

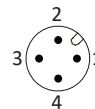
W40 PLASTIC RECTANGULAR SERIES

ARTICLE PROPERTIES

SENSOR TYPE	Inductive sensor
SIZE	40 x 40 x 66 mm
RATED OPERATING DISTANCE	See table
NUMBER OF CONDUCTORS	2-wire / 3-wire / 4-wire (see table)

CONNECTION TYPES (see table)

- M12 connector, A-coded



MECHANICAL DATA

MOUNTING	Flush / non-flush (see table)
HOUSING	Rectangular
MATERIAL HOUSING	PBT
MATERIAL SENSING SURFACE	PBT
TIGHTENING TORQUE LOCKING	1.8 N·m
STANDARD TEST	FE360
ATTENUATION COEFFICIENT	St37 = 1, V2A = 0.7, Al = 0.3

ELECTRICAL DATA

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

ENVIRONMENTAL CONDITIONS

PROTECTION CLASS	IP67	VIBRATION RESISTANCE (EN 60068-2-6)	10 ... 55 Hz, 1 mm
AMBIENT TEMPERATURE	-25 ... +70 °C	SHOCK RESISTANCE (EN 60068-2-27)	30 g, 11 ms

STANDARDS AND DIRECTIVES

EMC DIRECTIVE 2014/30/EU	EN IEC 60947-5-2
ROHS DIRECTIVE 2011/65/EU	EN IEC 63000

APPROVALS



W40 PLASTIC RECTANGULAR SERIES

DC 2-WIRE OUTPUT M12 CONNECTOR

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi20-W40-OD6L-Q12	flush	20 mm	DC NO (WD1)	100 Hz	see Fig. 1
Fi20-W40-CD6L-Q12	flush	20 mm	DC NC (WD2)	100 Hz	see Fig. 1
Ni30-W40-OD6L-Q12	non-flush	30 mm	DC NO (WD1)	50 Hz	see Fig. 1
Ni30-W40-CD6L-Q12	non-flush	30 mm	DC NC (WD2)	50 Hz	see Fig. 1
Fi25-W40-OD6L-Q12	flush	25 mm	DC NO (WD1)	100 Hz	see Fig. 1
Fi25-W40-CD6L-Q12	flush	25 mm	DC NC (WD2)	100 Hz	see Fig. 1
Ni40-W40-OD6L-Q12	non-flush	40 mm	DC NO (WD1)	50 Hz	see Fig. 1
Ni40-W40-CD6L-Q12	non-flush	40 mm	DC NC (WD2)	50 Hz	see Fig. 1

DC 2-WIRE OUTPUT M12 CONNECTOR

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi20-W40-OD9L-Q12	flush	20 mm	DC NO (WD1)	100 Hz	see Fig. 1
Fi20-W40-CD9L-Q12	flush	20 mm	DC NC (WD2)	100 Hz	see Fig. 1
Ni30-W40-OD9L-Q12	non-flush	30 mm	DC NO (WD1)	50 Hz	see Fig. 1
Ni30-W40-CD9L-Q12	non-flush	30 mm	DC NC (WD2)	50 Hz	see Fig. 1
Fi25-W40-OD9L-Q12	flush	25 mm	DC NO (WD1)	100 Hz	see Fig. 1
Fi25-W40-CD9L-Q12	flush	25 mm	DC NC (WD2)	100 Hz	see Fig. 1
Ni40-W40-OD9L-Q12	non-flush	40 mm	DC NO (WD1)	50 Hz	see Fig. 1
Ni40-W40-CD9L-Q12	non-flush	40 mm	DC NC (WD2)	50 Hz	see Fig. 1

AC/DC 2-WIRE OUTPUT M12 CONNECTOR

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi20-W40-OA41L-Q12	flush	20 mm	AC/DC NO (WD5)	20 Hz	see Fig. 1
Ni20-W40-CA41L-Q12	flush	20 mm	AC/DC NC (WD6)	20 Hz	see Fig. 1
Ni30-W40-OA41L-Q12	non-flush	30 mm	AC/DC NO (WD5)	20 Hz	see Fig. 1
Ni30-W40-CA41L-Q12	non-flush	30 mm	AC/DC NC (WD6)	20 Hz	see Fig. 1
Fi25-W40-OA41L-Q12	flush	25 mm	AC/DC NO (WD5)	20 Hz	see Fig. 1
Fi25-W40-CA41L-Q12	flush	25 mm	AC/DC NC (WD6)	20 Hz	see Fig. 1
Ni40-W40-OA41L-Q12	non-flush	40 mm	AC/DC NO (WD5)	20 Hz	see Fig. 1
Ni40-W40-CA41L-Q12	non-flush	40 mm	AC/DC NC (WD6)	20 Hz	see Fig. 1

