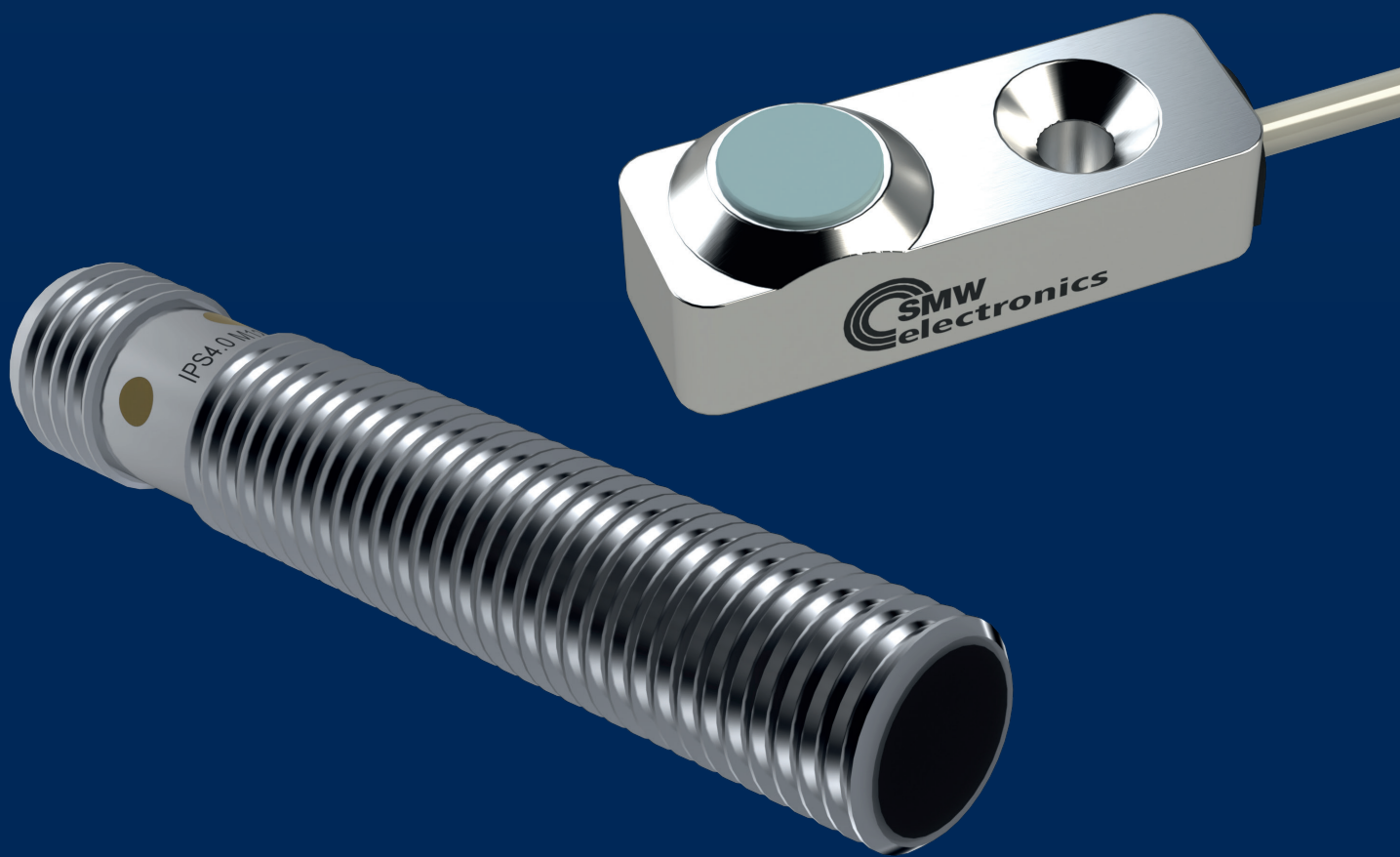


IPS 4.0

Inductive Sensors

Proximity Switches / Positioning Sensors
Flexible use with versatile mounting options
Compact and rigid design



IPS 4.0 M08-PNP

Inductive proximity sensor



Application/customer benefits

- Inductive proximity sensor
- Flexible use with versatile mounting options
- Compact and rigid design

