

the sensor people





Part no.: 50135696 LCS-1M12P-F04PNO-M12 Capacitive sensor





Figure can vary

Contents

- Technical data
- Dimensioned drawings
- · Electrical connection
- Circuit diagrams
- · Operation and display
- Accessories
- Notes





Technical data

Basic data	
Series	LCS-1
Switching distance S _n	1 4 mm
Assured switching distance	4 mm
toda ownorming diotarios	
Electrical data	
Protective circuit	Polarity reversal protection Short circuit protected
Performance data	
Supply voltage	10 30 V, DC
Residual ripple	0 10 %, From U _B
Open-circuit current	15 mA
Temperature drift, max. (in % of S _r)	20 %
Repeatability, max. (in % of S _r)	2 %
Rated operating current	100 mA
Outputs	
Number of digital switching outputs	1 Piece(s)
Switching outputs	
Туре	Digital switching output
Voltage type	DC
Switching output 1	
Assignment	Connection 1, pin 4
Switching element	Transistor, PNP
Switching principle	NO (normally open)
Timing	
Switching frequency	100 Hz
Connection	
Number of connections	1 Piece(s)
	1 Piece(s)
Number of connections	1 Piece(s) Connector
Number of connections Connection 1	
Number of connections Connection 1 Type of connection	Connector Voltage supply
Number of connections Connection 1 Type of connection Function	Connector Voltage supply Signal OUT
Number of connections Connection 1 Type of connection Function Thread size	Connector Voltage supply Signal OUT M12
Number of connections Connection 1 Type of connection Function Thread size Type	Connector Voltage supply Signal OUT M12 Male
Number of connections Connection 1 Type of connection Function Thread size Type Material	Connector Voltage supply Signal OUT M12 Male Plastic
Number of connections Connection 1 Type of connection Function Thread size Type Material No. of pins	Connector Voltage supply Signal OUT M12 Male Plastic 4 -pin
Number of connections Connection 1 Type of connection Function Thread size Type Material No. of pins	Connector Voltage supply Signal OUT M12 Male Plastic 4 -pin
Number of connections Connection 1 Type of connection Function Thread size Type Material No. of pins Encoding	Connector Voltage supply Signal OUT M12 Male Plastic 4 -pin
Number of connections Connection 1 Type of connection Function Thread size Type Material No. of pins Encoding Mechanical data	Connector Voltage supply Signal OUT M12 Male Plastic 4 -pin A-coded
Number of connections Connection 1 Type of connection Function Thread size Type Material No. of pins Encoding Mechanical data Design	Connector Voltage supply Signal OUT M12 Male Plastic 4 -pin A-coded Cylindrical
Number of connections Connection 1 Type of connection Function Thread size Type Material No. of pins Encoding Mechanical data Design Thread size	Connector Voltage supply Signal OUT M12 Male Plastic 4 -pin A-coded Cylindrical M12 x 1 mm
Number of connections Connection 1 Type of connection Function Thread size Type Material No. of pins Encoding Mechanical data Design Thread size Dimension (Ø x L)	Connector Voltage supply Signal OUT M12 Male Plastic 4 -pin A-coded Cylindrical M12 x 1 mm 12 mm x 75 mm
Connection 1 Type of connection Function Thread size Type Material No. of pins Encoding Mechanical data Design Thread size Dimension (Ø x L) Type of connection	Connector Voltage supply Signal OUT M12 Male Plastic 4 -pin A-coded Cylindrical M12 x 1 mm 12 mm x 75 mm Embedded



