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Safety Instructions
Proline Promag 500

INMETRO: Zone 2

Segurança

OCP 0004 INMETRO

Endress+Hauser
People for Process Automation

Proline Promag 500

Table of contents

Associated documentation

For an overview of the scope of the associated Technical Documentation, refer to the following:
- *Device Viewer* (www.endress.com/deviceviewer): Enter serial number from nameplate.
- *Endress+Hauser Operations app*: Enter serial number from nameplate or scan matrix code on nameplate.

To commission the device, please observe the Operating Instructions pertaining to the device:

Measuring device	Documentation code			
	HART	FOUNDATION Fieldbus	PROFIBUS PA	PROFIBUS DP
Promag H 500	BA01398D	BA01479D	BA01404D	BA01866D
Promag P 500	BA01399D	BA01480D	BA01405D	BA01867D
Promag W 500	BA01400D	BA01481D	BA01406D	BA01868D

Measuring device	Documentation code		
	Modbus RS485	EtherNet/IP	PROFINET
Promag H 500	BA01401D	BA01720D	BA01723D
Promag P 500	BA01402D	BA01721D	BA01724D
Promag W 500	BA01403D	BA01722D	BA01725D

Additional documentation

Contents	Document type	Documentation code
Explosion Protection	Brochure	CP00021Z/11
Ethernet-APL Installation Drawing	Installation Drawing	HE_01622

Please note the documentation associated with the device.

Certificates and declarations

Declaration of conformity

INMETRO CERTIFICADO DE CONFORMIDADE

Certificate of Conformity

Certificate number:

- TÜV 19.1341X
- TÜV 23.0040X
- TÜV 23.0041X
- TÜV 23.0042X

Affixing the certificate number certifies conformity with the standards under www.abnt.org.br (depending on the device version).

- ABNT NBR IEC 60079-0: 2020
- ABNT NBR IEC 60079-7: 2018
- ABNT NBR IEC 60079-11: 2013
- ABNT NBR IEC 60079-15: 2019

Certificate holder

Endress+Hauser Flowtec AG
Kägenstrasse 7
4153 Reinach BL
Switzerland

Extended order code

The extended order code is indicated on the nameplate, which is affixed to the device in such a way that it is clearly visible. Additional information about the nameplate is provided in the associated Operating Instructions.

Structure of the extended order code

******	–	***** ... *****	+	A*B*C*D*E*F*G*...
(Device type)		*(Basic specifications)*		*(Optional specifications)*

* = Placeholder
At this position, an option (number or letter) selected from the specification is displayed instead of the placeholders.

Device type

The device and the device design is defined in the "Device type" section (Product root).

Basic specifications

The features that are absolutely essential for the device (mandatory features) are specified in the basic specifications. The number of positions depends on the number of features available.
The selected option of a feature can consist of several positions.

Optional specifications

The optional specifications describe additional features for the device (optional features). The number of positions depends on the number of features available. The features have a 2-digit structure to aid identification (e.g. JA). The first digit (ID) stands for the feature group and consists of a number or a letter (e.g. J = Test, Certificate). The

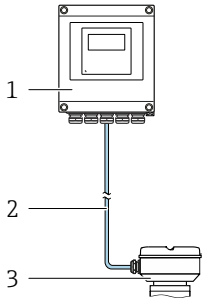
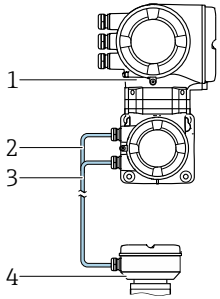
second digit constitutes the value that stands for the feature within the group (e.g. A = 3.1 material (wetted parts), inspection certificate).

More detailed information about the device is provided in the following tables. These tables describe the individual positions and IDs in the extended order code which are relevant to hazardous locations.