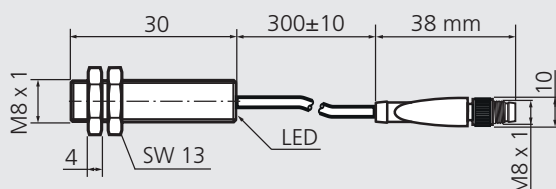
Technical features

- 2 mm flush
- Temperature range -40 ... +85 °C
- Operating voltage 24 V
- M8 x 1 Mounting
- Digital signal output PNP normally open (NO)
- Protection class: IP67

Standard equipment

IPS 4.0 M08-PNP
2 self locking nuts M8

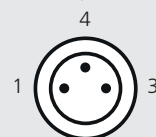
0E012802



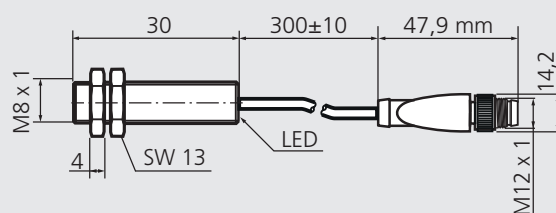
Pin Assignment

Pin	Description
1	24 V DC (brown)
3	GND (blue)
4	Normally open (NO) (black)

Male connector
M8 x 1



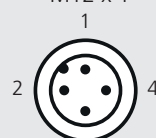
0E012803



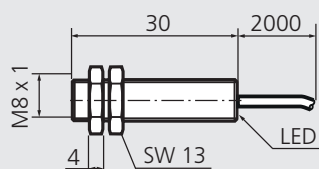
Pin Assignment

Pin	Description
1	24 V DC (brown)
2	NC
3	GND (blue)
4	Normally open (NO) (black)

Male connector
M12 x 1



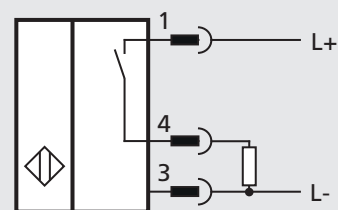
0E012804



Wire Assignment

Description
24 V DC (brown) (1)
GND (blue) (3)
Normally open (NO) (black) (4)

Connection



Technical data

Type	IPS 4.0 M08-PNP		IPS 4.0 M08-PNP	IPS 4.0 M08-PNP
Id. No.	0E012802		0E012803	0E012804
Switching function			Normally open (NO)	
Output type			PNP	
Rated operating distance			2 mm	
Installation			Flush	
Assured operating distance			0 ... 1.62 mm	
Operating voltage U_B			5 ... 30 V	
Switching frequency			0 ... 6000 Hz	
Reverse polarity protection			Reverse polarity protected	
Operating current			0 ... 100 mA	
No-load supply current			≤ 10 mA	
Switching state indicator			LED yellow	
MTTF _d			960 a	
Mission time (T_M)			20 a	
Diagnostic Coverage (DC)			0 %	
Ambient temperature			-40 ... +85 °C	
Connection type	Cable connector M8 x 1, PUR, 300 mm		Cable connector M12 x 1, PUR, 300 mm	Cable PUR, 2000 mm
Core cross section			0.14 mm ²	
Housing material			Brass, nickel plated	
Protection class			IP67	
Threading			M8	

IPS 4.0 M12-PNP

Inductive proximity sensor



Application/customer benefits

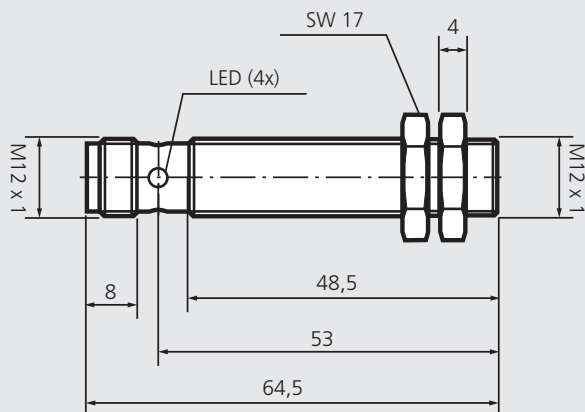
- Inductive proximity sensor
- Flexible use with versatile mounting options
- Compact and rigid design

