

Sd = 200 mm

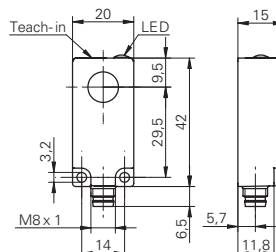
- internal and external Teach-in
- small sonic beam angle



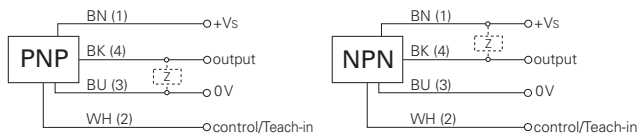
general data	
sensing range sd	10 ... 200 mm
scanning range far limit Sde	30 ... 200 mm
hysteresis typ.	4% Sde
repeatability	< 0,5 mm
temperature drift	< 0,18% Sde/K
adjustment	Teach-in
response time ton	< 10 ms
release time toff	< 10 ms
alignment aid	target display flashing
sonic frequency	380 kHz
output indicator	LED green
electrical data	
voltage supply range +Vs	12 ... 30 VDC
current consumption max.	35 mA
output current	< 200 mA
voltage drop Vd	< 2 VDC
residual ripple	< 10% Vs
short circuit protection	yes
reverse polarity protection	yes
mechanical data	
type	rectangular
housing material	polyester
width / diameter	20 mm
height / length	42 mm
depth	15 mm
connection types	connector M8
ambient conditions	
operating temperature	-10 ... +60 °C
protection class	IP 67
accessories	
connectors	ESW 31A, ESG 32A

order reference	output circuit
UNDK 20N6914/S35A	NPN make function (NO)
UNDK 20N7914/S35A	NPN break function (NC)
UNDK 20P6914/S35A	PNP make function (NO)
UNDK 20P7914/S35A	PNP break function (NC)

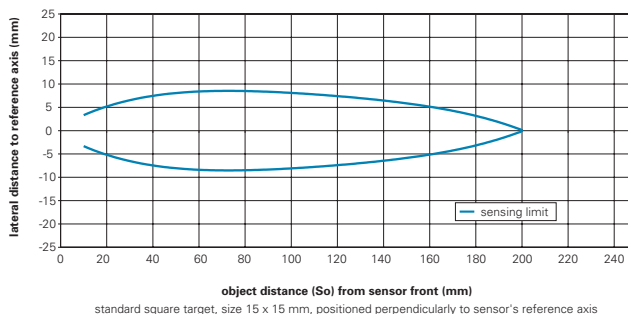
dimension drawing



connection diagrams



typical sonic cone profile





Sd = 400 mm

- internal and external Teach-in
- wide sonic beam angle



UNDK 20 Sd = 400 mm

Ultrasonic proximity sensors

general data

sensing range sd	40 ... 400 mm
scanning range far limit Sde	60 ... 400 mm
hysteresis typ.	4% Sde
repeatability	< 0,5 mm
temperature drift	< 0,18% Sde/K
adjustment	Teach-in
response time ton	< 25 ms
release time toff	< 25 ms
alignment aid	target display flashing
sonic frequency	290 kHz
output indicator	LED green

electrical data

voltage supply range +Vs	12 ... 30 VDC
current consumption max.	35 mA
output current	< 200 mA
voltage drop Vd	< 2 VDC
residual ripple	< 10% Vs
short circuit protection	yes
reverse polarity protection	yes

mechanical data

type	rectangular
housing material	polyester
width / diameter	20 mm
height / length	42 mm
depth	15 mm
connection types	connector M8

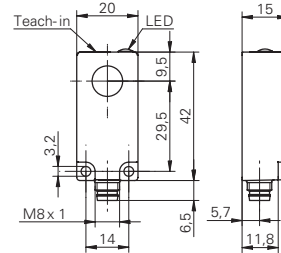
ambient conditions

operating temperature	-10 ... +60 °C
protection class	IP 67

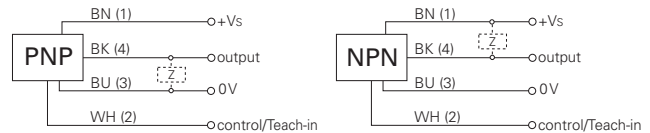
accessories

connectors	ESW 31A, ESG 32A
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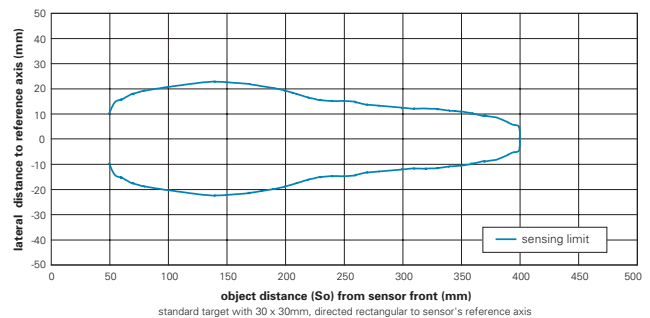
dimension drawing



connection diagrams

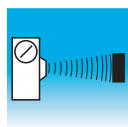


typical sonic cone profile



order reference output circuit

UNDK 20N6912/S35A	NPN make function (NO)
UNDK 20N7912/S35A	NPN break function (NC)
UNDK 20P6912/S35A	PNP make function (NO)
UNDK 20P7912/S35A	PNP break function (NC)