Net weight		
Type of display LED Number of LEDs 2 Piece(s) Switching distance, adjustable Yes Environmental date Perminental date Ambient temperature, operation 2.5 85 °C Certifications UN Degree of protection IP 67 Protection class III Certifications U.U. U.S. Standards applied IEC 60947-52 Correction factors IEC 60947-52 Actifications 0.75 Actifications 0.75 Actifications 0.11 0.25 Alline 0.4 Ammonia 0.7 - 0.85 Anilline 0.4 Gasoline 0.1 Cultuid 0.15 Elpony resin 0.15 Elpony resin 0.15 Churde oil 0.05 Elthrand 0.85 Elthylene glycol 0.93 From R22 and 502 (fiquid) 0.35 Grain 0.15 0.3 Glass 0.2 0.55 <	Net weight	13 g
Type of display LED Number of LEDs 2 Piece(s) Switching distance, adjustable Yes Environmental date Perminental date Ambient temperature, operation 2.5 85 °C Certifications UN Degree of protection IP 67 Protection class III Certifications U.U. U.S. Standards applied IEC 60947-52 Correction factors IEC 60947-52 Actifications 0.75 Actifications 0.75 Actifications 0.11 0.25 Alline 0.4 Ammonia 0.7 - 0.85 Anilline 0.4 Gasoline 0.1 Cultuid 0.15 Elpony resin 0.15 Elpony resin 0.15 Churde oil 0.05 Elthrand 0.85 Elthylene glycol 0.93 From R22 and 502 (fiquid) 0.35 Grain 0.15 0.3 Glass 0.2 0.55 <		
Number of LEDs 2 Piece(s) Switching distance, adjustable Yes Environmental data Ambient temperature, operation 25 85 °C Certifications PF 67 Degree of protection datas III Certifications c UL US Standards applied IEC 60947-5-2 Correction factors V Acatonic 0.75 Acrylic resin 0.4 0.25 Actione 0.85 Ammonia 0.7 0.85 Ammonia 0.1 0.25 Actione 0.4 Celluloid 0.15 Eliquid chrome 0.1 Ebonite 0.15 Epoxy resin 0.15 Crude oil 0.95 Eithanol 0.85 Eithylene glycol 0.93 Freen R22 and 502 (fiquid) 0.35 Grain 0.15 0.35 Glass 0.2 0.55 Glycerin 0.98 Rubber 0.15 0.9 Wood, dy 0.1	Operation and display	
Switching distance, adjustable Yes Environmental data Ambient temperature, operation -25 85 °C Certifications UR Degree of protection IP 67 Protection class III Certifications CUL US Standards applied IEC 60947-5-2 Correction factors IEC 60947-5-2 Acottone 0.75 Acytic resin 0.1 0.25 Alcohol 0.85 Ammonia 0.7 0.85 Antiline 0.4 Gasaline 0.1 Celluloid 0.15 Liquid obtorine 0.1 Ebonite 0.15 Epory resin 0.15 0.35 Crude oil 0.95 Eithanol 0.85 Eithylene glycol 0.33 Freon R22 and 502 (liquid) 0.39 Grain 0.15 0.3 Glass 0.2 0.55 Glycorin 0.98 Wood, dy 0.1 0.4 Carbon dioxide	Type of display	LED
Position	Number of LEDs	2 Piece(s)
Ambient temperature, operation -25 85 °C Cortifications P67 Potection class III Certifications o UL US Standards applied lEC 60947-6-2 Ecorection factors IEC 60947-6-2 Acetone 0.75 Acetone 0.85 Armonia 0.7 0.85 Aniline 0.4 Gasoline 0.1 Celluloid 0.15 Liquid chlorine 0.1 Ebonite 0.15 Epoxy resin 0.15 Citude oil 0.05 Ethylene glycol 0.93 Freon R22 and 502 (liquid) 0.35 Grain 0.15 0.3 Glass 0.2 0.55 Glycerin 0.98 Rubber 0.15 0.9 Wood, dry 0.1 0.4 Carbon dioxide 0 Carbon dioxide 0 Carbon dioxide 0 Mallamine resin 0.25 0.55 Milk powder 0.2	Switching distance, adjustable	Yes