Technical features

- 2 mm Flush
- Temperature range -40 ... +85 °C
- Operating voltage 24 V
- M12 x 1 Mounting with Connector plug M12 x 1
- Digital signal output PNP (normally open / closed)
- Protection class: IP68

Standard equipment

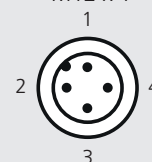
IPS 4.0 M12-PNP
2 self locking nuts M12



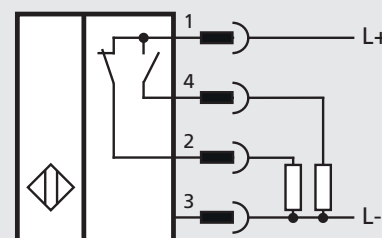
Pin Assignment

Pin	Description
1	24 V DC (brown)
2	Normally closed (white)
3	GND (blue)
4	Normally open (black)

Male connector
M12 x 1



Connection

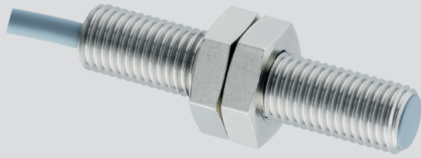


Technical data

Type	IPS 4.0 M12-PNP
Id. No.	OE012800
Switching function	complementary
Output type	PNP
Rated operating distance	2 mm
Installation	flush
Assured operating distance	0 ... 1.62 mm
Operating voltage U_B	5 ... 36 V
Switching frequency	0 ... 3500 Hz
Operating current	0 ... 200 mA
No-load supply current	≤ 15 mA
Switching state indicator	Multihole-LED, yellow
MTTF _d	1255 a
Mission time (T_M)	20 a
Diagnostic Coverage (DC)	0 %
Ambient temperature	- 40 ... +85 °C
Connection type	Connector plug M12x1
Housing material	Brass , white bronze coated
Degree of protection	IP68
Threading	M12 x 1

IPS 4.0 M08-0-10V e-sensing

Inductive positioning sensor



Application/customer benefits

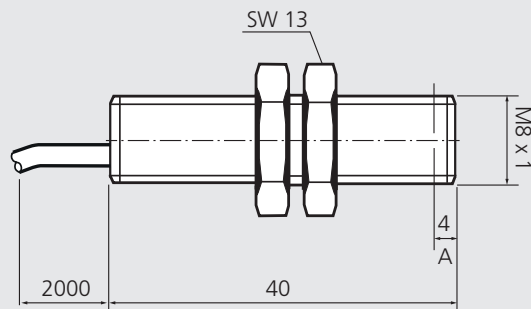
- Inductive positioning sensor
- Flexible use with versatile mounting options
- High accuracy distance measuring
- Compact and rigid design

Technical features

- 2 mm Flush
- Temperature range -10 ... +70 °C
- Operating voltage 12 ... 36 V DC
- M8 x 1 Mounting
- Protection class: IP67

Standard equipment

IPS 4.0 M08-0-10V
2 self locking nuts M8

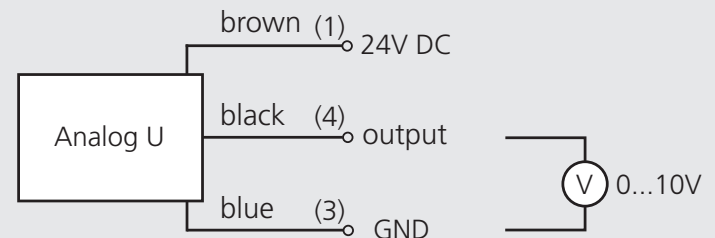


Wire Assignment

Wire Description

- | | |
|---|----------------------|
| 1 | 24 V DC (brown) |
| 3 | GND (blue) |
| 4 | 0-10V output (black) |

