High performance inductive proximity sensors

DH / DH2 series

3-Line Standard/ Connector / Relay Type

2-Line Standard/ Connector / Relay Type



Extremely resistant to oil mist environments

IP67 protection class, Stable and precise detection in humid, dusty, and complex environments



Excellent locking strength

Sensor housing is sturdy and durable, with high-quality hardware accessories to prevent loosening due to vibration or impact



High-quality IC ensures excellent quality

High-quality IC and stable circuitry provide extremely strong anti-interference ability



SIMEX sp. z o.o.
ul. Wielopole 11
80-556 Gdańsk

(+48) 58 76-20-777
info@simex.pl

More merits

- Standard lengths available, suitable for most applications
- Made of stainless steel or high-quality copper, sturdy and durable
- Customizable for special requirements such as detection distance
- Multiple installation specifications available
- Normally open/closed and NPN/PNP outputs can be selected
- Replacement import, simple and convenient

DH/DH-E/DH-C 3-Line Product List

Specification(detection distance)

● Each product offers multiple selectable detection distances, for example: L1 represents a 1mm detection distance; L6 represents a 6mm detection distance

Order Example: Main model DH-004 – Detection distance L1.2 ⇨ Order model DH-004-L1.2

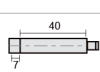
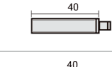
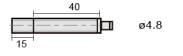
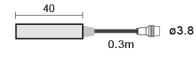
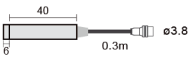
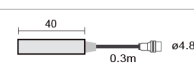
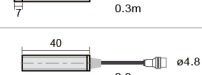
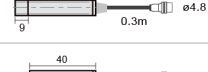
Type		External dimension(mm)		Detection distance list(mm)	Output type	Main model	
						Normally open	Normally closed
3-line standard	ø4	Shielded	25, ø2.9	1.2	NPN	DH-004	DH-004C
					PNP	DH-004P	DH-004CP
	M5*0.5	Shielded	25, ø2.9	1.2	NPN	DH-M005	DH-M005C
					PNP	DH-M005P	DH-M005CP
	M8×P1	Shielded	40, ø3.8	2	NPN	DH-M008	DH-M008C
					PNP	DH-M008P	DH-M008CP
		Non-shielded	40, ø3.8, 6	4	NPN	DH-U008	DH-U008C
					PNP	DH-U008P	DH-U008CP
	M12×P1	Shielded	40, ø4.8	4	NPN	DH-M012	DH-M012C
					PNP	DH-M012P	DH-M012CP
		Non-shielded	40, ø4.8, 7	8	NPN	DH-U012	DH-U012C
					PNP	DH-U012P	DH-U012CP
	M18×P1	Shielded	40, ø4.8	8	NPN	DH-M018	DL-M018C
					PNP	DH-M018P	DH-M018CP
		Non-shielded	40, ø4.8, 9	16	NPN	DH-U018	DH-U018C
					PNP	DH-U018P	DH-U018CP
	M30×P1.5	Shielded	40, ø4.8	15	NPN	DH-M030	DH-M030C
					PNP	DH-M030P	DH-M030CP
		Non-shielded	40, ø4.8, 15	30	NPN	DH-U030	DH-U030C
					PNP	DH-U030P	DH-U030CP