Ambient temperature, operation -25 85 °C Cortifications P67 Potection class III Certifications o UL US Standards applied lEC 60947-6-2 Ecorection factors IEC 60947-6-2 Acetone 0.75 Acetone 0.85 Armonia 0.7 0.85 Aniline 0.4 Gasoline 0.1 Celluloid 0.15 Liquid chlorine 0.1 Ebonite 0.15 Epoxy resin 0.15 Citude oil 0.05 Ethylene glycol 0.93 Freon R22 and 502 (liquid) 0.35 Grain 0.15 0.3 Glass 0.2 0.55 Glycerin 0.98 Rubber 0.15 0.9 Wood, dry 0.1 0.4 Carbon dioxide 0 Carbon dioxide 0 Carbon dioxide 0 Mallamine resin 0.25 0.55 Milk powder 0.2		
Certifications IP 67 Protection class III Certifications c UL US Standards applied IEC 60947-5-2 Correction factors Aceylic resin 0.1 - 0.25 Acrylic resin 0.4 - 0.85 Ammonia 0.7 - 0.85 Ammine 0.4 Gasoline 0.1 Celluloid 0.16 Liquid chlorine 0.1 Ebonite 0.15 Epoxy resin 0.15 - 0.35 Crude oil 0.95 Ethanol 0.86 Ethylene glycol 0.93 Freon R22 and 502 (liquid) 0.35 Grain 0.15 - 0.3 Glass 0.2 - 0.55 Glycerin 0.98 Rubber 0.16 - 0.9 Wood, wet 0.8 - 0.85 Wood, wet 0.8 - 0.85 Wood fly 0.1 - 0.4 Carbon dioxide 0 Air 0 Marble 0.5 Flour <t< td=""><td>Environmental data</td><td></td></t<>	Environmental data	
Degree of protection IP 67 Protection class III Certifications c U US Standards applied IEC 60947-5-2 Correction factors Acetone 0.75 Acetone 0.85 Annonia 0.7 0.85 Anmonia 0.7 0.85 Aniline 0.4 Gasoline 0.1 Celluloid 0.15 Liquid chlorine 0.15 Ebonite 0.15 Ebonite 0.15 Ethonice 0.95 Ethanol 0.95 Ethanol 0.95 Ethanol 0.93 Freen R22 and 502 (liquid) 0.35 Grain 0.15 0.3 Glass 0.2 0.55 Glycarin 0.98 Rubber 0.15 0.9 Wood, dvy 0.1 0.4 Carbon dioxide 0.6 0.85 Wood wet 0.6 0.85 Wood wet 0.5 0.55 Melamine resin	Ambient temperature, operation	-25 85 °C
Degree of protection IP 67 Protection class III Certifications c U US Standards applied IEC 60947-5-2 Correction factors Acetone 0.75 Acetone 0.85 Annonia 0.7 0.85 Anmonia 0.7 0.85 Aniline 0.4 Gasoline 0.1 Celluloid 0.15 Liquid chlorine 0.15 Ebonite 0.15 Ebonite 0.15 Ethonice 0.95 Ethanol 0.95 Ethanol 0.95 Ethanol 0.93 Freen R22 and 502 (liquid) 0.35 Grain 0.15 0.3 Glass 0.2 0.55 Glycarin 0.98 Rubber 0.15 0.9 Wood, dvy 0.1 0.4 Carbon dioxide 0.6 0.85 Wood wet 0.6 0.85 Wood wet 0.5 0.55 Melamine resin		
Protection class III Certifications c UL US Standards applied IEC 60947-5-2 Correction factors IEC 60947-5-2 Acyplic resin 0.1-0.25 Accohol 0.85 Ammonia 0.7-0.85 Aniline 0.4 Gasoline 0.1 Cituloid 0.15 Liquid chlorine 0.15 Liquid chlorine 0.15 Elpoxy resin 0.150.35 Crude oil 0.05 Ethylene glycol 0.93 Ethylene glycol 0.93 Grain 0.150.3 Glass 0.2-0.55 Glycerin 0.98 Wood, wet 0.60.85 Wood, dry 0.10.4 Carbon dioxide 0 Air 0 Marble 0.5 Flour 0 Melamine resin 0.250.55 Melamine resin 0.250.55 Melamine resin 0.250.55 Milk	Certifications	
Certifications c UL US Standards applied IEC 60947-5-2 Correction factors Acetone 0.75 Acrylic resin 0.1 0.25 Alcohol 0.85 Anminoria 0.4 Gasoline 0.1 Celluloid 0.15 Liquid chlorine 0.15 Ebonite 0.15 Epoxy resin 0.15 0.95 Ethanol 0.85 Ethylene glycol 0.93 Ethylene glycol 0.93 Freon R22 and 502 (liquid) 0.35 Grain 0.15 0.3 Glycerin 0.98 Rubber 0.15 0.9 Wood, dry 0.1 0.4 Carbon dioxide 0 Air 0 Marble 0.5 Flour 0.05 Melamine resin 0.25 0.55 Melamine resin 0.25 0.55 Melamine resin 0.25 0.55 Melamine resin 0.25 0.55 Melamine resi	Degree of protection	IP 67