Connection



Technical data

Type	IPS 4.0 M08-0-10V
Id. No.	0E012810
Installation	flush
Measuring distance	0 ... 2 mm
Repeat accuracy	< 0.02 mm
Linearity error	± 60 µm (S = 0,5 ... 1,5 mm), ± 140 µm (S = 0 ... 2 mm)
Temperature drift	± 3 % (Full Scale: 0 ... +60 °C), ± 5 % (Full Scale: -10 ... +70 °C)
Response time	< 0.5 ms
Operating voltage	12 ... 36 V DC
No-load supply current max.	10 mA
Output circuit	Voltage output
Output signal	0 ... 10 V DC
Reverse polarity protection	Yes
Housing material	Stainless steel
Dimension	8 mm
Housing length	40 mm
Connection type	Cable, 2000 mm
Tightening torque max.	10 Nm
Ambient temperature	-10 ... +70 °C
Degree of protection	IP 67



Application/customer benefits

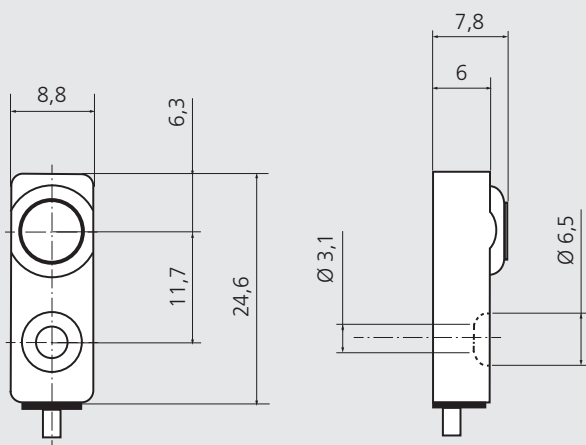
- Inductive positioning sensor
- Flexible use with versatile mounting options
- High accuracy distance measuring

Technical features

- 3 mm flush
- Temperature range -20 ... +70 °C
- Operating voltage 12 ... 30 V DC
- Protection class: IP67

Standard equipment

IPS 4.0 8.8x24.6-0-10V

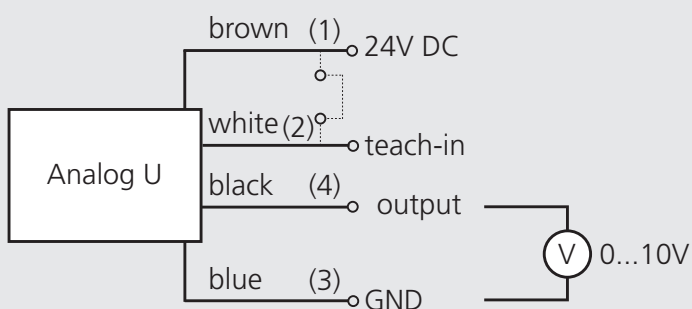


Wire Assignment

Wire Description

- | | |
|---|----------------------|
| 1 | 24 V DC (brown) |
| 2 | Teach In (white) |
| 3 | GND (blue) |
| 4 | 0-10V output (black) |

