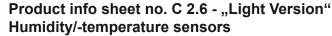
Galltec Mess- und Regeltechnik GmbH ∩ D-71145 Bondorf · Germany

Tel. +49 (0)7457-9453-0 · Fax +49 (0)7457-3758 E-Mail: sensoren@galltec.de · Internet:www.galltec-mela.de

ik GmbH MELA Sensortechnik GmbH D-07987 Mohlsdorf-Teichwolframsdorf · Gei

D-07987 Mohlsdorf-Teichwolframsdorf · Germany Tel. +49(0)3661-62704-0 · Fax +49(0)3661-62704-20 E-mail:mela@melasensor.de · Internet: www.galltec-mela.de





for use in air-conditioning systems, building services management systems and ventilation technology

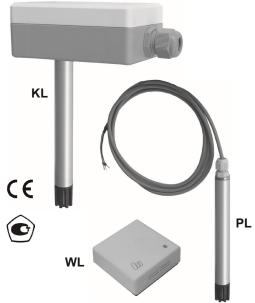
Technichal Data

Humidity		
measuring range	e	0100%rh
sensing element	t	capacitive FE09/4
accuracy	at 23°C (73,4°	°F) ±3%RH (4060%rh)
-	at 23°C (73,4°	°F) ±5%RH (otherwise)
working range		[^] 1590%rh
influence of tem	perature	1590%rh typ. ± 0.2%RH per °C/°F
minimum air spe	ed (only for PL	,KĹ) 1m/sec, 3ft/sec
Calibration		1 point
		essureless, non-aggressive
output	· · · · · · · · · · · · · · · · · · ·	010V or 420mA
Temperature w	ith active outp	ut
		050°C (32122°F) ²⁾
sensing element	t	LM35
accuracy (104	0°C ; 50104°F	F) ±1 °C; ±1.8 °F
calibration	· · · · · · · · · · · · · · · · · · ·	1 point at 23°C
		010V or 420mA
Electrical Data		
power supply:		
current outp	ut (KL) (PL)	1224V
load R	(O)- SL	<u>ipply - 10 V DC</u> ± 50 Ω
IX	.[(22)—	0,02 A
current outpo	ut (WL)	1530V
		supply - 14 V DC
		0,02 A
voltage outp	ut	24V AC/DC ±10%
	ut (duct-version	
· o.tago outp		., 1530V DC/24V AC ±10%
load (voltage ou		>10kOhm
ambient tem	perature KL.PL	-20+80°C (-4176°F)
ambient tem	perature KL,PL	20+80°C (-4176°F)
	nperature KL,PL WL	20+80°C (-4176°F) 20+60°C (-4140°F)
electromagnetic	nperature KL,PL WL compatibility	20+80°C (-4176°F) 20+60°C (-4140°F)
electromagnetic Emitted inter	nperature KL,PL WL compatibility ference	20+80°C (-4176°F) 20+60°C (-4140°F) EN 55011 cl. B
electromagnetic Emitted inter Noise immur	nperature KL,PL WL compatibility ferencenity	20+80°C (-4176°F) 20+60°C (-4140°F) EN 55011 cl. B EN 50082-2
electromagnetic Emitted inter Noise immur sensor tube	perature KL,PL WL compatibility ference nity	20+80°C (-4176°F) 20+60°C (-4140°F) EN 55011 cl. B EN 50082-2 20mm (Ø 0,79") aluminium
electromagnetic Emitted inter Noise immur sensor tube housing	nperature KL,PL WL compatibility ference nity	20+80°C (-4176°F) 20+60°C (-4140°F) EN 55011 cl. B EN 50082-2

Type versions

Measured variable	Output	WL series wall	KL series duct	PL series rod-haped
F	010 V	FWL2/5	FKL2/5	FPL2/5
rel. humidity	420 mA	FWL3/5	FKL3/5	FPL3/5
K	2 x 010 V	KWL2/5	KKL2/5	KPL2/5
r.h. + temp.	2 x 420 mA	KWL3/5	KKL3/5	KPL3/5
Т	010 V	TWL2/5	TKL2/5	TPL2/5
temperature	420 mA	TWL3/5	TKL3/5	TPL3/5
	Pt100	TWL5/5	TKL5/5	TPL5/5
c r.h. + temp. passive	010 V + T	CWL2/5-X	CKL2/5-X	CPL2/5-X
	420 mA + T		CKL3/5-X	CPL3/5-X
Weight approx.		80g	330	120g

KL (housing) IP54, (sensor) IP20



Description

These sensors have been specially adapted to the needs of the ventilation and air-conditioning sector.

They come in three series (the WL series for wall mounting, the KL series for duct installation and the PL series with a cable for suspension from any location). The KL and PL series are equipped with gauze filters as standard. Other filters are available on request.