Device type

Position	Order code for	Option selected	Description
1	Instrument family	5	Electromagnetic flowmeter
2	Sensor	H, P, W [1]	Sensor type
3	Transmitter	5	Transmitter type: 4-wire, remote version
4	Generation index	B	Platform generation
5, 6	Nominal diameter	Examples: 02, 04, 40, 50, 1H, 1Z, T0, E4 [2] [3]	Nominal diameter of sensor

1) For replacement transmitter only: X
2) For the exact specification of the nominal diameter, see nameplate
3) For replacement transmitter only: XX

Proline 500 – digital	Proline 500
Order code for "Integrated ISEM Electronic", option **A** "Sensor"	Order code for "Integrated ISEM Electronic", option **B** "Transmitter"
	
1 Transmitter *2 Connecting cable* *3 Sensor connection housing with integrated ISEM*	*1 Transmitter with integrated ISEM* *2 Coil current cable* *3 Signal cable* *4 Sensor connection housing*

Basic specifications

Position 1, 2 Order code for "Approval" Option selected	Position 10 [1] Order code for "Integrated ISEM electronics" Option selected	Type of protection	
		Transmitter	Sensor
ML	A	Non-Ex [2] [3]	Ex ec ic IIC T6...T1 Gc
MS	A, B	Ex ec nC IIC T5...T4 Gc [4]	

1) Promag W 500: Position 11
2) The transmitter is located in the safe area (non-hazardous area)
3) The marking changes depending on the order code for "Output; input 1", option HA or TA: |Ex ic| IIC
4) The marking changes relating to the order code "Output; Input 1", option HA or TA: Ex ec nC |ic| IIC T5...T4 GC

Position [1]	Order code for	Option selected	Description
4, 5 (5,6)	Output, input 1	BA	4-20mA HART
		GA	PROFIBUS PA
		HA	PROFIBUS PA Ex-i
		LA	PROFIBUS DP
		MA	Modbus RS485
		MB	Modbus TCP with Ethernet-APL
		MC	Modbus TCP with Ethernet-APL Ex i
		NA	EtherNet/IP 2-port switch integrated
		RA	PROFINET IO 2-port switch integrated
		RB	PROFINET with Ethernet-APL
		RC	PROFINET with Ethernet-APL Ex i
		SA	FOUNDATION Fieldbus
		TA	FOUNDATION Fieldbus Ex-i
6 (7)	Output, input 2	A	W/o
		B	4-20mA
		C	4-20mA Ex-i passive
		D	Configurable I/O initial setting off
		E	Pulse/frequency/switch output
		F	Pulse output, phase-shifted
		G	Pulse/frequency/switch output Ex-i passive
		H	Relay
		I	4-20mA input

Position [1]	Order code for	Option selected	Description
		J	Status input
7 (8)	Output, input 3	A	W/o
		B	4-20mA
		C	4-20mA Ex-i passive
		D	Configurable I/O initial setting off
		E	Pulse/frequency/switch output
		F	Pulse output, phase-shifted
		G	Pulse/frequency/switch output Ex-i passive
		H	Relay
		I	4-20mA input
		J	Status input
8 (9)	Output; input 4 [2]	A	W/o
		B	4-20mA
		C	4-20mA Ex-i passive
		D	Configurable I/O initial setting off
		E	Pulse/frequency/switch output
		G	Pulse/frequency/switch output Ex-i passive
		H	Relay
		I	4-20mA input
		J	Status input
9 (10)	Display; Operation	F	4-line, illuminated; touch control
		G	4-line, illuminated; touch control + WLAN
10 (11)	Integrated ISEM Electronic	A	Sensor
		B	Transmitter
12 (13)	Sensor junction Housing	A	Alu, coated
		B	Stainless
		D	Polycarbonate
		L	Cast, stainless
14 (15)	Liner	A	PFA
		B	PFA High-temperature
		E	PTFE
		H	Hard rubber
		Q	PTFE 90°C

Position [1]	Order code for	Option selected	Description
		U	Polyurethane
21, 22 (22, 23)	Device Model	A1	1
		A2	2

1) Position in brackets: Promag W 500
2) The order code "Output; input 4" is only available for the Proline 500 – digital transmitter.