*1. Special requirements can be customized production



DH/DH2

High performance inductive proximity sensors

Type			External dimension(mm)	Detection distance list(mm)	Output type	Main model: Normally open	Main model: Normally closed
3-line connector type	M8×P1	Shielded		2	NPN	DH-EM008	DH-EM008C
					PNP	DH-EM008P	DH-EM008CP
		Non-shielded		4	NPN	DH-EU008	DH-EU008C
					PNP	DH-EU008P	DH-EU008CP
	M12×P1	Shielded		4	NPN	DH-EM012	DH-EM012C
					PNP	DH-EM012P	DH-EM012CP
		Non-shielded		8	NPN	DH-EU012	DH-EU012C
					PNP	DH-EU012P	DH-EU012CP
	M18×P1	Shielded		8	NPN	DH-EM018	DH-EM018C
					PNP	DH-EM018P	DH-EM018CP
		Non-shielded		16	NPN	DH-EU018	DH-EU018C
					PNP	DH-EU018P	DH-EU018CP
	M30×P1.5	Shielded		15	NPN	DH-EM030	DH-EM030C
					PNP	DH-EM030P	DH-EM030CP
		Non-shielded		30	NPN	DH-EU030	DH-EU030C
					PNP	DH-EU030P	DH-EU030CP
3-line relay type	M8×P1	Shielded		2	NPN	DH-CM008	DH-CM008C
					PNP	DH-CM008P	DH-CM008CP
		Non-shielded		4	NPN	DH-CU008	DH-CU008C
					PNP	DH-CU008P	DH-CU008CP
	M12×P1	Shielded		4	NPN	DH-CM012	DH-CM012C
					PNP	DH-CM012P	DH-CM012CP
		Non-shielded		8	NPN	DH-CU012	DH-CU012C
					PNP	DH-CU012P	DH-CU012CP
	M18×P1	Shielded		8	NPN	DH-CM018	DH-CM018C
					PNP	DH-CM018P	DH-CM018CP
		Non-shielded		16	NPN	DH-CU018	DH-CU018C
					PNP	DH-CU018P	DH-CU018CP
	M30×P1.5	Shielded		15	NPN	DH-CM030	DH-CM030C
					PNP	DH-CM030P	DH-CM030CP
		Non-shielded		30	NPN	DH-CU030	DH-CU030C
					PNP	DH-CU030P	DH-CU030CP

*1. Special requirements can be customized production

Fiber Optic Sensors
Photoelectric Sensors
Color Sensors
Laser Sensors
Inductive Proximity Sensors
Precision Contact Sensors
Area/Safety Light Curtain
Laser Scanners
Digital Contact Sensors
Laser Displacement Sensors
Confocal Displacement Sensors
Barcode Scanners
RFID
Infrared Temperature Sensors
Digital Pressure Sensors
Flow Test Sensors
Gate Magnetic Sensors
Ultrasonic Displacement Sensors
Magnetic Scale
Static Eliminators



simex

0607

DH2/DH2-E/DH2-C 2-Line Product List

Specification(detection distance)

● Each product offers multiple selectable detection distances, for example: L1 represents a 1mm detection distance; L6 represents a 6mm detection distance

Order Example: Main model DH2-M008 – Detection distance L2 ⇨ Order model DH2-M008-L2

Type		External dimension(mm)	Detection distance list(mm)	Main model	
				Normally open	Normally closed
2-line standard	M8×P1	Shielded	2	DH2-M008	DH2-M008C
		Non-shielded	4	DH2-U008	DH2-U008C
	M12×P1	Shielded	4	DH2-M012	DH2-M012C
		Non-shielded	8	DH2-U012	DH2-U012C
	M18×P1	Shielded	8	DH2-M018	DH2-M018C
		Non-shielded	16	DH2-U018	DH2-U018C
	M30×P1.5	Shielded	15	DH2-M030	DH2-M030C
		Non-shielded	30	DH2-U030	DH2-U030C
2-line connector type	M8×P1	Shielded	2	DH2-EM008	DH2-EM008C
		Non-shielded	4	DH2-EU008	DH2-EU008C
	M12×P1	Shielded	4	DH2-EM012	DH2-EM012C
		Non-shielded	8	DH2-EU012	DH2-EU012C
	M18×P1	Shielded	8	DH2-EM018	DH2-EM018C
		Non-shielded	16	DH2-EU018	DH2-EU018C
	M30×P1.5	Shielded	15	DH2-EM030	DH2-EM030C
		Non-shielded	30	DH2-EU030	DH2-EU030C
2-line relay type	M8×P1	Shielded	2	DH2-CM008	DH2-CM008C
		Non-shielded	4	DH2-CU008	DH2-CU008C
	M12×P1	Shielded	4	DH2-CM012	DH2-CM012C
		Non-shielded	8	DH2-CU012	DH2-CU012C
	M18×P1	Shielded	8	DH2-CM018	DH2-CM018C
		Non-shielded	16	DH2-CU018	DH2-CU018C
	M30×P1.5	Shielded	15	DH2-CM030	DH2-CM030C
		Non-shielded	30	DH2-CU030	DH2-CU030C

