 80 2517 05 0000 0000 17 44 58 61	0 ... 25	75	0 ... 10 VDC	15 ... 32
EPI40.0V	8287 81 2517 05 0000 0000 17 44 58 61	0 ... 40	120	0 ... 10 VDC	15 ... 32
EPI60.0V	8287 82 2517 05 0000 0000 17 44 58 61	0 ... 60	180	0 ... 10 VDC	15 ... 32
EPI100.0V	8287 83 2517 05 0000 0000 17 44 58 61	0 ... 100	300	0 ... 10 VDC	15 ... 32
EPI160.0V	8287 85 2517 05 0000 0000 17 44 58 61	0 ... 160	480	0 ... 10 VDC	15 ... 32
EPI250.0V	8287 74 2517 05 0000 0000 17 44 58 61	0 ... 250	750	0 ... 10 VDC	15 ... 32
EPI400.0V	8287 84 2517 05 0000 0000 17 44 58 61	0 ... 400	1000	0 ... 10 VDC	15 ... 32
EPI600.0V	8287 86 2517 05 0000 0000 17 44 58 61	0 ... 600	1500	0 ... 10 VDC	15 ... 32

Specifications		
<b>Electrical data</b>	Output / supply voltage	4 ... 20 mA: 24 (9...32) VDC 0 ... 5 VDC: 24 (9...32) VDC 0.5 ... 5 VDC: 24 (9...32) VDC 1 ... 6 VDC: 24 (9...32) VDC 0 ... 10 VDC: 24 (15...32) VDC 0.5 ... 4.5 VDC ratiometric 10 ... 90 % $U_{\text{supply}}$ : $5 \pm 0.25$ VDC
	Rise time	Typ. 1 ms / 10 ... 90 % nominal pressure
	Power-on delay time	100 ms
	Inverse-polarity protection, short-circuit strength @ 25°C during 5 min.	4 ... 20 mA: to $U_s = 32$ VDC 0 ... 10 VDC, 0 ... 5 VDC, 1 ... 6 VDC: to $U_s = 28$ VDC 0.5 ... 4.5 VDC ratiometric: to $U_s = 14$ VDC
	<b>Environmental conditions</b>	
	Media temperature	-40°C ... +125°C
	Ambient temperature	-40°C ... +125°C Cable PVC: -5°C ... +60°C Cable PUR: -20°C ... +70°C Cable Raychem: -20°C ... +100°C
	Protection <sup>1)</sup>	IP65, IP67, IP68
	Humidity	Max. 95 % relative
	Vibration	15 g RMS (20...2000 Hz) acc.to EN 60068-2-64 25 g sin (80...2000 Hz), 1 oct./min, (1x @ 25°C) acc.to EN 60068-2-6
	Shock	500 g / 1 ms acc.to EN 60068-2-27
<b>EMC protection</b>	Emission	EN/IEC 61000-6-3
	Immunity	EN/IEC 61000-6-2
<b>Mechanical data</b>	Sensor (wetted parts)	1.4542 (AISI630)
	Pressure connection (wetted parts)	1.4542 (AISI630) or 1.4404 (AISI316L)
	Housing	1.4542 (AISI630) or 1.4404 (AISI316L)
	Sealing	FPM/EPDM/NBR
	Male electrical connector	See ordering information
	Weight	appr. 80 ... 110 g
	Mounting torque	25 Nm

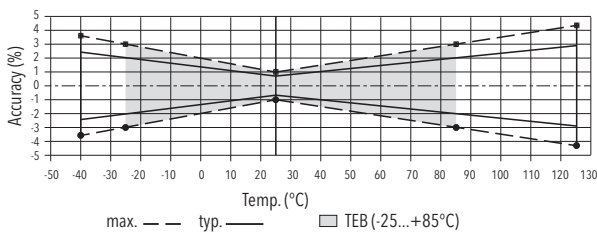
<sup>1)</sup> See electrical connection

## Accuracy

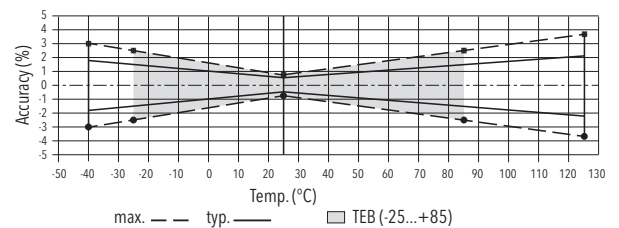
		Measuring accuracy 0.3 %		Measuring accuracy 0.3 %		Measuring accuracy 0.5 %	
		Ordering No. 23	> 0.6	Ordering no. 23/33	> 10	Ordering No. 25/35	> 30
Measuring range	[bar]	≥ 0.2 ≤ 0.6	> 0.6 < 2.5	≥ 2.5		≥ 2.5	
	[psi]	≥ 3 ≤ 10	> 10 < 30	≥ 30		≥ 30	
TEB @ -25 ... +85°C	[% FS typ.]	± 2.0	± 1.5	± 1.0		± 1.75	
Accuracy @ +25°C	[% FS typ.]	± 0.8	± 0.6	± 0.3		± 0.5	
NLH @ +25°C (BSL)	[% FS typ.]	± 0.2	± 0.2	± 0.2		± 0.2	
TC zero point and span	[% FS/K typ.]	± 0.02	± 0.02	± 0.01		± 0.03	
Long term stability 1 year	[% FS typ.]	± 0.3	± 0.2	± 0.1		± 0.1	
Mounting dependency with 180° rotation (vibration and shock)	[% FS max.]	0.5 mbar	0.5 mbar	0.5 mbar		0.5 mbar	