Connection

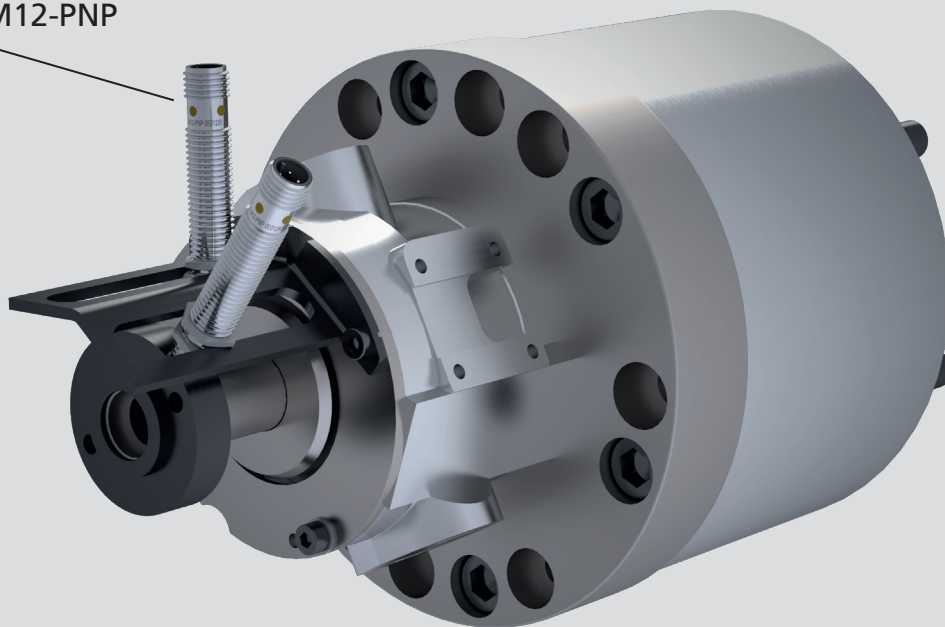


Technical data

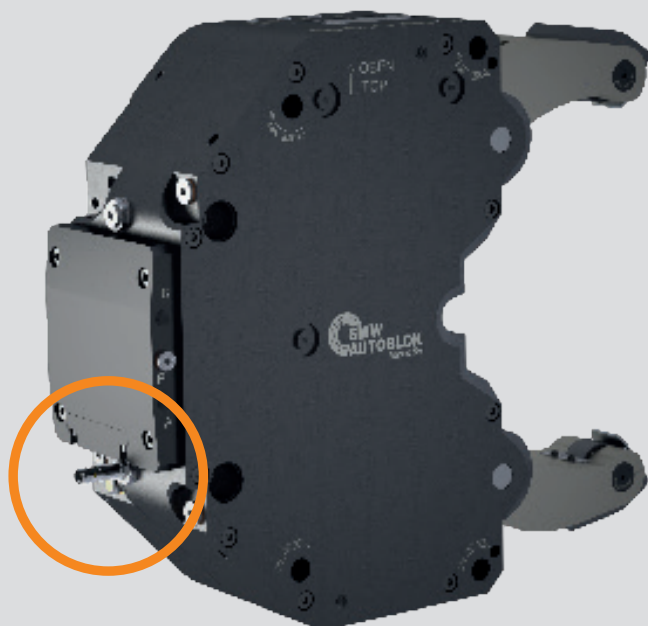
Type	IPS 4.0 8.8x24.6-0-10V
Id. No.	212282
Installation	Nearly Flush
Measuring distance	0 ... 3 mm
Repeat accuracy	< 0.01 mm
Linearity error	± 10 µm (S = 0 ... 2 mm), ± 90 µm (S = 0 ... 3 mm)
Temperature drift	± 2 % (Full Scale: S = 0 ... 2 mm), ± 6 % (Full Scale: S = 0 ... 3 mm)
Response time	< 2 ms
Operating voltage	12 ... 30 V DC
No-load supply current max.	10 mA
Output circuit	Voltage output
Output signal	0 ... 10 V DC
Reverse polarity protection	Yes
Housing material	Stainless steel
Connection type	Cable PUR, 2000 mm
Tightening torque max.	0,8 Nm
Ambient temperature	-20 ... +70 °C
Degree of protection	IP67

Example of integration hydraulic cylinder SIN-S with IPS 4.0 M12-PNP: Monitoring of the End-position of the cylinder