*1. Special requirements can be customized production



DH/DH2 High performance inductive proximity sensors

Specs

DH series 3-line standard type

Main model	DH-00 4□□	DH-M0 05□□	DH-M0 08□□	DH-M0 12□□	DH-M0 18□□	DH-M0 30□□	DH-U0 06□□	DH-U0 08□□	DH-U0 12□□	DH-U0 18□□	DH-U0 30□□
Type	Shielded						Non-shielded				
Detection distance	1.2mm±10%		2mm±10%	4mm±10%	8mm±10%	15mm±10%	4mm±10%	4mm±10%	8mm±10%	16mm±10%	30mm±10%
Set distance	0~0.84mm		0~1.6mm	0~3.2mm	0~6.4mm	0~12mm	0~3.2mm	0~3.2mm	0~6.4mm	0~12.8mm	0~24mm
Standard detection object	5×5×1（mm）		8×8×1（mm）	12×12×1（mm）	24×24×1（mm）	45×45×1（mm）	12×12×1（mm）	12×12×1（mm）	24×24×1（mm）	48×48×1（mm）	90×90×1（mm）
Response frequency	2KHz		1.5KHz	1KHz	0.5KHz	0.25KHz	1KHz	1KHz	0.8KHz	0.4KHz	0.1KHz
Hysteresis range	1%~10% of detection distance		1%~15% of detection distance				1%~15% of detection distance				
Repeat precision	Less than 3% of detection distance		Less than 5% of detection distance				Less than 5% of detection distance				
Power voltage	12~24VDC		10~30VDC				10~30VDC				
Current consumption	＜10mA		＜10mA	＜15mA		＜22mA	＜10mA	＜10mA	＜15mA		＜22mA
Output	-		NPN Output NPN open-collector transistor Load current: ＜100mA Residual voltage: ＜2V (load current of 100mA and wire length of 2 meters) ＜200mA Less than 2.5V(load current of 200mA and wire length of 2 meters)				NPN Output NPN open-collector transistor Load current: ＜100mA Residual voltage: ＜2V (load current of 100mA and wire length of 2 meters) ＜200mA Less than 2.5V(load current of 200mA and wire length of 2 meters)				
Indicator lamp	Amber indicator(lights up when output is ON)										
Circuit protection	Reverse polarity protection, output short-circuit protection, surge absorption										
Ambient temperature	When using: -25℃~+70℃ Storing: -25℃~+70℃										
Relative humidity	When using: 35~95% Storing: 35~95%										
Withstand voltage	500VAC, 50/60Hz 1-minute charging between the overall charging part and the fix fix using		1000VAC, 50/60Hz 1-minute charging between the overall charging part and the housing				1000VAC, 50/60Hz 1min charging between the overall charging part and the housing				
Insulation resistance	>20MΩ（DC500V）charging between the overall charging part and the housing		> 50MΩ (DC500V) charging between the overall charging part and the housing				> 50MΩ (DC500V) charging between the overall charging part and the housing				
Vibration resistance	10 to 55Hz double amplitude 1.5 mm X.Y.Z 2H in all directions										
Shock resistance	Can withstand acceleration of 500m/s² (approx. 50G) in the X, Y, and Z directions three times										
Protection structure	IEC IP67										
Connection method	Standard cable length 2m										
Material	Main unit case: nickel-plated brass, front plug: PBT Rear plug: PC										
Weight	-		Aprrox.50g	Aprrox.95g	Aprrox.115g	Aprrox.190g	Aprrox.45g	Aprrox.50g	Aprrox.95g	Aprrox.115g	Aprrox.190g

