PLUG-IN INTELLIGENT LCD DISPLAY WITH ALARM FOR TRANSMITTERS

eskon
Sensor Technology

EPD11

GENERAL INFORMATIONS

The EPD11 digital display is used to convert and display the 4-20mA signal taken from the transmitters to the desired measurement unit. The product has high accuracy, good stability, easy operate features. Designed to plug in / plug out of DIN43650 connected 2 wire transmitters. The product has high accuracy, stability and easy operation. It is a convenient way to add a display, and an alarm set point, to pressure or other transmitters. It has 5 digit clear LCD display and the device is programmed with 3 keys for scaling, decimal point and switch point. The display can be rotated in 90 degree steps and settings are maintained during power off conditions.
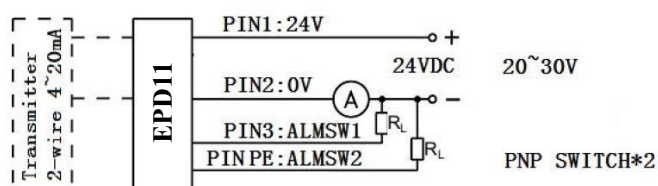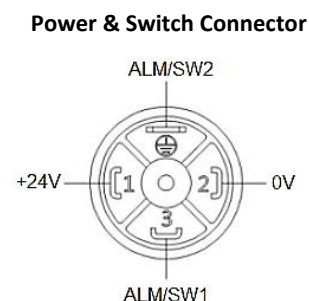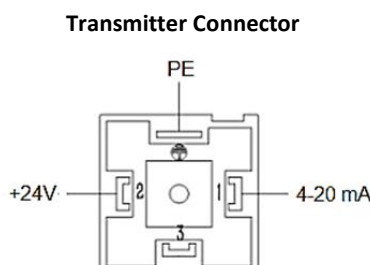
WARNINGS

- The installation of the product is carried out by the customer who purchases the product, according to the wiring diagrams, installation information, etc. in this manual.
- Maintenance and repair should be done by the technicians authorized by the manufacturer firm.
- Keep away the product from as high power energy cables, contactor, motor, switched power supplies, inductive and capacitive noisy supplies.
- Don't energize before all connections completed.
- Transport and storage should be at their original packaging and an ambient temperature of -20°C / +70°C in such a way that they will not be exposed to dust, humudity, impact, vibration, falling or water.
- Chemicals such as alcohol, thinner etc. should not be used for cleaning the product. The product should be wiped with a damp cloth.
- The product may be damaged and may become unusable if used outside of the specifications in the user manual.
- The product will be out of warranty if used outside of the specifications in the user manual and opened or repaired other than authorized services.

ELECTRICAL CONNECTIONS

*S35 Connection / Pin Configurations		
DIN 43650 A	Power & Switch Connector	Transmitter Connector
PIN 1	+24VDC	+24VDC
PIN 2	0V	4-20 mA
PIN 3	ALM/SW1	-
PIN PE	ALM/SW2	PE

Transmitter Connector

Power & Switch Connector
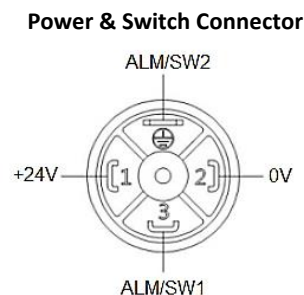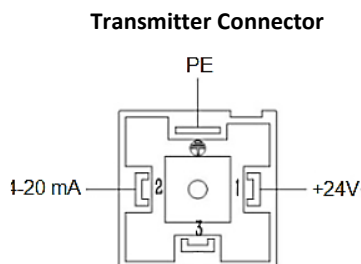
*S30 Connection / Pin Configurations		
DIN 43650 A	Power & Switch Connector	Transmitter Connector
PIN 1	+24VDC	4-20 mA
PIN 2	0V	+24VDC
PIN 3	ALM/SW1	-
PIN PE	ALM/SW2	PE