IPS 4.0 M12-PNP



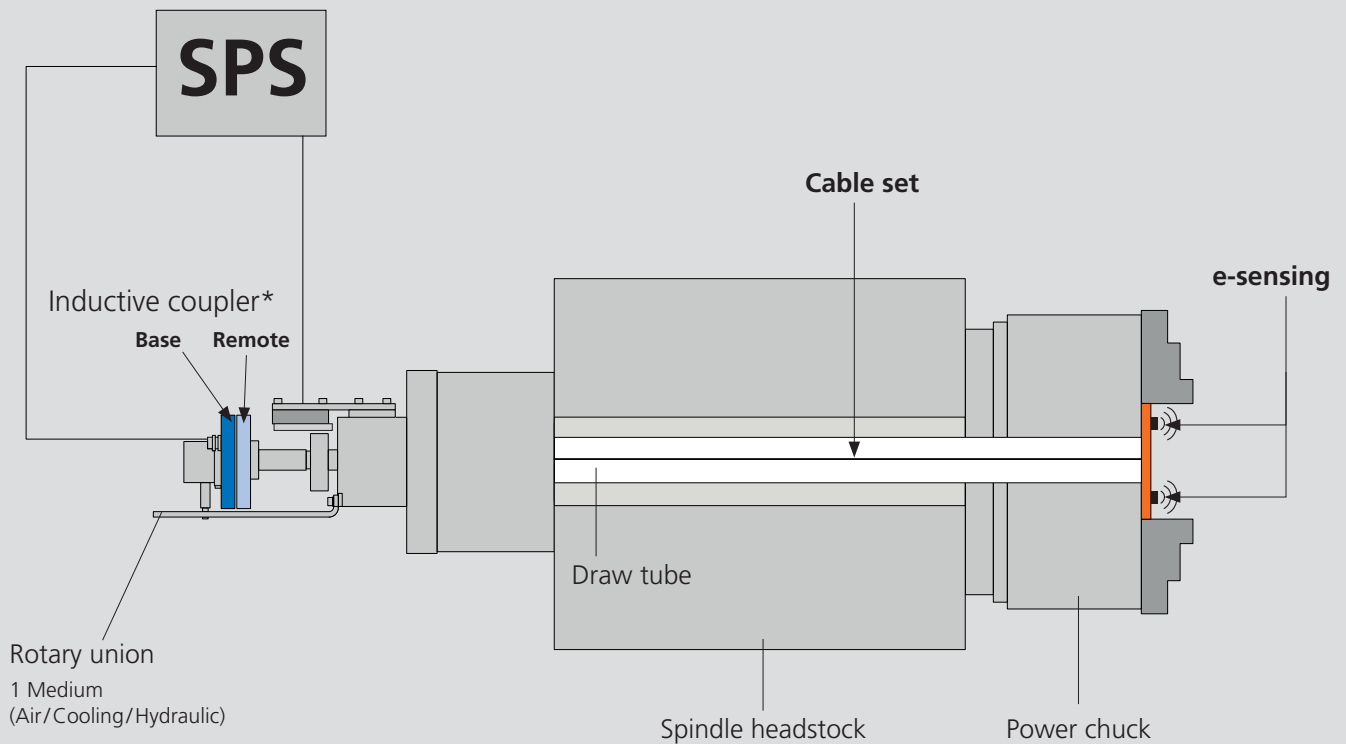
Example of integration steady rest RX with IPS 4.0 M12-PNP: Monitoring of the End-position of the arms



IPS 4.0 M12-PNP

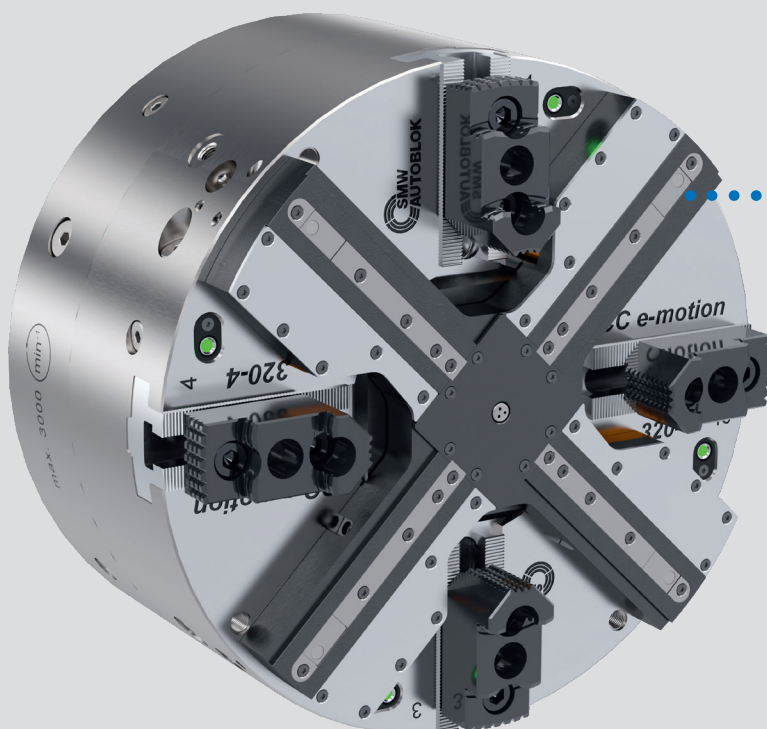
further application examples: *e-sensing*

Integration power chuck scheme



*for contact free transmission of energy and signals

Example of integration CC e-motion with IPS 4.0 0-10V e-sensing



4 x e-sensing
for inductive
component detection /
distance measurement
(optional)



IPS 4.0 0-10V e-sensing

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