## Accuracy class 0.3 %

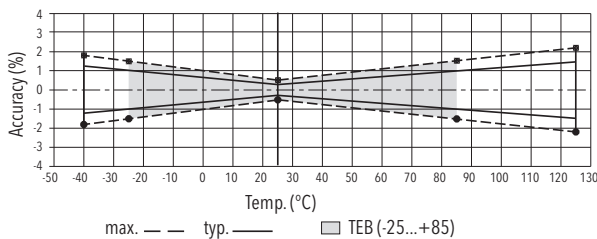
≥ 0.2 bar ... ≤ 0.6 bar



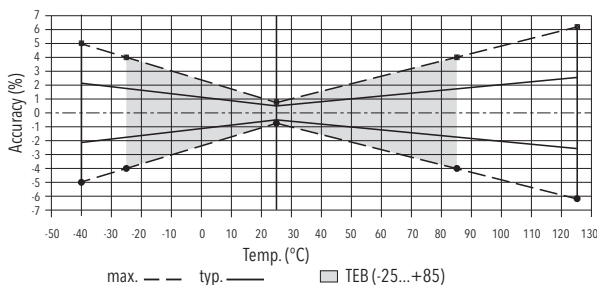
>0.6 bar ... <2.5 bar



≥ 2.5 bar



## Accuracy class 0.5 %

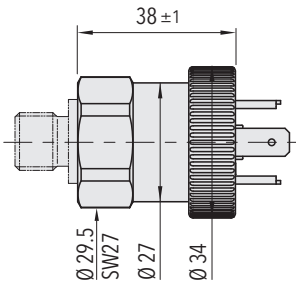


## Additional information

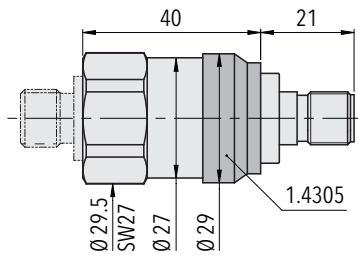
### Documents

Data sheet	<a href="http://www.trafag.com/H72317">www.trafag.com/H72317</a>
Instructions	<a href="http://www.trafag.com/H73317">www.trafag.com/H73317</a>
Flyer	<a href="http://www.trafag.com/H70692">www.trafag.com/H70692</a>

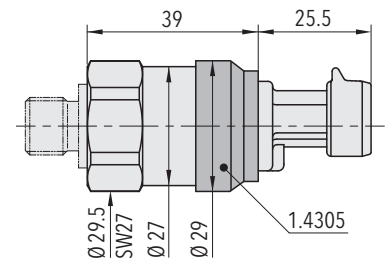
## Dimensions



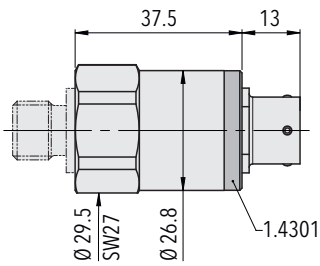
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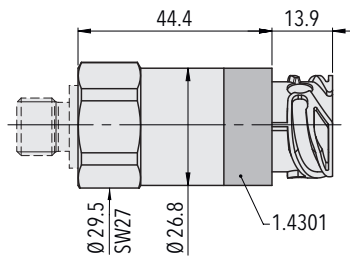
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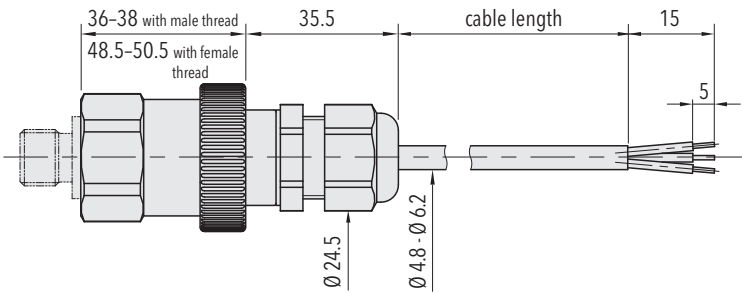
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8287.XX.XXXX.02.XX.XX