DH-E series 3-line connector type

Main model	DH-EM0 08□□	DH-EM0 12□□	DH-EM0 18□□	DH-EM0 30□□	DH-EU0 08□□	DH-EU0 12□□	DH-EU0 18□□	DH-EU0 30□□
Type	Shielded				Non-shielded			
Detection distance	2mm±10%	4mm±10%	8mm±10%	15mm±10%	4mm±10%	8mm±10%	16mm±10%	30mm±10%
Set distance	0~1.6mm	0~3.2mm	0~6.4mm	0~12mm	0~3.2mm	0~6.4mm	0~12.8mm	0~24mm
Standard detection object	8×8×1（mm）	12×12×1（mm）	24×24×1（mm）	45×45×1（mm）	12×12×1（mm）	24×24×1（mm）	48×48×1（mm）	90×90×1（mm）
Response frequency	1.5KHz	1KHz	0.5KHz	0.25KHz	1KHz	0.8KHz	0.4KHz	0.1KHz
Hysteresis range	1%~15% of detection distance							
Repeat precision	Less than 5% of detection distance							
Power voltage	10~30VDC							
Current consumption	＜10mA	＜15mA	＜22mA		＜10mA	＜15mA		＜22mA
Output	NPN output NPN open-collector transistor Load current: ＜100mA Residual voltage: ＜2V (load current of 100mA and wire length of 2 meters) ＜200mA less than 2.5V (load current of 200mA and wire length of 2 meters)							
Indicator lamp	Amber indicator (lights up when output is ON)							
Circuit protection	Reverse polarity protection, output short-circuit protection, surge absorption							
Ambient temperature	When using: -25℃~+70℃ Storing: -25℃~+70℃							
Relative humidity	When using: 35~95% Storing: 35~95%							
Withstand voltage	1000V AC, 50/60Hz 1-minute charging between the overall charging part and the housing							
Insulation resistance	＞50MΩ (DC500V) charging between the overall charging part and the housing							
Vibration resistance	10 to 55Hz double amplitude 1.5 mm X.Y.Z 2H in all directions							
Shock resistance	Can withstand acceleration of 500m/s² (approx. 50G) in the X, Y, and Z directions three times							
Protection structure	IEC IP67							
Connection method	Connector M8-3Pin	Connector M12-4Pin			Connector M8-3Pin	Connector M12-4Pin		
Material	Main unit case: nickel-plated brass(except for stainless steel for the SN08 housing), front plug: PBT Rear plug: PC							
Weight	Aprrox.20g	Aprrox.30g	Aprrox.60g	Aprrox.130g	Aprrox.20g	Aprrox.30g	Aprrox.60g	Aprrox.130g



simex

0609

Specs

DH-C series 3-line relay type

Main model	DH-CM 008□□	DH-CM 012□□	DH-CM 018□□	DH-CM 030□□	DH-CU 008□□	DH-CU 012□□	DH-CU 018□□	DH-CU 030□□
Type	Shielded				Non-shielded			
Detection distance	2mm±10%	4mm±10%	8mm±10%	15mm±10%	4mm±10%	8mm±10%	16mm±10%	30mm±10%
Set distance	0~1.2mm	0~1.6m	0~4mm	0~8mm	0~1.6mm	0~3.2mm	0~6.4mm	0~12mm
Standard detection object	8×8×1（mm）	12×12×1（mm）	18×18×1（mm）	30×30×1（mm）	8×8×1（mm）	12×12×1（mm）	24×24×1（mm）	45×45×1（mm）
Response frequency	2KHz	1.5KHz	1KHz	0.5KHz	1KHz	0.8KHz	0.4KHz	0.1KHz
Hysteresis range	1%~15% of detection distance							
Repeat precision	Less than 5% of detection distance							
Power voltage	10~30VDC							
Output type	NO/NC							
Load current	＜100mA							
Residual voltage	＜5V							
Indicator lamp	Amber light(lights up when output is ON)							
Circuit protection	Reverse polarity protection, output short-circuit protection, surge absorption							
Ambient temperature	When using: -25℃~+70℃ Storing: -25℃~+70℃							
Relative humidity	When using: 35~95% Storing: 35~95%							
Withstand voltage	1000V AC, 50/60Hz 1minchanging between the overall charging part and the housing							
Insulation resistance	＞50MΩ（DC500V）charging between the overall charging part and the housing							
Vibration resistance	10 to 55Hz double amplitude 1.5 mm X.Y.Z 2H in all directions							
Shock resistance	Can withstand acceleration of 500m/s² (approx. 50G) in the X, Y, and Z directions three times							
Protection structure	IEC IP67							
Connection method	Connector M8-3Pin	Connector M12-4Pin			Connector M8-3Pin	Connector M12-4Pin		
Material	Main unit case: nickel-plated brass, Front plug：PBT Rear plug：PC							
Weight	Aprrox.20g	Aprrox.30g	Aprrox.60g	Aprrox.130g	Aprrox.20g	Aprrox.30g	Aprrox.60g	Aprrox.130g