Transmitter Connector

Power & Switch Connector
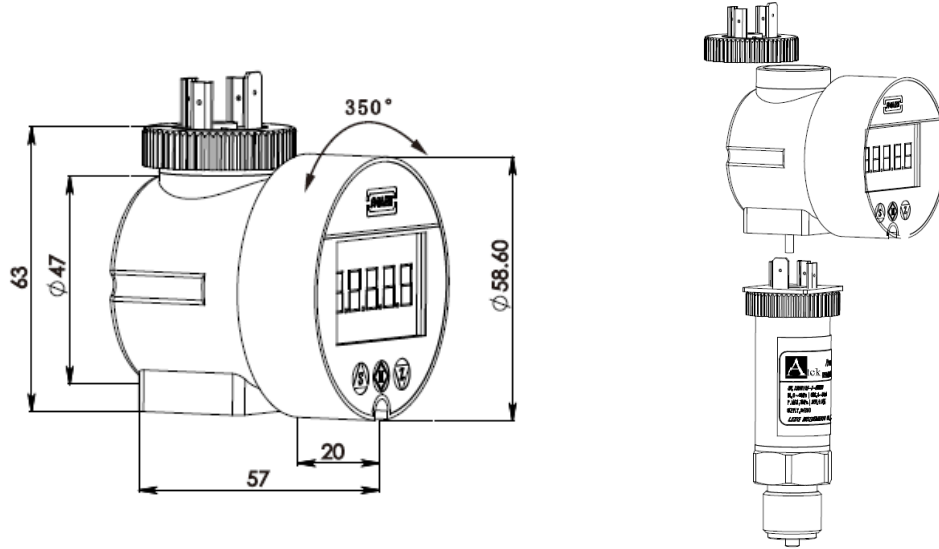

Pin Configurations

WARNING (!): The product must be connected to the sensor for operation. Otherwise the product will not work.

(*) S30 Connection: Connection for Atek-BCT series and Trafag pressure sensors
S35 Connection: Connection for other products

MECHANICAL DIMENSIONS AND INSTALLATION

TECHNICAL SPECIFICATIONS

General Specifications

Uygulamalar	4-20 current value or percentage site display
	Up to 2 indipendent alarm/switch output
Input signal	4-20 mA (2-wire)
Power supply	4-20 mA 2-wire loop power supply, max pressure drop 8VDC
Output signal	4-20 mA 2-wire signal loop output for option
Site operation	3 buttons, all parameters can ve modified at site

Display Specifications

Display	Double row 5bit/8bit, 7 section/16 section with backlight LCD display
	-19999 ～ 99999
Accuracy	0.1%F.S ±1 bit
ADC sampling	24 bits

Switch/Alarm Output Specifications

Output	Indipendent of 4-20 mA 2-wire circuits
Switch quantity	2 way PNP for option
Switch settings	0-100 % for option
Switch state	Normally open, normally closed for option
Switch function	High setting, low setting, window function, hysteresis function
Accuracy	0.1%F.S
State indicate	Red or Green LED display
Max. load	Continuous max load 120 mA
Delay time	0-255 ms for option
Max. frequency	Top 10 times/s
Hysteresis setting	0-5 % option

Error Warning

Standard	Low alarm value 3,5mA, high alarm value 23 mA

Mechanical and Environmental Specifications

Material	ABS+PC
Rotation Angle	350°
Color	Black
Anti-Vibration	20g, 20-5000Hz
Anti-Shock	100g, 11 ms
Storage and Operating Temperature	-20°C…+70°C (5-85% RH humudity)
Humudity	%5-85 RH

Electrical Specifications

Insulating property	500V/100 MΩ
Electrical protection	Short Circuit protection, reverse polarity protection
EMC	EN61326

Measuring Units

kPa, MPa, Pa, bar, mbar, psi, mH2O, mmH2O, Torr, atm, kg, g, mg, N, kN, °C, °F, K, %RH, %VOL, PPM, %LEL, pH, m, cm, mm, inch, m/s, Ω, kΩ, mV,V

CONFIGURATION

1- Key Functions

Key	Function
M	Parameter selection and setting key: switching parameters, save the setting parameters data.
S	Cursor selection key: When setting parameters, select the revised data bit, click the key once then the cursor shift left one bit, when the cursor shift to the highest bit it will automatically return to the lowest bit, and followed by cycle.
Z	Value modification key: Modify the current data bit value when you set the parameter, click the key once the value is incremented by one, and automatically return to the lower limit when the value is incremented by the upper limit, followed by cycle. Press and hold the key the value automatically successive increments, followed by cycle.

2- Parameter Settings

When the system is in measurement condition, press the "M" key to enter the setup menu, set CLK as 132, Press "M" key to set other parameters in turn, and it will turn back to measurement condition when all parameters setting are over.

Parameter	Name	Range	Specifications
CLK	Parameters setting unlocked	0~255	CLK=132, Unlocked, can set other parameters. CLK ≠ 132, locked,can't set other parameters.
SLL	Display lower limit	-19999~99999	Display lower limit of setting value
SLH	Display upper limit	-19999~99999	Display upper limit of setting value
UNI	Display unit	0~33	Setting the d i s p l a y u nits (see Table 3)
DISI	LCD Display information	DISI1=0	The main screen displays the input current value, vice screen displays the percentage of data and data unit percentage of current data and the current unit in mA.
		DISI1=1	The main screen displays the converted measured value, vice screen displa
		DISI1=2	The main screen displays the exact percentage of the measurement data (keep two significant figures after the decimal point), and vice screen displays the percentage of dat a and the symbol "%".
DECP	Decimal point position	DECP=0	No decimal point: XXXXX
		DECP=1	Decimal point position: XXXX.X
		DECP=2	Decimal point position: XXX.XX
		DECP=3	Decimal point p osition: XX.XXX
PB1	Display zero	-19999~99999	LCD main screen display zero migration value
KK1	Display range	0~1.9999	LCD main screen display range proportion
3,500 mA ROLC	Low level alarm		Used to set low level alarm value
23.000 mA ROHC	High level alarm		Used to set high level alarm value

When the system is in measurement condition, press the "Z" key to enter the setup menu, set CLK as 132, Press "M" key to set other parameters in turn, and it will turn back to measurement condition when all parameters setting are over.