Standards applied IEC 60947-5-2	Protection class	III
Correction factors Acetone 0.75 Accylic resin 0.1 0.25 Alcohol 0.85 Ammonia 0.7 0.85 Aniline 0.4 Gasoline 0.1 Cilluloid 0.15 Liquid chlorine 0.1 Ebonite 0.15 Epoxy resin 0.15 Crude oil 0.05 Ethanol 0.86 Ethylene glycol 0.93 Freen R22 and 502 (liquid) 0.35 Grain 0.15 0.3 Glycerin 0.98 Rubber 0.15 0.9 Wood, wet 0.6 0.85 Wood, dry 0.1 0.4 Carbon dloxide 0 Marie 0 Marie 0 Melamine resin 0.25 0.55 Milk powder 0.2 Nylon 0.2 0.55 Milk powder 0.2 Oll-containing paper 0.26 Polyamide 0.3	Certifications	c UL US
Acetone 0.75 Acrylic resin 0.1 0.25 Alcohol 0.85 Ammonia 0.7 0.85 Anliline 0.4 Gasoline 0.1 Celluloid 0.15 Liquid chlorine 0.15 Ebonite 0.15 Epoxy resin 0.15 Crude oil 0.05 Ethanol 0.85 Ethylene glycol 0.93 Grain 0.15 0.3 Glass 0.2 0.55 Glycerin 0.98 Rubber 0.15 0.9 Wood, wet 0.6 0.85 Wood, wet 0.6 0.85 Wood wide 0.1 0.4 Carbon dioxide 0.6 0.85 Marble 0.5 Flour 0.05 Mallik powder 0.25 0.55 Milk	Standards applied	IEC 60947-5-2
Acetone 0.75 Acrylic resin 0.1 0.25 Alcohol 0.85 Ammonia 0.7 0.85 Anliline 0.4 Gasoline 0.1 Celluloid 0.15 Liquid chlorine 0.15 Ebonite 0.15 Epoxy resin 0.15 Crude oil 0.05 Ethanol 0.85 Ethylene glycol 0.93 Grain 0.15 0.3 Glass 0.2 0.55 Glycerin 0.98 Rubber 0.15 0.9 Wood, wet 0.6 0.85 Wood, wet 0.6 0.85 Wood wide 0.1 0.4 Carbon dioxide 0.6 0.85 Marble 0.5 Flour 0.05 Mallik powder 0.25 0.55 Milk		
Acetone 0.75 Acrylic resin 0.1 0.25 Alcohol 0.85 Ammonia 0.7 0.85 Anliline 0.4 Gasoline 0.1 Celluloid 0.15 Liquid chlorine 0.15 Ebonite 0.15 Epoxy resin 0.15 Crude oil 0.05 Ethanol 0.85 Ethylene glycol 0.93 Grain 0.15 0.3 Glass 0.2 0.55 Glycerin 0.98 Rubber 0.15 0.9 Wood, wet 0.6 0.85 Wood, wet 0.6 0.85 Wood wide 0.1 0.4 Carbon dioxide 0.6 0.85 Marble 0.5 Flour 0.05 Mallik powder 0.25 0.55 Milk	Correction factors	
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Alcohol 0.85 Ammonia 0.7 0.85 Aniline 0.4 Gasoline 0.1 Celluloid 0.15 Liquid chlorine 0.15 Epoxy resin 0.15 Epoxy resin 0.05 Crude oil 0.85 Ethylene glycol 0.85 Ethylene glycol 0.93 Freon R22 and 502 (liquid) 0.35 Grain 0.15 0.3 Glycerin 0.98 Rubber 0.15 0.9 Wood, wet 0.6 0.85 Wood, dry 0.1 0.4 Carbon dioxide 0 Air 0 Marble 0.5 Flour 0.05 Melamine resin 0.25 0.55 Milk powder 0.2 Njon 0.2 0.3 Oil-containing paper 0.26 Paper 0.1 Polyamide 0.1 Polyester resin 0.15 0.5	Acrylic resin	
Aniline 0.4 Gasoline 0.1 Celluloid 0.15 Liquid chlorine 0.1 Ebonite 0.15 Epoxy resin 0.15 0.35 Crude oil 0.05 Ethanol 0.85 Ethylene glycol 0.93 Freon R22 and 502 (liquid) 0.36 Glass 0.2 0.55 Glycerin 0.98 Rubber 0.15 0.9 Wood, wet 0.6 0.85 Wood, dry 0.1 0.4 Carbon dioxide 0 Air 0 Marble 0.5 Flour 0.05 Melamine resin 0.25 0.55 Milk powder 0.2 Milk powder 0.2 Oil-containing paper 0.2 Paper 0.1 Polyamide 0.3 Polyamide 0.1 Polyester resin 0.15 0.5		0.85