Use of capacitive humidity sensor elements is a guarantee of high long-term stability, resistance to dew formation, small hysteresis and good dynamic performance.

User instructions

Install these sensors at a place where characteristic climatic conditions occur. The wall-mounting sensors can be installed on flush-mounted sockets on installation systems and directly onto the wall. Avoid installing them close to heaters or windows or against outside walls.

The sensors with the connection cable can be suspended directly from the cable.

In principle, the sensors do not require any maintenance. However, the dynamic behaviour of the sensor may be affected if it is exposed to too much dust. In this case, clean the sensor element by blowing the dust off. In the case of the KL and PL series, clean the sensors by rinsing them carefully in distilled water. Never touch the highly sensitive sensor element.

Please consult the *application instructions for the sensing elements* (product info sheet no. A 1) or check with the manufacturer for further information which you need to bear in mind when using humidity sensors with capacitive sensing elements.

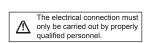
Temperature with passive output

Measuring elements to be chosen: NTC; PTC; KTY; LMx35; Pt100; Pt1000; Ni1000; AD592; LM34; BALKO 1kΩ; SILICON 2kΩ; SEMICONDUCTOR 559 mVDC @23°C (73,4°F)

Thermistors @ 25°C (77°F) 1,8k Ω ; 2,252k Ω ; 3k Ω ; 5k Ω ; 10k Ω ; 1,8k Ω (Type II; III, CSI); 20k Ω ; 100k Ω

2) special versions available on request

This information is based on current knowledge and is intended to provide details of our products and their possible applications. It does not, therefore, act as a guarantee of specific properties of the products described or of their suitability for a particular application. It is our experience that the equipment may be used across a broad spectrum of applications under the most varied conditions and loads. We cannot appraise every individual case. Purchasers and/or users are responsible for checking the equipment for suitability for any particular application. Any existing industrial rights of protection must be observed. The perfect quality of our products is guaranteed under our General Conditions of Sale. Issue: November 2012 C26 E. Subiect to modifications.



Connection diagram series KL

version 0...10V DC

	terminals	ranges	
supply	(1-) (2+)	1530V DC	
	(1~) (2~)	24V AC ±10%	
"humidity"	(3) (4+)	010V DC	
"temperature"	(5) (6+)	010V DC	
not galvanic disconnected negative pole (1-) (3) (5) = common			
"temperature"	(5) (6)	passive sensor galvanic disconnected	
shield	(7)		

210 (8,27) 160 (6,3) 25 (0,98) 25 (0,98) 30 (3,15) (21,7)

version 4...20mA, 12...24V DC (heed load)

	terminals	ranges	
"humidity"	(1-) (2+)	420mA	outputs galvanic
"temperature"	(3-) (4)	420mA	disconnected
"temperature"	(3) (4)	passive sensor	
shield	(5)		

Connection diagram series WL

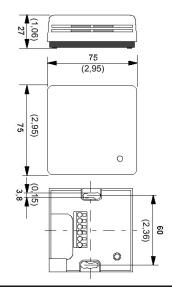
version 0...10V DC

	terminals	ranges	
supply	(1-) (2+)	24V DC ±10%	
	(1~) (2~)	24V AC ±10%	
"humidity"	(3) (4+)	010V DC	
"temperature"	(5) (6+)	010V DC	
not galvanic disconnected negative pole (1-) (3) (5) = common			
"temperature"	(5) (6)	passive sensor galvanic disconnected	

version 4...20mA, 15...30V DC (heed max. load)

	terminals	ranges	
"humidity"	(1-) (2+)	420mA	outputs galvanic
"temperature"	(3-) (4)	420mA	disconnected
"temperature"	(3) (4)	passive sensor	

dimensions in mm (inch)

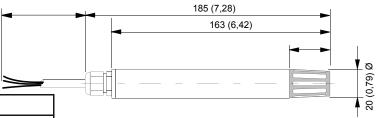


Connection diagram series PL

version 0...10V DC

not galvanic disconnected negative pole (-brown) = common

	wire colour	ranges
supply	*(-brown) (+green)	24V DC ±10%
	(~brown) (~green)	24V AC ±10%
"humidity"	*(-brown) (+white)	010V DC
"temperature"	*(-brown) (+yellow)	010V DC
"temperature"	(blue) (yellow)	passive sensor galvanic disconnected



version 4...20mA, 12...24V DC (heed load)

	wire colour	ranges	
"humidity"	(-green) (+brown)	420mA	outputs galvanic
"temperature"	(-white) (+yellow)	420mA	discon-
			nected
"temperature"	(white) (yellow)	passive sensor	