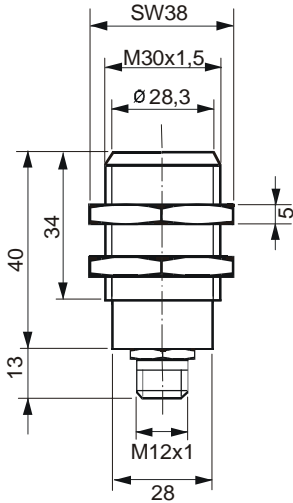# DOUBLE SHEET DETECTOR E20

Sensors:

It is recommended to use the sensors P30GS, P42AGS and P75VGS with the control unit E20. The connection of the older P36GS, P42GS and P75GS sensors is also possible.

P30GS   **P42AGS / P42GS***   **P75VGS / P75GS**

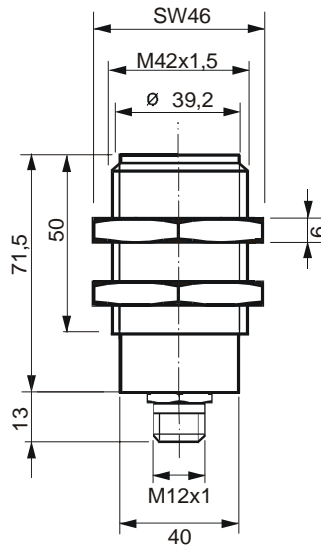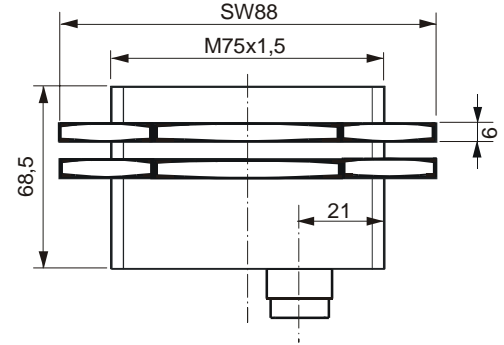* The dimensions of the sensors (P42AGS / P42GS) are identical with the exception of the connector.
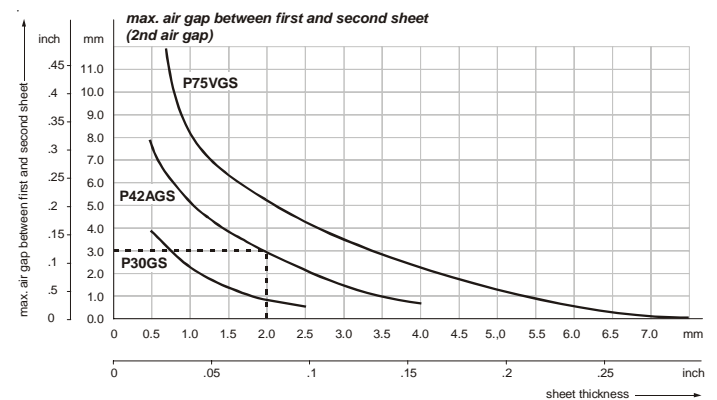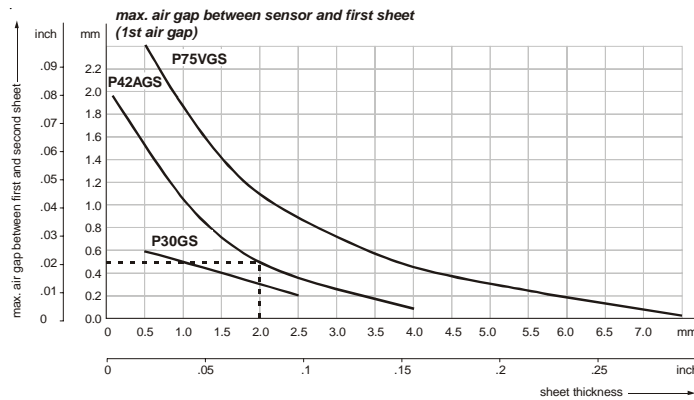
Air gap behavior:

The new Double Sheet Detector E20 has a much improved air gap tolerance especially in conjunction with the new sensor P42AGS. There are two types of air gaps in case of double sheet control. First there is the air gap between sensor and sheet surface (1st air gap) and the air gap between the first sheet and the second sheet (2nd air gap). The diagrams show the relationship.

Example for 1st air gap with sensor P42AGS: According to the diagram, if processing a sheet of 2.0 mm (.08 in.) an air gap of 0.5 mm (.02 in.) can be tolerated with a double sheet threshold of 120 %.