Sd = 1000 mm

- internal and external Teach-in
- long sensing range



general data

sensing range sd	100 ... 1000 mm
scanning range far limit Sde	100 ... 1000 mm
hysteresis typ.	4% Sde
repeatability	< 0,5 mm
temperature drift	< 0,18% Sde/K
adjustment	Teach-in
response time ton	< 50 ms
release time toff	< 50 ms
alignment aid	target display flashing
sonic frequency	240 kHz
output indicator	LED green

electrical data

voltage supply range +Vs	12 ... 30 VDC
current consumption max.	35 mA
output current	< 200 mA
voltage drop Vd	< 2 VDC
residual ripple	< 10% Vs
short circuit protection	yes
reverse polarity protection	yes

mechanical data

type	rectangular
housing material	polyester
width / diameter	20 mm
height / length	42 mm
depth	15 mm
connection types	connector M8

ambient conditions

operating temperature	-10 ... +60 °C
protection class	IP 67

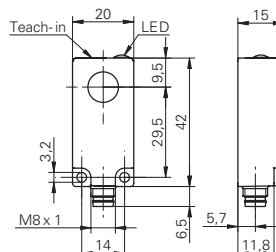
accessories

connectors	ESW 31A, ESG 32A
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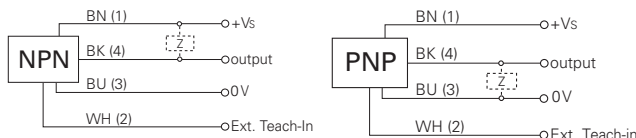
order reference output circuit

UNDK 20N6903/S35A	NPN make function (NO)
UNDK 20N7903/S35A	NPN break function (NC)
UNDK 20P6903/S35A	PNP make function (NO)
UNDK 20P7903/S35A	PNP break function (NC)

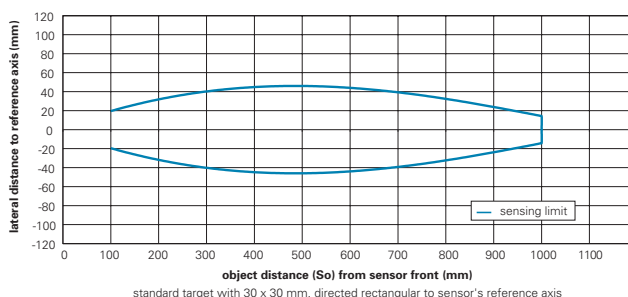
dimension drawing



connection diagrams

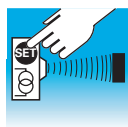


typical sonic cone profile



UNDK 20 Sd = 1000 mm

Ultrasonic proximity sensors



Sd = 200 mm

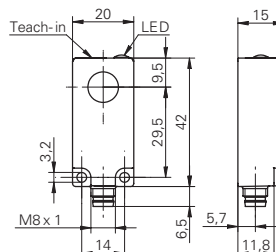
- internal and external Teach-in
- 0 ... 10 V / 4 ... 20 mA invertible
- small sonic beam angle



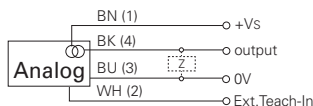
general data	
sensing range sd	20 ... 200 mm
scanning range close limit Sdc	20 ... 200 mm
scanning range far limit Sde	20 ... 200 mm
repeatability	< 0,5 mm
resolution	< 0,3 mm
adjustment	Teach-in
sonic frequency	380 kHz
response time ton	< 30 ms
release time toff	< 30 ms
alignment aid	target display flashing
light indicator	yellow LED / red LED
temperature drift	< 2% of distance to target So
electrical data	
voltage supply range +Vs	15 ... 30 VDC
current consumption max.	35 mA
output current	< 20 mA
residual ripple	< 10% Vs
short circuit protection	yes
reverse polarity protection	yes
voltage output	
output signal	0 ... 10 V / 10 ... 0 V
current output	
output signal	4 ... 20 mA / 20 ... 4 mA
load resistance +Vs max.	< 1100 Ohm
load resistance +Vs min.	< 400 Ohm
mechanical data	
type	rectangular
housing material	polyester
width / diameter	20 mm
height / length	42 mm
depth	15 mm
connection types	connector M8
ambient conditions	
operating temperature	-10 ... +60 °C
protection class	IP 67
accessories	
connectors	ESW 31A, ESG 32A

order reference	output circuit
UNDK 20I6914/S35A	current output
UNDK 20U6914/S35A	voltage output