Optional specifications

ID	Order code for	Option selected	Description
Cx	Sensor option	CG	Extended neck for insulation [1]
Cx	Sensor option	CI	Fluid Temperature Probe [2]
Jx	Test, certificate	JN	Ambient temperature transmitter −50 °C
Px	Enclosed accessories	P8	Wireless antenna, wide area (external WLAN antenna) [3]

1) Only for Promag W and Promag P available
2) Only for Promag H available
3) The external WLAN antenna is available with the order code for "Accessory Enclosed", option P8.

Safety instructions: General

- Staff must meet the following conditions for mounting, electrical installation, commissioning and maintenance of the device:
  - Be suitably qualified for their role and the tasks they perform
  - Be trained in explosion protection
  - Be familiar with national regulations or guidelines (e.g. ABNT NBR IEC 60079-14)
- Install the device according to the manufacturer's instructions and national regulations.
- Do not operate the device outside the specified electrical, thermal and mechanical parameters.
- Only use the device in media to which the wetted materials have sufficient durability.
- Refer to the temperature tables for the relationship between the permitted ambient temperature for the sensor and/or transmitter, depending on the range of application, and the temperature classes.

- Alterations to the device can affect the explosion protection and must be carried out by staff authorized to perform such work by Endress+Hauser.
- Observe all the technical data of the device (see nameplate).
- Avoid electrostatic charge (e.g. caused by friction, cleaning, maintenance, strong currents in the medium):
  - On the plastic connection housing of the Promag W sensor, IP68 and at the transmitter housing with analog signal transmission (order code for "Integrated ISEM electronics", option B).
  - On the attached stainless steel nameplate and on painted metallic housings that are not integrated into the local potential equalization system.

Safety instructions: Installation

- Continuous service temperature of the connecting cable: −40 to +80 °C (−50 to +80 °C for optional specifications, ID Jx (Test, Certificate) = JN); in accordance with the range of service temperature taking into account additional influences of the process conditions ($T_{a,min}$ and $T_{a,max}$ + 20 K).
- Only use certified cable entries suitable for the application. Observe selection criteria as per ABNT NBR IEC 60079-14.
- When the measuring device is connected, attention must be paid to explosion protection at the transmitter.
- In potentially explosive atmospheres:
  - Do not disconnect the electrical connection of the power supply circuit when energized.
  - Do not open the connection compartment cover when energized.
- Basic specification, order code for "Sensor connection housing", option B:
  To protect the housing of stainless steel housings: Ensure that the housing gasket is flat and not bent when closing the housing cover. Replace bent gaskets.

Ex ec type of protection

- In potentially explosive atmospheres: Do not disconnect the electrical connection of the power supply circuit when energized.
- Seal unused entry glands with approved sealing plugs that correspond to the type of protection.
- Only use certified cable entries or sealing plugs.
- Equipment in type of protection Ex ec, shall be installed using a transient protection not exceeding 140% of the peak rated voltage value at the power supply terminals and IO terminals.

Optional external WLAN antenna

- Connect the antenna bushing H337 to the transmitter housing and tighten by hand.
- Use only external antennas supplied by Endress+Hauser.
- Connect antenna or antenna cable with plug-in connector type N (MIL-STD-348) to antenna bushing H337.

Intrinsic safety

- Observe the guidelines for interconnecting intrinsically safe circuits (e.g. ABNT NBR IEC 60079-14 , Proof of Intrinsic Safety).
- Proline 500 (Order code for "Integrated ISEM electronics", option B) Connecting cables with a maximum length of 200 m must meet the following requirements:
  - Core/shield capacitance: maximum 0.42 nF/m (Inductance: maximum 0.5 µH/m)
  - The connecting cables supplied meet this requirement.

Potential equalization

- Integrate the device into the potential equalization .
- If the ground connection has been established via the pipe as specified, it is also possible to integrate the sensor into the potential equalization system via the pipe.
- The antenna bushing H337 of the external antenna must be integrated into the potential equalization system. This is the case if the sensor is connected in accordance with the regulations via the coupling.

