

## WL40 PLASTIC RECTANGULAR SERIES

## ARTICLE PROPERTIES

<b>SENSOR TYPE</b>	Inductive sensor	<b>CONNECTION TYPES</b> ( <i>see table</i> )	
<b>SIZE</b>	40 x 40 x 115 mm	• terminals	for cables with wire cross-section up to 2.5 mm <sup>2</sup> , cable gland M20x1.5
<b>RATED OPERATING DISTANCE</b>	<i>see table</i>		
<b>NUMBER OF CONDUCTORS</b>	2-wire / 3-wire / 4-wire ( <i>see table</i> )		

## MECHANICAL DATA

<b>MOUNTING</b>	flush/non-flush ( <i>see table</i> )
<b>HOUSING</b>	rectangular
<b>MATERIAL HOUSING</b>	PBT
<b>MATERIAL SENSING SURFACE</b>	PBT
<b>TIGHTENING TORQUE LOCKING</b>	1.8 Nm
<b>STANDARD TEST</b>	FE360
<b>ATTENUATION COEFFICIENT</b>	St37 = 1, V2A = 0.7, Al = 0.3

## ELECTRICAL DATA

<b>OPERATING VOLTAGE</b>	DC (6L): 10 ... 30 V DC DC (9L): 10 ... 60 V DC AC/DC: 20 ... 250 V AC/DC
<b>RATED OPERATING CURRENT</b>	2-wire DC: ≤ 100 mA 3-wire: ≤ 200 mA 4-wire: ≤ 200 mA
<b>SWITCHING FREQUENCY</b>	<i>see table</i>
<b>SWITCHING OUTPUT</b>	<i>see table</i>
<b>FUNCTION INDICATOR</b>	yellow LED
<b>HYSTERESIS</b>	3 ... 15 %
<b>TEMPERATURE DRIFT</b>	±10 %
<b>SHORT-CIRCUIT PROTECTION</b>	yes
<b>OVERLOAD RESISTANCE</b>	yes
<b>REVERSE POLARITY PROTECTION</b>	yes

## ENVIRONMENTAL CONDITIONS

<b>PROTECTION CLASS</b>	IP67	<b>VIBRATION RESISTANCE (EN 60068-2-27)</b>	55 Hz, 1 mm
<b>AMBIENT TEMPERATURE</b>	-25 ... 70 °C	<b>SHOCK RESISTANCE (EN 60068-2-6)</b>	30g/11 ms

## STANDARDS AND DIRECTIVES

<b>LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR</b>	DIN EN IEC 60947-5-2:2021-04
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## APPROVALS



## WL40 PLASTIC RECTANGULAR SERIES

## DC 2-WIRE OUTPUT TERMINALS

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi15-WL40-OD6L-Q	flush	15 mm	DC NO (WD1)	100 Hz	see Fig. 1
Fi15-WL40-CD6L-Q	flush	15 mm	DC NC (WD2)	100 Hz	see Fig. 1
Ni20-WL40-OD6L-Q	non-flush	20 mm	DC NO (WD1)	50 Hz	see Fig. 1
Ni20-WL40-CD6L-Q	non-flush	20 mm	DC NC (WD2)	50 Hz	see Fig. 1
Fi25-WL40-OD6L-Q	flush	25 mm	DC NO (WD1)	100 Hz	see Fig. 1
Fi25-WL40-CD6L-Q	flush	25 mm	DC NC (WD2)	100 Hz	see Fig. 1
Ni40-WL40-OD6L-Q	non-flush	40 mm	DC NO (WD1)	50 Hz	see Fig. 1
Ni40-WL40-CD6L-Q	non-flush	40 mm	DC NC (WD2)	50 Hz	see Fig. 1