Gasoline 0.1 Celluloid 0.15 Liquid chlorine 0.1 Ebonite 0.15 Epoxy resin 0.15 0.35 Crude oil 0.05 Ethanol 0.85 Ethylene glycol 0.93 Freon R22 and 502 (liquid) 0.35 Glass 0.2 0.55 Glycerin 0.98 Rubber 0.15 0.9 Wood, wet 0.6 0.85 Wood, wet 0.1 0.4 Carbon dioxide 0 Air 0 Marble 0.5 Flour 0.05 Melamine resin 0.25 0.55 Milk powder 0.2 Nylon 0.25 0.55 Milk powder 0.20 Oll-containing paper 0.25 0.3 Paper 0.1 Polyamide 0.3 Polyester resin 0.15 0.5	Ammonia	0.7 0.85
Celluloid 0.15 Liquid chlorine 0.15 Ebonite 0.15 Epoxy resin 0.15 0.35 Crude oil 0.85 Ethanol 0.85 Ethylene glycol 0.93 Freon R22 and 502 (liquid) 0.35 Grain 0.15 0.3 Glass 0.2 0.55 Glycerin 0.98 Rubber 0.15 0.9 Wood, wet 0.6 0.85 Wood, dry 0.1 0.4 Carbon dioxide 0 Air 0 Marble 0.5 Flour 0.05 Melamine resin 0.25 0.55 Milk powder 0.2 Nylon 0.2 0.3 Oil-containing paper 0.25 Paper 0.1 Polyamide 0.3 Polyester resin 0.15 0.5	Aniline	0.4
Liquid chlorine 0.1 Ebonite 0.15 Epoxy resin 0.15 0.35 Crude oil 0.05 Ethanol 0.85 Ethylene glycol 0.93 Freon R22 and 502 (liquid) 0.35 Grain 0.15 0.3 Glass 0.2 0.55 Glycerin 0.98 Rubber 0.15 0.9 Wood, wet 0.6 0.85 Wood, dry 0.1 0.4 Carbon dioxide 0 Air 0 Marble 0.5 Flour 0.05 Melamine resin 0.25 0.55 Milk powder 0.2 Nylon 0.2 0.3 Oil-containing paper 0.25 Paper 0.1 Polyamide 0.3 Polyoster resin 0.15 0.5	Gasoline	0.1
Ebonite 0.15 Epoxy resin 0.15 0.35 Crude oil 0.05 Ethanol 0.85 Ethylene glycol 0.93 Freon R22 and 502 (liquid) 0.35 Grain 0.15 0.3 Glass 0.2 0.55 Glycerin 0.98 Rubber 0.15 0.9 Wood, wet 0.6 0.85 Wood, dry 0.1 0.4 Carbon dioxide 0 Air 0 Marble 0.5 Flour 0.05 Melamine resin 0.25 0.55 Milk powder 0.2 Nylon 0.2 0.3 Oil-containing paper 0.26 Paper 0.1 Polyamide 0.3 Polyester resin 0.15 0.5	Celluloid	0.15
Epoxy resin 0.15 0.35 Crude oil 0.05 Ethanol 0.85 Ethylene glycol 0.93 Freon R22 and 502 (liquid) 0.35 Grain 0.15 0.3 Glass 0.2 0.55 Glycerin 0.98 Rubber 0.15 0.9 Wood, wet 0.6 0.85 Wood, dry 0.1 0.4 Carbon dioxide 0 Air 0 Marble 0.5 Flour 0.05 Melamine resin 0.25 0.55 Milk powder 0.2 Nylon 0.2 0.3 Oil-containing paper 0.25 Paper 0.1 Polyamide 0.3 Polyester resin 0.15 0.5	Liquid chlorine	0.1
Crude oil 0.05 Ethanol 0.85 Ethylene glycol 0.93 Freon R22 and 502 (liquid) 0.35 Grain 0.15 0.3 Glass 0.2 0.55 Glycerin 0.98 Rubber 0.15 0.9 Wood, wet 0.6 0.85 Wood, dry 0.1 0.4 Carbon dioxide 0 Air 0 Marble 0.5 Flour 0.05 Melamine resin 0.25 0.55 Milk powder 0.2 Nylon 0.2 0.3 Oil-containing paper 0.25 Paper 0.1 Polyamide 0.3 Polyester resin 0.15 0.5	Ebonite	0.15
Ethanol 0.85 Ethylene glycol 0.93 Freon R22 and 502 (liquid) 0.35 Grain 0.15 0.3 Glass 0.2 0.55 Glycerin 0.98 Rubber 0.15 0.9 Wood, wet 0.6 0.85 Wood, dry 0.1 0.4 Carbon dioxide 0 Air 0 Marble 0.5 Flour 0.05 Melamine resin 0.25 0.55 Milk powder 0.2 Nylon 0.2 0.3 Oil-containing paper 0.25 Paper 0.1 Polyamide 0.3 Polyester resin 0.15 0.5	Epoxy resin	0.15 0.35
Ethylene glycol 0.93 Freon R22 and 502 (liquid) 0.35 Grain 0.15 0.3 Glass 0.2 0.55 Glycerin 0.98 Rubber 0.15 0.9 Wood, wet 0.6 0.85 Wood, dry 0.1 0.4 Carbon dioxide 0 Air 0 Marble 0.5 Flour 0.05 Melamine resin 0.25 0.55 Milk powder 0.2 Nylon 0.2 0.3 Oil-containing paper 0.25 Paper 0.1 Polyamide 0.3 Polyester resin 0.15 0.5	Crude oil	0.05