Temperature tables

Ambient temperature

Minimum ambient temperature

- T_a = −40 °C depending on the selected device variant (see nameplate)
- *Optional specification, ID Jx (Test, Certificate) = JN*
  T_a = −50 °C depending on the selected device variant (see nameplate)

Maximum ambient temperature

T_a = +60 °C depending on the temperature class

Proline 500 – digital transmitter

Non-hazardous area, Zone 2

	T_a [°C]			
Transmitter housing material	**Non-hazardous area**	**T6**	**T5**	**T4**
Aluminum	60	–	45	60
Polycarbonate	60	–	–	–

Proline 500 transmitter

Zone 2

T_a [°C]		
T6	**T5**	**T4**
–	45	60

Medium temperature

Minimum medium temperature

T_m = −40 to 0 °C depending on the selected device version (see nameplate!)

Maximum medium temperature

T_m for T5…T1 depending on the maximum ambient temperature T_a

Proline 500 - digital

Order code for "Integrated ISEM electronics", option A

Maximum medium temperature with or without thermal insulation according to Endress+Hauser specifications

Promag H

DN	T_a [°C]	T_m [°C]					
		T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
Without thermal insulation							
2...150	40	50	95	130	150	150	150
	45	50	95	130	145	145	145
	55	–	95	115	115	115	115
	60	–	–	115	115	115	115

Promag P

DN	Liner	T_a [°C]	T_m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
Without thermal insulation								
15...600	PTFE	50	50	95	130	130	130	130
		60	–	95	130	130	130	130
25...200	PFA	50	50	95	130	150	150	150
		60	–	95	130	130	130	130
Extended neck for insulation (Optional specification, ID Cx (Sensor Option) = CG), with or without thermal insulation								
15...300	PTFE	50	50	95	130	130	130	130
		60	–	95	130	130	130	130
25...200	PFA	50	50	95	130	150	150	150
		60	–	95	130	130	130	130
High-temperature version (Order code for "Liner", option B) without thermal insulation								
25...200	PFA	50	40	95	130	180	180	180
		60	–	95	130	150	150	150
High-temperature version (Order code for "Liner", option B) with thermal insulation								
25...200	PFA	35	40	95	130	180	180	180

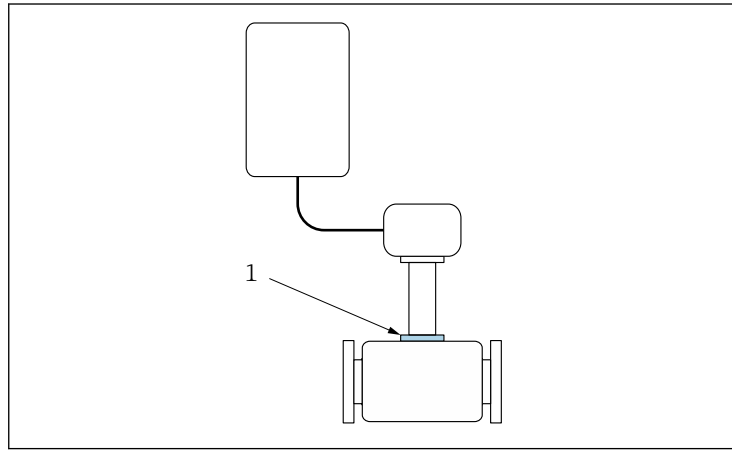
DN	Liner	T_a [°C]	T_m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
		50	40	95	130	175	175	175
		60	–	95	130	150	150	150

Promag W

DN	Liner	T_a [°C]	T_m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
Without thermal insulation								
25...300	PTFE	50	50	90	90	90	90	90
		60	–	90	90	90	90	90
50...2400	Hard rubber	50	80	80	80	80	80	80
		60	–	80	80	80	80	80
25...1200	PU	45	50	50	50	50	50	50
		50	–	50	50	50	50	50
Extended neck for insulation (Optional specification, ID Cx (Sensor Option) = CG), with or without thermal insulation								
25...300	PTFE	50	50	90	90	90	90	90
		60	–	90	90	90	90	90
50...300	Hard rubber	50	80	80	80	80	80	80
		60	–	80	80	80	80	80
25...300	PU	45	50	50	50	50	50	50
		50	–	50	50	50	50	50

With thermal insulation without Endress+Hauser specifications

The specified reference temperature T_{ref} and the maximum medium temperature $T_{m, max}$ for each temperature class must not be exceeded → 13.