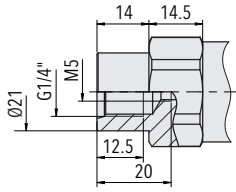


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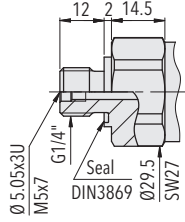


8287.XX.XXXX.24/22/08.XX.XX

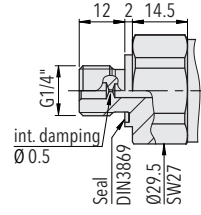
## Dimensions



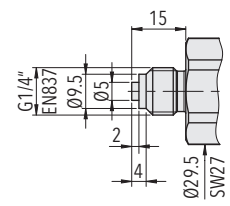
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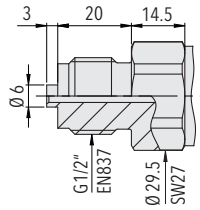
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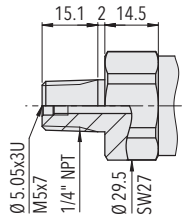
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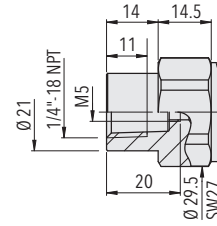
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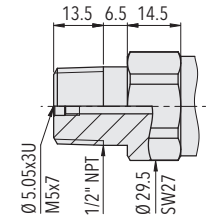
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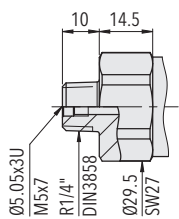
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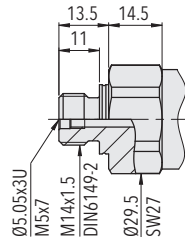
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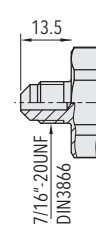
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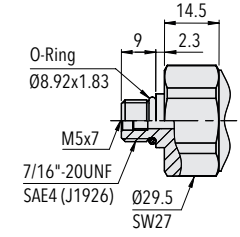
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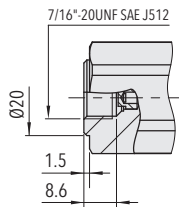
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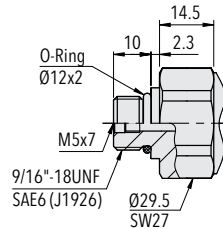
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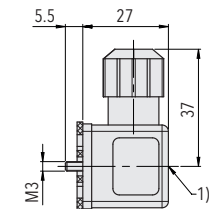
8287.XX.XX42.XX.XX.XX



8287.XX.XX24.XX.XX.XX

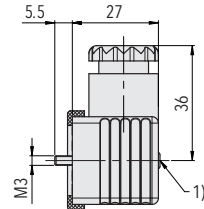


8287.XX.XX61.XX.XX.XX



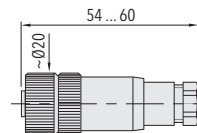
1) Tightening torque 50...60 Ncm

8287.XX.XXXX.XX.XX.46/56



1) Tightening torque 50...60 Ncm

8287.XX.XXXX.XX.XX.58



8287.XX.XXXX.XX.XX.33



## Electrical connection

		Protection / electrical connection				
		IP65*) **)	IP67*) **)	IP67*) **)	IP67*) **)	IP69K*)
		Industrial standard EN175301-803A	M12x1 5-pole	Packard Metri Pack 3-pole	MIL-C 26482	DIN 72585**) Code 1
		<b>05</b>	<b>35</b>	<b>51</b>	<b>02</b>	<b>25</b> <sup>1)</sup>
Output signal	<p>8287.xx.xxxx.xx.<b>19</b></p>	Standard	<b>92</b>	<b>94</b>	<b>E4</b>	
	<p>8287.xx.xxxx.xx.<b>14/16/17/22/23</b></p>	Standard	<b>98</b>	<b>97</b>	<b>99</b>	
		2 1 ⊕	1 2 ⊕	4 1 5	1 3 2 3	A B E
		2 3 1 ⊖	3 1 2 ⊖	2 4 3 5	1 3 2 3	1 2 4 3

<sup>1)</sup> Only for output signal 23

\*) Provided female electrical plug is mounted according to instructions

\*\*) Ventilation via male electric plug/cable end

\*\*\*) Only cable versions or female electrical plug with shield connection

		Protection / electrical connection	
		IP68 max. 3 m	IP68 max. 3 m
		Cable**)	Cable**)
		<b>24/22</b>	<b>08</b>
Output signal	<p>8287.xx.xxxx.xx.<b>19</b></p>		
	<p>8287.xx.xxxx.xx.<b>14/16/17/22/23</b></p>		
		white brown yellow	red black green
		white green brown yellow	red white black green