## DC 2-WIRE OUTPUT TERMINALS

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi15-WL40-OD9L-Q	flush	15 mm	DC NO (WD1)	100 Hz	see Fig. 1
Fi15-WL40-CD9L-Q	flush	15 mm	DC NC (WD2)	100 Hz	see Fig. 1
Ni20-WL40-OD9L-Q	non-flush	20 mm	DC NO (WD1)	50 Hz	see Fig. 1
Ni20-WL40-CD9L-Q	non-flush	20 mm	DC NC (WD2)	50 Hz	see Fig. 1
Fi25-WL40-OD9L-Q	flush	25 mm	DC NO (WD1)	100 Hz	see Fig. 1
Fi25-WL40-CD9L-Q	flush	25 mm	DC NC (WD2)	100 Hz	see Fig. 1
Ni40-WL40-OD9L-Q	non-flush	40 mm	DC NO (WD1)	50 Hz	see Fig. 1
Ni40-WL40-CD9L-Q	non-flush	40 mm	DC NC (WD2)	50 Hz	see Fig. 1

## AC/DC 2-WIRE OUTPUT TERMINALS

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi15-WL40-OA41L-Q	flush	15 mm	AC/DC NO (WD5)	20 Hz	see Fig. 1
Fi15-WL40-CA41L-Q	flush	15 mm	AC/DC NC (WD6)	20 Hz	see Fig. 1
Ni20-WL40-OA41L-Q	non-flush	20 mm	AC/DC NO (WD5)	20 Hz	see Fig. 1
Ni20-WL40-CA41L-Q	non-flush	20 mm	AC/DC NC (WD6)	20 Hz	see Fig. 1
Fi25-WL40-OA41L-Q	flush	25 mm	AC/DC NO (WD5)	20 Hz	see Fig. 1
Fi25-WL40-CA41L-Q	flush	25 mm	AC/DC NC (WD6)	20 Hz	see Fig. 1
Ni40-WL40-OA41L-Q	non-flush	40 mm	AC/DC NO (WD5)	20 Hz	see Fig. 1
Ni40-WL40-CA41L-Q	non-flush	40 mm	AC/DC NC (WD6)	20 Hz	see Fig. 1

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## DC 3-WIRE OUTPUT TERMINALS

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi15-WL40-OP6L-Q	flush	15 mm	PNP NO (WD7)	100 Hz	see Fig. 1
Fi15-WL40-ON6L-Q	flush	15 mm	NPN NO (WD8)	100 Hz	see Fig. 1
Fi15-WL40-CP6L-Q	flush	15 mm	PNP NC (WD9)	100 Hz	see Fig. 1
Fi15-WL40-CN6L-Q	flush	15 mm	NPN NC (WD10)	100 Hz	see Fig. 1
Ni20-WL40-OP6L-Q	non-flush	20 mm	PNP NO (WD7)	50 Hz	see Fig. 1
Ni20-WL40-ON6L-Q	non-flush	20 mm	NPN NO (WD8)	50 Hz	see Fig. 1
Ni20-WL40-CP6L-Q	non-flush	20 mm	PNP NC (WD9)	50 Hz	see Fig. 1
Ni20-WL40-CN6L-Q	non-flush	20 mm	NPN NC (WD10)	50 Hz	see Fig. 1
Fi25-WL40-OP6L-Q	flush	25 mm	PNP NO (WD7)	100 Hz	see Fig. 1
Fi25-WL40-ON6L-Q	flush	25 mm	NPN NO (WD8)	100 Hz	see Fig. 1
Fi25-WL40-CP6L-Q	flush	25 mm	PNP NC (WD9)	100 Hz	see Fig. 1
Fi25-WL40-CN6L-Q	flush	25 mm	NPN NC (WD10)	100 Hz	see Fig. 1
Ni40-WL40-OP6L-Q	non-flush	40 mm	PNP NO (WD7)	50 Hz	see Fig. 1
Ni40-WL40-ON6L-Q	non-flush	40 mm	NPN NO (WD8)	50 Hz	see Fig. 1
Ni40-WL40-CP6L-Q	non-flush	40 mm	PNP NC (WD9)	50 Hz	see Fig. 1
Ni40-WL40-CN6L-Q	non-flush	40 mm	NPN NC (WD10)	50 Hz	see Fig. 1