Freon R22 and 502 (liquid) 0.35 Grain 0.15 0.3 Glass 0.2 0.55 Glycerin 0.98 Rubber 0.15 0.9 Wood, wet 0.6 0.85 Wood, dry 0.1 0.4 Carbon dioxide 0 Air 0 Marble 0.5 Flour 0.05 Melamine resin 0.25 0.55 Milk powder 0.2 Nylon 0.2 0.3 Oil-containing paper 0.25 Paper 0.1 Polyamide 0.3 Polyester resin 0.15 0.5	Ethanol	0.85
Grain 0.15 0.3 Glass 0.2 0.55 Glycerin 0.98 Rubber 0.15 0.9 Wood, wet 0.6 0.85 Wood, dry 0.1 0.4 Carbon dioxide 0 Air 0 Marble 0.5 Flour 0.05 Melamine resin 0.25 0.55 Milk powder 0.2 Nylon 0.2 0.3 Oil-containing paper 0.25 Paper 0.1 Polyamide 0.3 Polyester resin 0.15 0.5	Ethylene glycol	0.93
Glass 0.2 0.55 Glycerin 0.98 Rubber 0.15 0.9 Wood, wet 0.6 0.85 Wood, dry 0.1 0.4 Carbon dioxide 0 Air 0 Marble 0.5 Flour 0.05 Melamine resin 0.25 0.55 Milk powder 0.2 Nylon 0.2 0.3 Oil-containing paper 0.25 Paper 0.1 Polyamide 0.3 Polyester resin 0.15 0.5	Freon R22 and 502 (liquid)	0.35
Glycerin 0.98 Rubber 0.15 0.9 Wood, wet 0.6 0.85 Wood, dry 0.1 0.4 Carbon dioxide 0 Air 0 Marble 0.5 Flour 0.05 Melamine resin 0.25 0.55 Milk powder 0.2 Nylon 0.2 0.3 Oil-containing paper 0.25 Paper 0.1 Polyamide 0.3 Polyester resin 0.15 0.5	Grain	0.15 0.3
Rubber 0.15 0.9 Wood, wet 0.6 0.85 Wood, dry 0.1 0.4 Carbon dioxide 0 Air 0 Marble 0.5 Flour 0.05 Melamine resin 0.25 0.55 Milk powder 0.2 Nylon 0.2 0.3 Oil-containing paper 0.25 Paper 0.1 Polyamide 0.3 Polyester resin 0.15 0.5	Glass	0.2 0.55
Wood, wet 0.6 0.85 Wood, dry 0.1 0.4 Carbon dioxide 0 Air 0 Marble 0.5 Flour 0.05 Melamine resin 0.25 0.55 Milk powder 0.2 Nylon 0.2 0.3 Oil-containing paper 0.25 Paper 0.1 Polyamide 0.3 Polyester resin 0.15 0.5	Glycerin	0.98
Wood, dry 0.1 0.4 Carbon dioxide 0 Air 0 Marble 0.5 Flour 0.05 Melamine resin 0.25 0.55 Milk powder 0.2 Nylon 0.2 0.3 Oil-containing paper 0.25 Paper 0.1 Polyamide 0.3 Polyester resin 0.15 0.5	Rubber	0.15 0.9
Carbon dioxide 0 Air 0 Marble 0.5 Flour 0.05 Melamine resin 0.25 0.55 Milk powder 0.2 Nylon 0.2 0.3 Oil-containing paper 0.25 Paper 0.1 Polyamide 0.3 Polyester resin 0.15 0.5	Wood, wet	0.6 0.85
Air 0 Marble 0.5 Flour 0.05 Melamine resin 0.25 0.55 Milk powder 0.2 Nylon 0.2 0.3 Oil-containing paper 0.25 Paper 0.1 Polyamide 0.3 Polyester resin 0.15 0.5	Wood, dry	0.1 0.4
Marble 0.5 Flour 0.05 Melamine resin 0.25 0.55 Milk powder 0.2 Nylon 0.2 0.3 Oil-containing paper 0.25 Paper 0.1 Polyamide 0.3 Polyester resin 0.15 0.5	Carbon dioxide	0
Flour 0.05 Melamine resin 0.25 0.55 Milk powder 0.2 Nylon 0.2 0.3 Oil-containing paper 0.25 Paper 0.1 Polyamide 0.3 Polyester resin 0.15 0.5	Air	0
Melamine resin 0.25 0.55 Milk powder 0.2 Nylon 0.2 0.3 Oil-containing paper 0.25 Paper 0.1 Polyamide 0.3 Polyester resin 0.15 0.5	Marble	0.5
Milk powder 0.2 Nylon 0.2 0.3 Oil-containing paper 0.25 Paper 0.1 Polyamide 0.3 Polyester resin 0.15 0.5	Flour	0.05
Nylon 0.2 0.3 Oil-containing paper 0.25 Paper 0.1 Polyamide 0.3 Polyester resin 0.15 0.5	Melamine resin	0.25 0.55
Oil-containing paper 0.25 Paper 0.1 Polyamide 0.3 Polyester resin 0.15 0.5	Milk powder	0.2
Paper 0.1 Polyamide 0.3 Polyester resin 0.15 0.5	Nylon	0.2 0.3
Polyamide 0.3 Polyester resin 0.15 0.5	Oil-containing paper	0.25
Polyester resin 0.15 0.5	Paper	0.1
	Polyamide	0.3
Pressboard 0.1 0.3	Polyester resin	0.15 0.5
	Pressboard	0.1 0.3