1 High-temperature version or extension neck for insulation: position of reference point for temperature measurement

1 Reference point (T_{ref})

Reference temperature T_{ref}

T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
51.4	65.7	69.0	70.9	70.9	70.9

Proline 500

Order code for "Integrated ISEM electronics", option B

Maximum medium temperature with or without thermal insulation according to Endress+Hauser specifications

Promag H

DN	T_a [°C]	T_m [°C]					
		T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
Without thermal insulation							
2...150	45	80 [1)]	95	130	150	150	150
	55	80 [1)]	95	130	130	130	130
	60 [2)]	80 [1)]	95	110	110	110	110

1) T_m = 50 °C for optional specification, ID Cx (Sensor option) = CI (Fluid Temperature Probe)
2) T_a = 50 °C for optional specification, ID Cx (Sensor option) = CI (Fluid Temperature Probe)

Promag P

DN	Liner	T_a [°C]	T_m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
Without thermal insulation								
15...600	PTFE	60	80	95	130	130	130	130
25...200	PFA	50	80	95	130	150	150	150
		60	80	95	130	130	130	130
Extended neck for insulation (Optional specification, ID Cx (Sensor Option) = CG), with or without thermal insulation								
15...300	PTFE	60	80	95	130	130	130	130
25...200	PFA	50	80	95	130	150	150	150
		60	80	95	130	130	130	130
High-temperature version (Order code for "Liner", option B) without thermal insulation								
25...200	PFA	50	80	95	130	180	180	180
		60	80	95	130	150	150	150
High-temperature version (Order code for "Liner", option B) with thermal insulation								
25...200	PFA	35	80	95	130	180	180	180

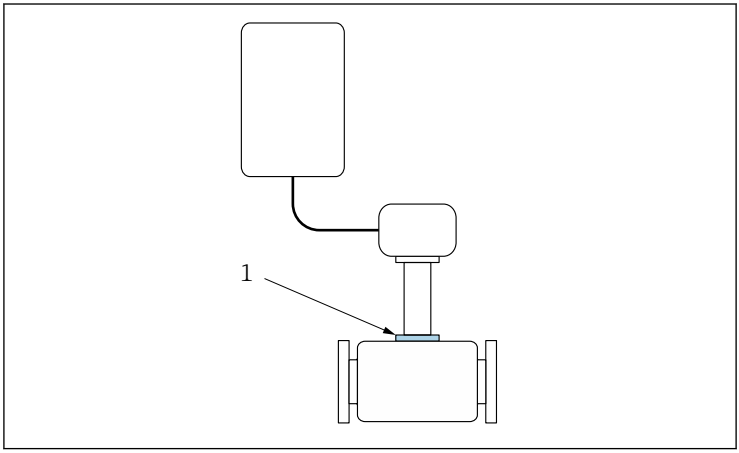
DN	Liner	T_a [°C]	T_m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
		40	80	95	130	170	170	170
		60	75	95	130	150	150	150

Promag W

DN	Liner	T_a [°C]	T_m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
Without thermal insulation								
25...300	PTFE	60	80	90	90	90	90	90
50...2400	Hard rubber	60	80	80	80	80	80	80
25...1200	PU	50	50	50	50	50	50	50
Extended neck for insulation (Optional specification, ID Cx (Sensor Option) = CG), with or without thermal insulation								
15...300	PTFE	60	80	90	90	90	90	90
50...300	Hard rubber	60	80	80	80	80	80	80
25...300	PU	50	50	50	50	50	50	50

With thermal insulation without Endress+Hauser specifications

The specified reference temperature T_{ref} and the maximum medium temperature $T_{m, max}$ for each temperature class must not be exceeded. → 16



2 *High-temperature version or extension neck for insulation: position of reference point for temperature measurement*

1 Reference point (T_{ref})

Reference temperature T_{ref}

T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
63.8	65.7	69.0	70.9	70.9	70.9

Connection values: Signal circuits

The following tables contain specifications which are dependent on the transmitter type and its input and output assignment. Compare the following specifications with those on the nameplate of the transmitter.