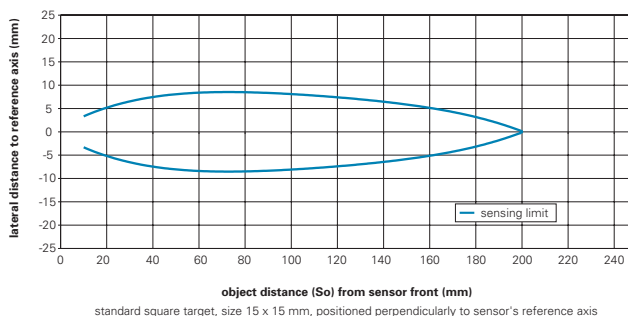
dimension drawing

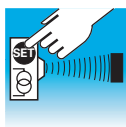


connection diagram



typical sonic cone profile





Sd = 400 mm

- internal and external Teach-in
- 0 ... 10 V / 4 ... 20 mA invertible
- wide sonic beam angle



general data

sensing range sd	60 ... 400 mm
scanning range close limit Sdc	60 ... 400 mm
scanning range far limit Sde	60 ... 400 mm
repeatability	< 0,5 mm
resolution	< 0,3 mm
adjustment	Teach-in
sonic frequency	290 kHz
response time ton	< 60 ms
release time toff	< 60 ms
alignment aid	target display flashing
light indicator	yellow LED / red LED
temperature drift	< 2% of distance to target So

electrical data

voltage supply range +Vs	15 ... 30 VDC
output current	< 20 mA
residual ripple	< 10% Vs
short circuit protection	yes
reverse polarity protection	yes

voltage output

current consumption max.	35 mA
output signal	0 ... 10 V / 10 ... 0 V

current output

current consumption max.	55 mA
output signal	4 ... 20 mA / 20 ... 4 mA
load resistance +Vs max.	< 1100 Ohm
load resistance +Vs min.	< 400 Ohm

mechanical data

type	rectangular
housing material	polyester
width / diameter	20 mm
height / length	42 mm
depth	15 mm
connection types	connector M8

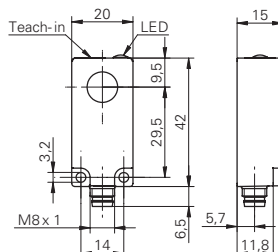
ambient conditions

operating temperature	-10 ... +60 °C
protection class	IP 67

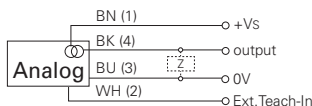
accessories

connectors	ESW 31A, ESG 32A
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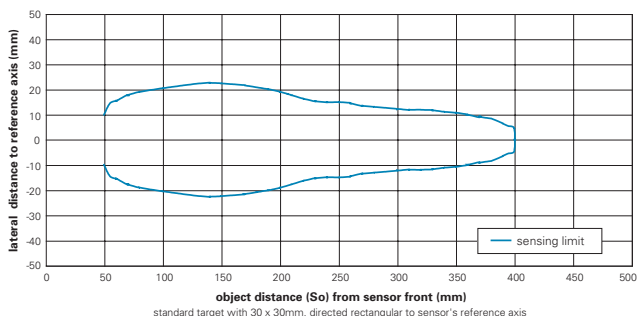
dimension drawing



connection diagram



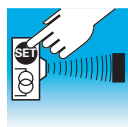
typical sonic cone profile



order reference output circuit

UNDK 20I6912/S35A	current output
UNDK 20U6912/S35A	voltage output

UNDK 20 Sd = 400 mm Ultrasonic analog sensors



Sd = 1000 mm

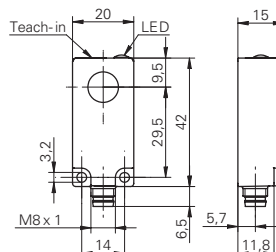
- internal and external Teach-in
- 0 ... 10 V / 4 ... 20 mA invertible
- long sensing distance



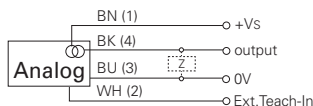
general data	
sensing range sd	100 ... 1000 mm
scanning range close limit Sdc	100 ... 1000 mm
scanning range far limit Sde	100 ... 1000 mm
repeatability	< 0,5 mm
resolution	< 0,3 mm
adjustment	Teach-in
sonic frequency	240 kHz
response time ton	< 80 ms
release time toff	< 80 ms
alignment aid	target display flashing
light indicator	yellow LED / red LED
temperature drift	< 2% of distance to target So
electrical data	
voltage supply range +Vs	15 ... 30 VDC
output current	< 20 mA
residual ripple	< 10% Vs
short circuit protection	yes
reverse polarity protection	yes
voltage output	
current consumption max.	35 mA
output signal	0 ... 10 V / 10 ... 0 V
current output	
current consumption max.	55 mA
output signal	4 ... 20 mA / 20 ... 4 mA
load resistance +Vs max.	< 1100 Ohm
load resistance +Vs min.	< 400 Ohm
mechanical data	
type	rectangular
housing material	polyester
width / diameter	20 mm
height / length	42 mm
depth	15 mm
connection types	connector M8
ambient conditions	
operating temperature	-10 ... +60 °C
protection class	IP 67
accessories	
connectors	ESW 31A, ESG 32A

order reference	output circuit
UNDK 20I6903/S35A	current output
UNDK 20U6903/S35A	voltage output

dimension drawing



connection diagram



typical sonic cone profile