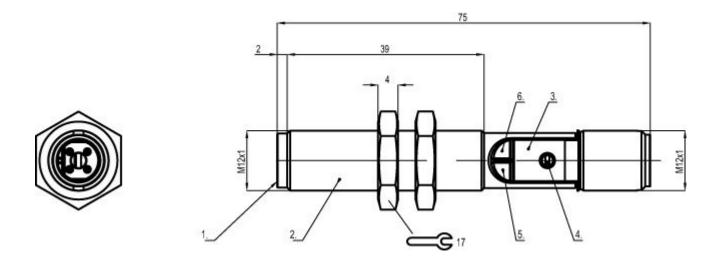


PTFE	0.1
Quartz glass	0.2
Salt	0.35
Sand	0.15 0.3
Water	1
Cement dust	0.25
Sugar	0.15

Classification		
eCl@ss 8.0	27270102	
eCl@ss 9.0	27270102	
ETIM 5.0	EC002715	

Dimensioned drawings

All dimensions in millimeters



- Active surface
- Housing
- Cover
- Potentiometer
- Green LED, operating voltage display Yellow LED, function indicator
- 123456

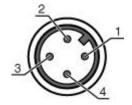
Electrical connection

Connection 1	
Type of connection	Connector
Function	Voltage supply Signal OUT
Thread size	M12
Туре	Male
Material	Plastic
No. of pins	4 -pin

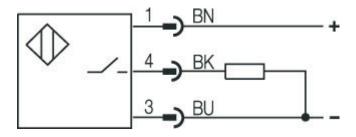


Connection 1	
Encoding	A-coded

Pin	Pin assignment	Conductor color
1	+1030 V DC	Brown
2	n.c.	White
3	GND	Blue
4	OUT	Black



Circuit diagrams



Operation and display

LEDs

LED	Display	Meaning
1	Green, continuous light	Ready
2	Yellow, continuous light	Switching output/switching state

Accessories

Connection technology - Connection cables

Part no.	Designation	Article	Description
50112960	K-D M12A-4P-10m- FAB	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 10,000 mm Sheathing material: FAB
50104570	K-D M12A-4P-2m- FAB	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: FAB