W40 PLASTIC RECTANGULAR SERIES

DC 3-WIRE OUTPUT M12 CONNECTOR

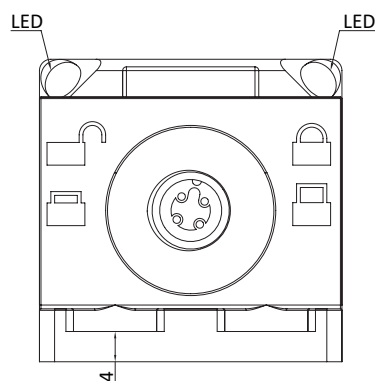
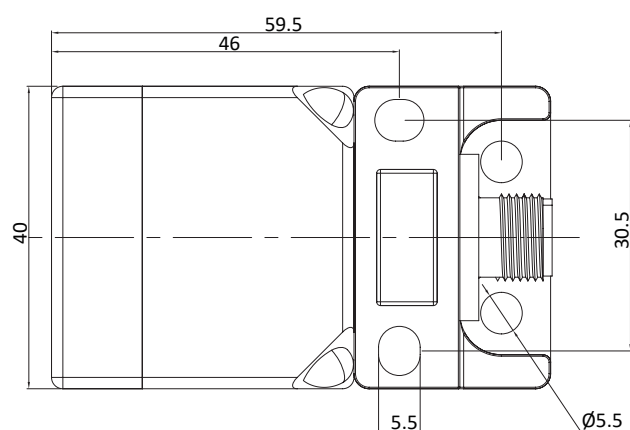
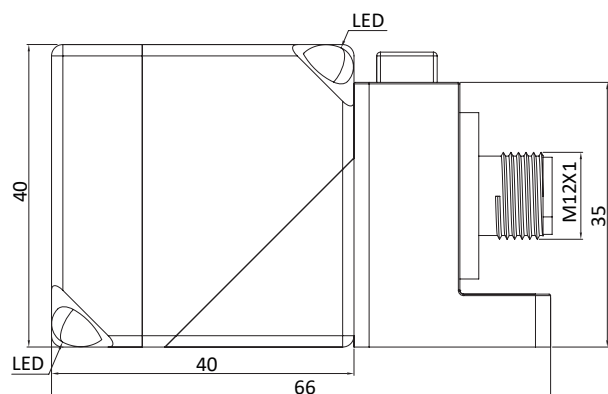
Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi20-W40-OP6L-Q12	flush	20 mm	PNP NO (WD7)	100 Hz	see Fig. 1
Fi20-W40-ON6L-Q12	flush	20 mm	NPN NO (WD8)	100 Hz	see Fig. 1
Fi20-W40-CP6L-Q12	flush	20 mm	PNP NC (WD9)	100 Hz	see Fig. 1
Fi20-W40-CN6L-Q12	flush	20 mm	NPN NC (WD10)	100 Hz	see Fig. 1
Ni30-W40-OP6L-Q12	non-flush	30 mm	PNP NO (WD7)	50 Hz	see Fig. 1
Ni30-W40-ON6L-Q12	non-flush	30 mm	NPN NO (WD8)	50 Hz	see Fig. 1
Ni30-W40-CP6L-Q12	non-flush	30 mm	PNP NC (WD9)	50 Hz	see Fig. 1
Ni30-W40-CN6L-Q12	non-flush	30 mm	NPN NC (WD10)	50 Hz	see Fig. 1
Fi25-W40-OP6L-Q12	flush	25 mm	PNP NO (WD7)	100 Hz	see Fig. 1
Fi25-W40-ON6L-Q12	flush	25 mm	NPN NO (WD8)	100 Hz	see Fig. 1
Fi25-W40-CP6L-Q12	flush	25 mm	PNP NC (WD9)	100 Hz	see Fig. 1
Fi25-W40-CN6L-Q12	flush	25 mm	NPN NC (WD10)	100 Hz	see Fig. 1
Ni40-W40-OP6L-Q12	non-flush	40 mm	PNP NO (WD7)	50 Hz	see Fig. 1
Ni40-W40-ON6L-Q12	non-flush	40 mm	NPN NO (WD8)	50 Hz	see Fig. 1
Ni40-W40-CP6L-Q12	non-flush	40 mm	PNP NC (WD9)	50 Hz	see Fig. 1
Ni40-W40-CN6L-Q12	non-flush	40 mm	NPN NC (WD10)	50 Hz	see Fig. 1