Terminal assignment

Transmitter: supply voltage, input/outputs

Promag H, P, W

HART

Supply voltage		Input/output 1		Input/output 2		Input/output 3		Input/output 4	
1 (+)	2 (–)	26 (+)	27 (–)	24 (+)	25 (–)	22 (+)	23 (–)	20 (+)	21 (–)
		Device-specific terminal assignment: adhesive label in terminal cover.							

FOUNDATION Fieldbus

Supply voltage		Input/output 1		Input/output 2		Input/output 3		Input/output 4	
1 (+)	2 (–)	26 (A)	27 (B)	24 (+)	25 (–)	22 (+)	23 (–)	20 (+)	21 (–)
		Device-specific terminal assignment: adhesive label in terminal cover.							

PROFIBUS DP

Supply voltage		Input/output 1		Input/output 2		Input/output 3		Input/output 4	
1 (+)	2 (–)	26 (B)	27 (A)	24 (+)	25 (–)	22 (+)	23 (–)	20 (+)	21 (–)
		Device-specific terminal assignment: adhesive label in terminal cover.							

PROFIBUS PA

Supply voltage		Input/output 1		Input/output 2		Input/output 3		Input/output 4	
1 (+)	2 (–)	26 (B)	27 (A)	24 (+)	25 (–)	22 (+)	23 (–)	20 (+)	21 (–)
		Device-specific terminal assignment: adhesive label in terminal cover.							

Modbus RS485

Supply voltage		Input/output 1		Input/output 2		Input/output 3		Input/output 4	
1 (+)	2 (–)	26 (B)	27 (A)	24 (+)	25 (–)	22 (+)	23 (–)	20 (+)	21 (–)
		Device-specific terminal assignment: adhesive label in terminal cover.							

Modbus TCP with Ethernet-APL

Supply voltage		Input/output 1		Input/output 2		Input/output 3		Input/output 4	
1 (+)	2 (–)	26 (B)	27 (A)	24 (+)	25 (–)	22 (+)	23 (–)	20 (+)	21 (–)
		Device-specific terminal assignment: adhesive label in terminal cover.							

EtherNet/IP

Supply voltage		Input/output 1	Input/output 2		Input/output 3		Input/output 4	
1 (+)	2 (–)	EtherNet/IP (RJ45 connector)	24 (+)	25 (–)	22 (+)	23 (–)	20 (+)	21 (–)
			Device-specific terminal assignment: adhesive label in terminal cover.					

PROFINET

Supply voltage		Input/output 1	Input/output 2		Input/output 3		Input/output 4	
1 (+)	2 (–)	PROFINET (RJ45 connector)	24 (+)	25 (–)	22 (+)	23 (–)	20 (+)	21 (–)
			Device-specific terminal assignment: adhesive label in terminal cover.					

PROFINET with Ethernet-APL

Supply voltage		Input/output 1		Input/output 2		Input/output 3		Input/output 4	
1 (+)	2 (–)	26 (+)	27 (–)	24 (+)	25 (–)	22 (+)	23 (–)	20 (+)	21 (–)
		Device-specific terminal assignment: adhesive label in terminal cover.							

Safety-related values

Order code for "Output; input 1"	Output type	Safety-related values "Output; input 1"	
		26 (+)	27 (–)
Option **BA**	Current output 4 to 20 mA HART	U_N = 30 V_{DC} U_M = 250 V_{AC}	
Option **GA**	PROFIBUS PA	U_N = 32 V_{DC} U_M = 250 V_{AC}	
Option **LA**	PROFIBUS DP	U_N = 32 V_{DC} U_M = 250 V_{AC}	
Option **MA**	Modbus RS485	U_N = 30 V_{DC} U_M = 250 V_{AC}	