Part no.	Designation	Article	Description
50104572	K-D M12A-4P-5m- FAB	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: FAB
50112961	K-D M12W-4P-10m- FAB	Connection cable	Connection 1: Connector, M12, Angled, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 10,000 mm Sheathing material: FAB
50104571	K-D M12W-4P-2m- FAB	Connection cable	Connection 1: Connector, M12, Angled, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: FAB
50104573	K-D M12W-4P-5m- FAB	Connection cable	Connection 1: Connector, M12, Angled, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: FAB
50130654	KD U-M12-4A- P1-020	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: PUR
50130672	KD U-M12-4A- P1-020-DP	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin Connector, LED: Yes, 1 Piece(s) Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: PUR
50130657	KD U-M12-4A- P1-050	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PUR
50130675	KD U-M12-4A- P1-050-DP	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin Connector, LED: Yes, 1 Piece(s) Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PUR
50130658	KD U-M12-4A- P1-100	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 10,000 mm Sheathing material: PUR
50130676	KD U-M12-4A- P1-100-DP	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin Connector, LED: Yes, 1 Piece(s) Connection 2: Open end Shielded: No Cable length: 10,000 mm Sheathing material: PUR



	Part no.	Designation	Article	Description
W	50130648	KD U-M12-4A- V1-020	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: PVC
W	50130652	KD U-M12-4A- V1-050	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC
W	50130653	KD U-M12-4A- V1-100	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 10,000 mm Sheathing material: PVC
	50132431	KD U-M12-4A- V1-200	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 20,000 mm Sheathing material: PVC
W	50132430	KD U-M12-4A- V1-300	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 30,000 mm Sheathing material: PVC
W	50130692	KD U-M12-4W- P1-020	Connection cable	Connection 1: Connector, M12, Angled, Female, A-coded, 4-pin Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: PUR
W	50130718	KD U-M12-4W- P1-020-DP	Connection cable	Connection 1: Connector, M12, Angled, Female, A-coded, 4 -pin Connector, LED: Yes, 1 Piece(s) Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: PUR
W	50130694	KD U-M12-4W- P1-050	Connection cable	Connection 1: Connector, M12, Angled, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PUR
W	50130720	KD U-M12-4W- P1-050-DP	Connection cable	Connection 1: Connector, M12, Angled, Female, A-coded, 4 -pin Connector, LED: Yes, 1 Piece(s) Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PUR
W	50130695	KD U-M12-4W- P1-100	Connection cable	Connection 1: Connector, M12, Angled, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 10,000 mm Sheathing material: PUR



	Part no.	Designation	Article	Description
W	50130721	KD U-M12-4W- P1-100-DP	Connection cable	Connection 1: Connector, M12, Angled, Female, A-coded, 4-pin Connector, LED: Yes, 1 Piece(s) Connection 2: Open end Shielded: No Cable length: 10,000 mm Sheathing material: PUR
W	50130688	KD U-M12-4W- V1-020	Connection cable	Connection 1: Connector, M12, Angled, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: PVC
W	50130690	KD U-M12-4W- V1-050	Connection cable	Connection 1: Connector, M12, Angled, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC
W	50130691	KD U-M12-4W- V1-100	Connection cable	Connection 1: Connector, M12, Angled, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 10,000 mm Sheathing material: PVC
W	50132641	KD U-M12-4W- V1-200	Connection cable	Connection 1: Connector, M12, Angled, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 20,000 mm Sheathing material: PVC

Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
Q	50113549	BT D12M.5	Mounting bracket	Diameter, inner: 12 mm Design of mounting device: Angle, L-shape Mounting bracket, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Rigid Material: Stainless steel

Mounting technology - Other

Part no.	Designation	Article	Description
50132729	AC D18M-CS	Clamp	Contains: 2x M24 mounting nut Diameter, inner: 18 mm Design of mounting device: Mounting clamp Mounting bracket, at system: Screw type, Through-hole mounting Mounting bracket, at device: Insertable, Clampable with limit stop Type of mounting device: Clampable, With limit stop Material: Metal
50111499	MC 012K	Clamp	Diameter, inner: 12 mm Design of mounting device: Mounting clamp Mounting bracket, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Rigid Material: Plastic



	Part no.	Designation	Article	Description
51	50111500	MC 012K-LS	Clamp	Diameter, inner: 12 mm Design of mounting device: Mounting clamp Mounting bracket, at system: Through-hole mounting Mounting bracket, at device: Clampable with limit stop Type of mounting device: Rigid Material: Plastic

Notes

Observe intended use!

- · This product is not a safety sensor and is not intended as personnel protection.
- · The product may only be put into operation by competent persons.
- · Only use the product in accordance with its intended use.