## AC/DC 4-WIRE OUTPUT TERMINALS

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi15-WL40-VA41L-Q	flush	15 mm	AC/DC NO+NC (WD13)	20 Hz	see Fig. 1
Ni20-WL40-VA41L-Q	non-flush	20 mm	AC/DC NO+NC (WD13)	20 Hz	see Fig. 1
Fi25-WL40-VA41L-Q	flush	25 mm	AC/DC NO+NC (WD13)	20 Hz	see Fig. 1
Ni40-WL40-VA41L-Q	non-flush	40 mm	AC/DC NO+NC (WD13)	20 Hz	see Fig. 1

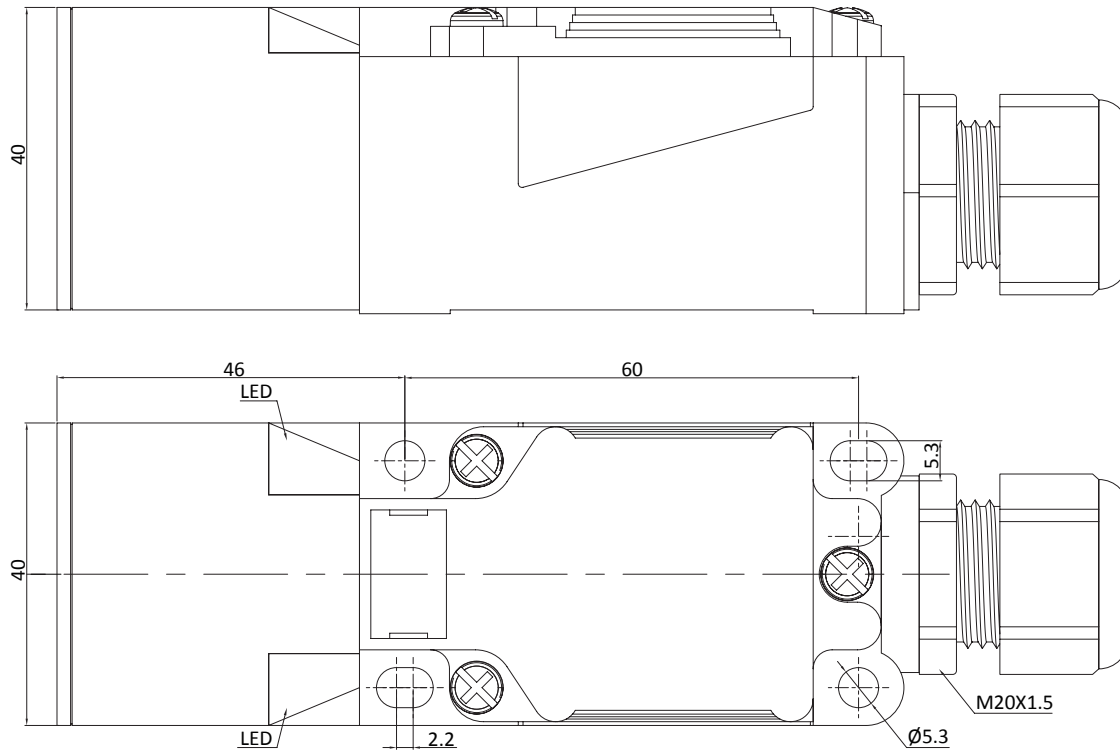
## DC 4-WIRE OUTPUT TERMINALS

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi15-WL40-BP6L-Q	flush	15 mm	PNP NO+NC (WD11)	100 Hz	see Fig. 1
Fi15-WL40-BN6L-Q	flush	15 mm	NPN NO+NC (WD12)	100 Hz	see Fig. 1
Ni20-WL40-BP6L-Q	non-flush	20 mm	PNP NO+NC (WD11)	50 Hz	see Fig. 1
Ni20-WL40-BN6L-Q	non-flush	20 mm	NPN NO+NC (WD12)	50 Hz	see Fig. 1
Fi25-WL40-BP6L-Q	flush	25 mm	PNP NO+NC (WD11)	100 Hz	see Fig. 1
Fi25-WL40-BN6L-Q	flush	25 mm	NPN NO+NC (WD12)	100 Hz	see Fig. 1
Ni40-WL40-BP6L-Q	non-flush	40 mm	PNP NO+NC (WD11)	50 Hz	see Fig. 1
Ni40-WL40-BN6L-Q	non-flush	40 mm	NPN NO+NC (WD12)	50 Hz	see Fig. 1