DH2 series 2-line standard type

Main model	DH2-M0 08□□	DH2-M0 12□□	DH2-M0 18□□	DH2-M0 30□□	DH2-U0 08□□	DH2-U0 12□□	DH2-U0 18□□	DH2-U0 30□□
Type	Shielded				Non-shielded			
Detection distance	2mm±10%	4mm±10%	8mm±10%	15mm±10%	4mm±10%	8mm±10%	16mm±10%	30mm±10%
Set distance	0~1.2mm	0~1.6m	0~4mm	0~8mm	0~1.6mm	0~3.2mm	0~6.4mm	0~12mm
Standard detection object	8×8×1（mm）	12×12×1（mm）	18×18×1（mm）	30×30×1（mm）	8×8×1（mm）	12×12×1（mm）	24×24×1（mm）	45×45×1（mm）
Response frequency	2KHz	1.5KHz	1KHz	0.5KHz	1KHz	0.8KHz	0.4KHz	0.1KHz
Hysteresis range	1%~15% of detection distance							
Repeat precision	Less than 5% of detection distance							
Power voltage	10~30VDC							
Output type	NO/NC							
Load current	＜100mA							
Residual voltage	＜5V							
Indicator lamp	Amber light（lights up when output is ON）							
Circuit protection	Reverse polarity protection, output short-circuit protection, surge absorption							
Ambient temperature	When using: -25℃~+70℃ Storing: -25℃~+70℃							
Relative humidity	When using: 35~95% Storing: 35~95%							
Withstand voltage	1000V AC, 50/60Hz 1minchanging between the overall charging part and the housing							
Insulation resistance	＞50MΩ（DC500V）charging between the overall charging part and the housing							
Vibration resistance	10 to 55Hz double amplitude 1.5 mm X.Y.Z 2H in all directions							
Shock resistance	Can withstand acceleration of 500m/s² (approx. 50G) in the X, Y, and Z directions three times							
Protection structure	IEC IP67							
Connection method	Standard cable length 2m							
Material	Main unit case: nickel-plated brass, front plug: PBT Rear plug: PC							
Weight	Aprrox.20g	Aprrox.30g	Aprrox.60g	Aprrox.130g	Aprrox.20g	Aprrox.30g	Aprrox.60g	Aprrox.130g



DH/DH2 High performance inductive proximity sensors

Specs

DH2-E series 2-line connector type

Main model	DH2-EM 008□□	DH2-EM 012□□	DH2-EM 018□□	DH2-EM 030□□	DH2-EU 008□□	DH2-EU 012□□	DH2-EU 018□□	DH2-EU 030□□
Type	Shielded				Non-shielded			
Detection distance	2mm±10%	4mm±10%	8mm±10%	15mm±10%	4mm±10%	8mm±10%	16mm±10%	30mm±10%
Set detection	0~1.2mm	0~1.6m	0~4mm	0~8mm	0~1.6mm	0~3.2mm	0~6.4mm	0~12mm
Standard detection object	8×8×1（mm）	12×12×1（mm）	18×18×1（mm）	30×30×1（mm）	8×8×1（mm）	12×12×1（mm）	24×24×1（mm）	45×45×1（mm）
Response frequency	2KHz	1.5KHz	1KHz	0.5KHz	1KHz	0.8KHz	0.4KHz	0.1KHz
Hysteresis range	1%~15% of detection distance							
Repeat precision	Less than 5% of detection distance							
Power voltage	10~30VDC							
Output type	NO/NC							
Load current	＜100mA							
Residual voltage	＜5V							
Indicator lamp	Amber light（Lights up when output is ON）							
Circuit protection	Reverse polarity protection, output short-circuit protection, surge absorption							
Ambient temperature	When using: -25℃~+70℃ Storing: -25℃~+70℃							
Relative humidity	When using: 35~95% Storing: 35~95%							
Withstand voltage	1000V AC, 50/60Hz 1mincharging between the overall charging part and the housing							
Insulation resistance	＞50MΩ（DC500V）charging between the overall charging part and the housing							
Vibration resistance	10 to 55Hz double amplitude 1.5 mm X.Y.Z 2H in all directions							
Shock resistance	Can withstand acceleration of 500m/s² (Approx. 50G) in the X, Y, and Z directions three times							
Protection structure	IEC IP67							
Connection method	Connector M8-3Pin	Connector M12-4Pin			Connector M8-3Pin	Connector M12-4Pin		
Material	Main unit case: nickel-plated brass, Front plug: PBT Rear plug: PC							
Weight	Aprrox.20g	Aprrox.30g	Aprrox.60g	Aprrox.130g	Aprrox.20g	Aprrox.30g	Aprrox.60g	Aprrox.130g