Order code for "Output; input 1"	Output type	Safety-related values "Output; input 1"	
		26 (+)	27 (–)
Option **MB**	Modbus TCP with Ethernet-APL	APL port profile SLAX SPE PoDL classes 10, 11, 12 U_N = 30 V_{DC} U_M = 250 V_{AC}	
Option **SA**	FOUNDATION Fieldbus	U_N = 32 V_{DC} U_M = 250 V_{AC}	
Option **NA**	EtherNet/IP	U_N = 30 V_{DC} U_M = 250 V_{AC}	
Option **RA**	PROFINET	U_N = 30 V_{DC} U_M = 250 V_{AC}	
Option **RB**	PROFINET with Ethernet-APL	APL port profile SLAX SPE PoDL classes 10, 11, 12 U_N = 30 V_{DC} U_M = 250 V_{AC}	

Order code for "Output; input 2"; "Output; input 3" "Output; input 4"	Output type	Safety-related values					
		Output; input 2		Output; input 3		Output; input 4 [1]	
		24 (+)	25 (–)	22 (+)	23 (–)	20 (+)	21 (–)
Option **B**	Current output 4 to 20 mA	U_N = 30 V_{DC} U_M = 250 V_{AC}					
Option **D**	User-configurable input/output	U_N = 30 V_{DC} U_M = 250 V_{AC}					
Option **E**	Pulse/frequency/ switch output	U_N = 30 V_{DC} U_M = 250 V_{AC}					
Option **F**	Double pulse output	U_N = 30 V_{DC} U_M = 250 V_{AC}					
Option **H**	Relay output	U_N = 30 V_{DC} I_N =100 mA_{DC}/500 mA_{AC} U_M = 250 V_{AC}					
Option **I**	Current input 4 to 20 mA	U_N = 30 V_{DC} U_M = 250 V_{AC}					
Option **J**	Status input	U_N = 30 V_{DC} U_M = 250 V_{AC}					

1) The order code "Output; input 4" is only available for the Proline 500 – digital transmitter.

Intrinsically safe values

Order code for "Output; input 1"	Output type	Intrinsically safe values "Output; input 1"	
		26 (+)	27 (–)
Option HA	PROFIBUS PA Ex i (STANDARD + FISCO)	**Ex ic** U_i = 32 V I_i = 570 mA P_i = 8.5 W L_i = 10 µH C_i = 5 nF	
Option MC	Modbus TCP with Ethernet-APL Ex i	**2-WISE power load, APL port profile SLAC** [1] **Ex ic** U_i = 17.5 V I_i = 380 mA P_i = 5.32 W L_i = 10 µH C_i = 5 nF **Cable specifications according to 2-WISE:** R_c = 15 to 150 Ω/km L_c = 0.4 to 1 mH/km C_c = 45 to 200 nF/km C_c = C_c line/line + 0,5 C_c line/screen, if both lines are floating, or C_c = C_c line/line + C_c line/screen, if the screen is connected to one line Length of cable (not including cable stubs): ≤200 m (656.2) Length of cable stubs: ≤1 m (3.3 ft)	
Option RC	PROFINET with Ethernet-APL Ex i		
Option TA	FOUNDATION Fieldbus Ex i (STANDARD + FISCO)	**Ex ic** U_i = 32 V I_i = 570 mA P_i = 8.5 W L_i = 10 µH C_i = 5 nF	

1) For further options see Ethernet-APL Installation Drawing HE_01622.

Order code for "Output; input 2"; "Output; input 3"; "Output; input 4"	Output type	Intrinsically safe values					
		Output; input 2		Output; input 3		Output; input 4 [1]	
		24 (+)	25 (–)	22 (+)	23 (–)	20 (+)	21 (–)
Option C	Current output 4 to 20 mA Ex i passive	U_i = 30 V I_i = 100 mA P_i = 1.25 W L_i = 0 C_i = 0					
Option G	Pulse/frequency/ switch output Ex i passive	U_i = 30 V I_i = 100 mA P_i = 1.25 W L_i = 0 C_i = 0					

1) The order code "Output; input 4" is only available for the Proline 500 – digital transmitter.

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