Parameter	Name	Range	Specifications
SP1	Upper limit of Out1	-19999~99999	Upper limit of set value in the first channel transistor output
RP1	Lower limit of Out1	-19999~99999	Lower limit of set value in the first channel transistor output.
DTC1	Out1 output delay	0~255 (ms)	Delay time before the first channel output be valid
DST1	Out1 reset delay	0~255 (ms)	Delay time before the first channel outputbe reset
MOD1	Out1 Output mode	MOD1=0	No output, Out1 always keep the reset state.
		MOD1=1	When measured values > SP1, Out1 be valid; When measured value < RP1, Out1 be reset.
		MOD1=2	When measured values > SP1, Out1 be reset; when measured value < RP1, Out1 be valid.
		MOD1=3	When RP1 < measured value < SP1, Out1 be valid; When measured values > SP1 or measured value < RP1, Out1 be reset.
		MOD1=4	When measured values > SP1 or measured value < RP1, Out1 be valid ; When RP1< measured value < SP1, Out1 be reset.

When the system is in measurement condition, press the "S" key to enter the setup menu, set CLK as 132, Press "M" key to set other parameters in turn, and it will turn back to measurement condition when all parameters setting are over

Parameter	Name	Range	Specifications
SP2	Upper limit of Out2	-19999~99999	Upper limit of set value in the second channel transistor output
RP2	Lower limit of Out2	-19999~99999	Lower limit of set value in the second channel transistor output
DTC2	Out2 output delay	0~255 (ms)	Delay time before the second channel output be valid
DST2	Out2 reset delay	0~255 (ms)	Delay time before the second channel output be reset

MOD2	Out2 Output mode	MOD2=0	No output,Out2 always keep the reset state.
		MOD2=1	When measured values>SP2, Out1 be valid; When measured value <RP2, Out2 be reset.
		MOD2=2	When measured values>SP2, Out2 be reset; When measured value <RP2, Out2 be valid.
		MOD2=3	When RP2<measured value <SP2, Out2 be valid; When measured values > SP2 or measured value < RP2, Out2 be reset.
		MOD2=4	When measured values>SP2 or measured value <Rp2, Out2 be valid ; When RP2 < measured value < SP2, Out2 be reset.

Note :

● When modify any parameters, the current data modification bit will be flashing, through the "S" key to switch.

● If the parameter values need to be modified from a positive number to a negative, change the sign bit at the highest bit. For example, to modify parameter value from 100 to -100, EPD11-A/B main screen will display "-0100".

● When the set value of the parameter exceeds the valid range, the system automatically save the setting data before. For example, SLL parameter range is -19999~99999, SLL is 0 before modification, then modify SLL to 2000,
the system will display SLL in 0.

● When the parameters value higher data bit is 0 value, the system automatically optimizes the visual effects (not display), press the "S" key to switch the data modifications to this data bit to restore the display. For example, SLL is 0, EPD11
main screen displays "0" instead of "0000".

3- Measurement Unit Table

Parameter	Unit	Parameter	Unit	Parameter	Unit	Parameter	Unit
UNI=1	kPa	UNI=10	mmHg	UNI=19	°F	UNI=28	mm
UNI=2	Mpa	UNI=11	TOR	UNI=20	K	UNI=29	inch
UNI=3	Pa	UNI=12	atm	UNI=21	RH	UNI=30	m/s
UNI=4	bar	UNI=13	Kg	UNI=22	VOL	UNI=31	ohm
UNI=5	mbar	UNI=14	g	UNI=23	PPM	UNI=32	Kohm
UNI=6	psi	UNI=15	mg	UNI=24	LEL	UNI=33	mV
UNI=7	mH2O	UNI=16	N	UNI=25	PH	UNI=34	V
UNI=8	mmH2O	UNI=17	KN	UNI=26	m		
UNI=9	cmH2O	UNI=18	℃	UNI=27	cm		

Note: When measurement unit is set to "mH2O" or "mmH2O" or "cmH2O" influenced by the EPD11-digit limit, they are actually displayed as "mHO" "mmHO" "cmHO".

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Disposal of Packagings: Packaging materials consist of recyclable materials. For providing recycling, please dispose waste packagings to collecting points of authorized recycling facilities.

Disposal of E-Waste: This device is in conformity with WEEE Directive and consists of recyclable materials. This product should not be disposed with general waste for preventing negative effects on enviroment and human health. This product should be disposed to collecting points of authorized recycling facilities. Further information can be reached from authorized unit.