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DIMENSIONS

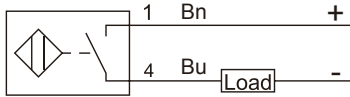
Fig. 1 Inductive sensor with terminals (flush/non-flush)



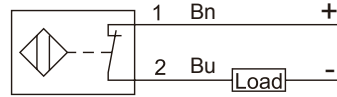
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WIRING DIAGRAMS (Note: 1 / 2 / 3 / 4 connector and terminals pin number Bn / Bu / Wh / Bk cable color)

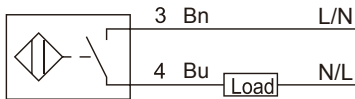
**WD1 DC 2-wire NO**



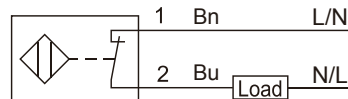
**WD2 DC 2-wire NC**



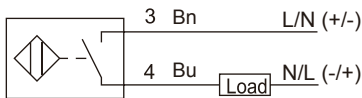
**WD3 AC 2-wire NO**



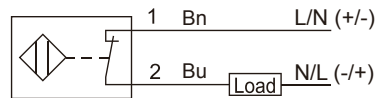
**WD4 AC 2-wire NC**



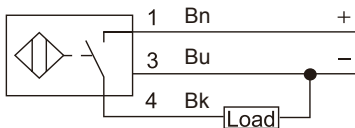
**WD5 AC / DC 2-wire NO**



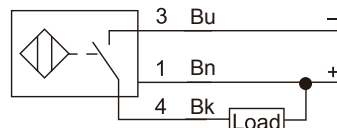
**WD6 AC / DC 2-wire NC**



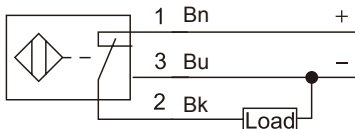
**WD7 DC 3-wire PNP NO**



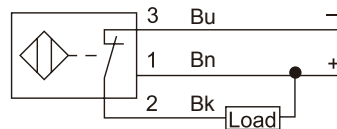
**WD8 DC 3-wire NPN NO**



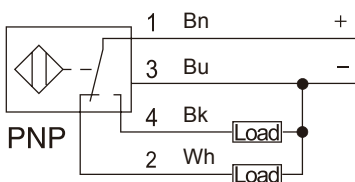
**WD9 DC 3-wire PNP NC**



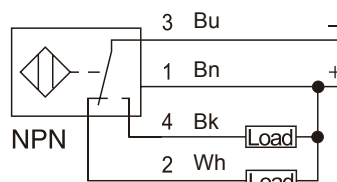
**WD10 DC 3-wire NPN NC**



**WD11 DC 4-wire PNP NO + NC**



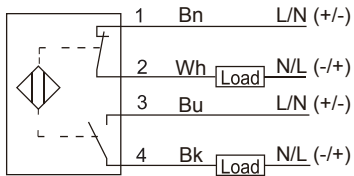
**WD12 DC 4-wire NPN NO + NC**



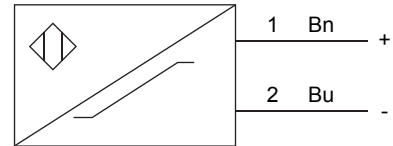
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WIRING DIAGRAMS (Note: 1 / 2 / 3 / 4 connector and terminals pin number Bn / Bu / Wh / Bk cable color)

**WD13 AC/DC 4-wire NO+NC**



**WD14 NAMUR 2-wire NC**



**WD15 DC 4-wire 0-10V+0-20mA**