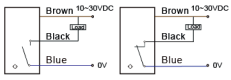
DH2-C series 2-line relay type

Main model	DH2-CM 008□□	DH2-CM 012□□	DH2-CM 018□□	DH2-CM 030□□	DH2-CU 008□□	DH2-CU 012□□	DH2-CU 018□□	DH2-CU 030□□
Type	Shielded				Non-shielded			
Detection distance	2mm±10%	4mm±10%	8mm±10%	15mm±10%	4mm±10%	8mm±10%	16mm±10%	30mm±10%
Set detection	0~1.2mm	0~1.6m	0~4mm	0~8mm	0~1.6mm	0~3.2mm	0~6.4mm	0~12mm
Standard detection object	8×8×1（mm）	12×12×1（mm）	18×18×1（mm）	30×30×1（mm）	8×8×1（mm）	12×12×1（mm）	24×24×1（mm）	45×45×1（mm）
Response frequency	2KHz	1.5KHz	1KHz	0.5KHz	1KHz	0.8KHz	0.4KHz	0.1KHz
Hysteresis range	1%~15% of detection distance							
Repeat precision	Less than 5% of detection distance							
Power voltage	10~30VDC							
Output type	NO/NC							
Load current	＜100mA							
Residual voltage	＜5V							
Indicator lamp	Amber light（Lights up when output is ON）							
Circuit protection	Reverse polarity protection, output short-circuit protection, surge absorption							
Ambient temperature	When using: -25℃~+70℃ Storing: -25℃~+70℃							
Relative humidity	When using: 35~95% Storing: 35~95%							
Withstand voltage	1000V AC, 50/60Hz 1mincharging between the overall charging part and the housing							
Insulation resistance	＞50MΩ（DC500V）charging between the overall charging part and the housing							
Vibration resistance	10 to 55Hz double amplitude 1.5 mm X.Y.Z 2H in all directions							
Shock resistance	Can withstand acceleration of 500m/s² (Approx. 50G) in the X, Y, and Z directions three times							
Protection structure	IEC IP67							
Connection method	Connector M8-3Pin	Connector M12-4Pin			Connector M8-3Pin	Connector M12-4Pin		
Cable length	0.3m							
Material	Main unit case: nickel-plated brass, front plug: PBT Rear plug: PC							
Weight	Aprrox.20g	Aprrox.30g	Aprrox.60g	Aprrox.130g	Aprrox.20g	Aprrox.30g	Aprrox.60g	Aprrox.130g

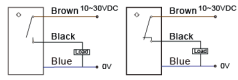
I/O Circuit Connection Diagram

Lead type normally open/normally closed

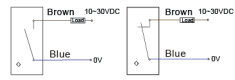
NPN 3-line DC



PNP 3-line DC



2-line DC





simex

Quick connect cables
OW-DH series


OW-DH-012ML-04


OW-DH-008ML-03


OW-DH-012M-04


OW-DH-008M-03

Specs

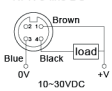
Main model	OW-DH-008M-03	OW-DH-008ML-03	OW-DH-012M-04	OW-DH-012ML-04
Connector type	Pico style M8		Euro style M12	
Material	PVC			
Rated current	1.5A			
Rated voltage	60 VAC/ 75 VDC			
O-Ring	Fluororubber			
Safety nut fixing	Steel nickel plating			
Protection level	IP67			
Contact resistance	≤5MΩ			
Insulation resistance	> 10^8 Ω			
Conductor specification	0.14mm²			
Length	2m			

*1, Special requirements can be customized production

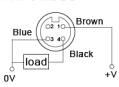
Connector Schematic

Plug-in normally open type

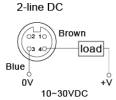
NPN 3-line DC



PNP 3-line DC

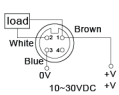


2-line DC

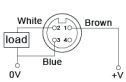


Plug-in normally closed type

NPN 3-line DC



PNP 3-line DC



2-line DC