DC 4-WIRE OUTPUT M12 CONNECTOR

Article number	Mounting	Rated operating distance Sn	Switching output (wiring diagram)	Switching frequency	Dimensions
Fi20-W40-BP6L-Q12	flush	20 mm	PNP NO+NC (WD11)	100 Hz	see Fig. 1
Fi20-W40-BN6L-Q12	flush	20 mm	NPN NO+NC (WD12)	100 Hz	see Fig. 1
Ni30-W40-BP6L-Q12	non-flush	30 mm	PNP NO+NC (WD11)	50 Hz	see Fig. 1
Ni30-W40-BN6L-Q12	non-flush	30 mm	NPN NO+NC (WD12)	50 Hz	see Fig. 1
Fi25-W40-BP6L-Q12	flush	25 mm	PNP NO+NC (WD11)	100 Hz	see Fig. 1
Fi25-W40-BN6L-Q12	flush	25 mm	NPN NO+NC (WD12)	100 Hz	see Fig. 1
Ni40-W40-BP6L-Q12	non-flush	40 mm	PNP NO+NC (WD11)	50 Hz	see Fig. 1
Ni40-W40-BN6L-Q12	non-flush	40 mm	NPN NO+NC (WD12)	50 Hz	see Fig. 1

W40 PLASTIC RECTANGULAR SERIES

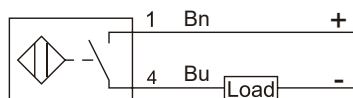
DIMENSIONS

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

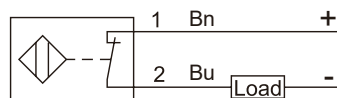
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WIRING DIAGRAMS (Note: 1 / 2 / 3 / 4 connector and terminals pin number Bn / Bu / Wh / Bk cable color)

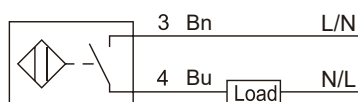
WD1 DC 2-wire NO



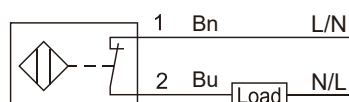
WD2 DC 2-wire NC



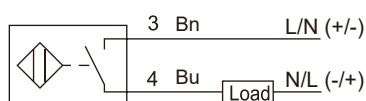
WD3 AC 2-wire NO



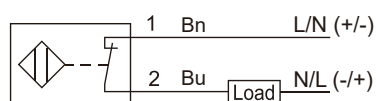
WD4 AC 2-wire NC



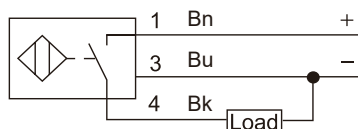
WD5 AC / DC 2-wire NO



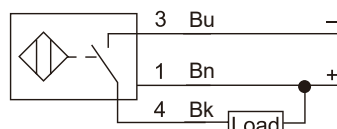
WD6 AC / DC 2-wire NC



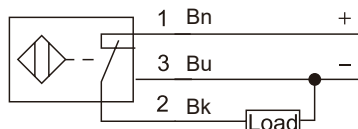
WD7 DC 3-wire PNP NO



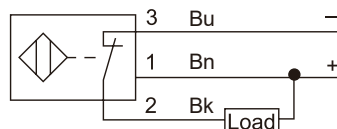
WD8 DC 3-wire NPN NO



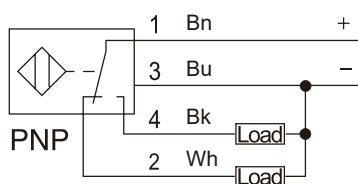
WD9 DC 3-wire PNP NC



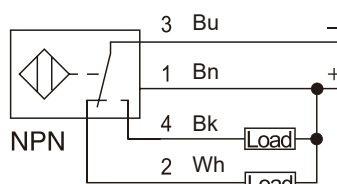
WD10 DC 3-wire NPN NC



WD11 DC 4-wire PNP NO + NC



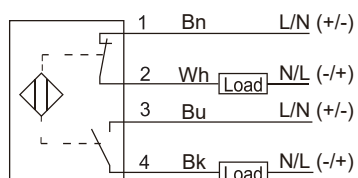
WD12 DC 4-wire NPN NO + NC



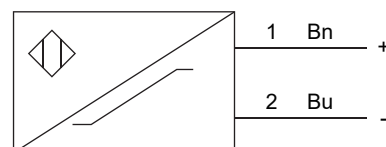
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WIRING DIAGRAMS (Note: 1 / 2 / 3 / 4 connector and terminals pin number Bn / Bu / Wh / Bk cable color)

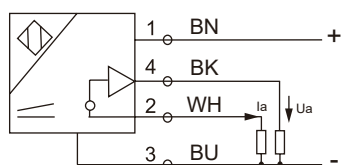
WD13 AC/DC 4-wire NO+NC



WD14 NAMUR 2-wire NC



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



W40 PLASTIC RECTANGULAR SERIES

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