Example for 2nd air gap and sensor P42AGS with 2.0 mm (.08 in.) sheet thickness and a double sheet threshold of 120 %; an air gap of up to 3.0 mm (.12 in.) can be tolerated.

Attention ! The performance data of both diagrams **cannot** be combined !

Measurement time:

The table to the right shows the reaction time of the system when detecting double sheet with the maximum sheet thickness applicable to each sensor and a selected upper switching limit of 120%.
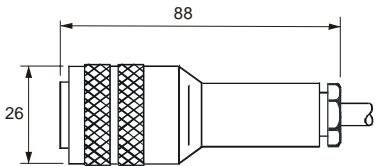
The times for 2, 3 and 4 sensors apply to the **sequenzer mode**.

*with restriction

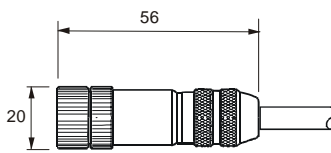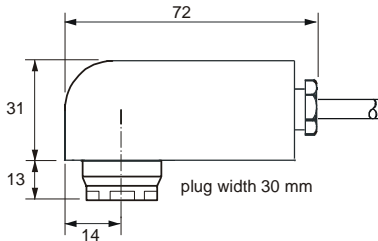| Sensor	max. sheet thickness [mm] / [inch]	Measurement time [ms] with max. sheet thickness and 120 % double sheet threshold			
		1 Sensor	2 Sensors	3 Sensors	4 Sensors
P30GS	2.5 / .1	100	150	195	245
P42GS	4 / .16	140	230	310	410
P42AGS	4 / .16	145	215	305	385
P75VGS	6.5 / .25 (8 / .315)*	450	860	1280	1680

Sensor cable:

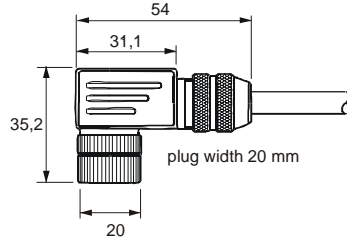Cable: **CPS-5-G Oil for P42GS and P75VGS**
straight receptacle

88

26

Cable: **CPM12S-G for P30GS and P42AGS**
straight receptacle

56

20

Cable: **CPS-5-W Oil**
right angle receptacle

72

31

13

14

plug width 30 mm

Cable: **CPM12S-W**
right angle receptacle

54

31,1

35,2

20

plug width 20 mm

Sensor bracket:

Spring loaded sensor bracket
with vacuum cup SHS
for sensor P42(A)GS
(also available without vacuum
cup as type SH...GS)

94

ø25

Clamping bracket SHK

M8

40

25

Spring loaded sensor bracket

Sensor

movable

fixed

300 or custom made

6

98

57 Lift max. 65 min. 25

6

40

5

Cup

110

Sensorcable for fieldbus-technology see operating manual

Order data:

Control unit for the connection of one sensor:

E20-B-R	Control via PLC	Relay Version
E20-B-O	Control via PLC	Optocoupler Version
E20-C-O	Download, control via PLC	Optocoupler Version
E20-PR-S*	Control via Profibus	

Control unit for the connection of up to 4 sensors:

E20-4P-B-R	Control via PLC	Relay Version
E20-4P-B-O	Control via PLC	Optocoupler Version
E20-4P-C-O	Download, Control via PLC	Optocoupler Version
E20-4P-PR-S*	Control via Profibus	

all common fieldbus technologies are available

Sensors:

P30GS	Electromagnet up to 2.5 mm single sheet thickness (The sensor P30GS should only be used in case of confined space situations. The standard sensor should be P42AGS)
P42GS	Electromagnet up to 4.0 mm single sheet thickness
P42AGS	Electromagnet up to 4.0 mm single sheet thickness
P75VGS	Electromagnet up to 6.5 mm single sheet thickness

Sensor cable:

for P30GS and P42AGS:

CPM12S-G	Straigth receptacle, standard length 5 m
CPM12S-W	Rigth angle receptacle, standard length 5 m
SM12CPM12S-GG	Fieldbus technology, straigth receptacle
SM12CPM12S-GW	Fieldbus technology, rigth angle receptacle

for all other sensors:

CPS-5-G Oil	Straigth receptacle, standard 5 m
CPS-5-W Oil	Rigth angle receptacle, standard 5 m
SCPM12S-GG	Fieldbus technology, straigth receptacle
SCPM12S-GW	Fieldbus technology, rigth angle recept.

Cable up to 25 m made to order, for longer cables enquire

Special accessoires:

SH42GS	Spring loaded sensor bracket for P42GS and P42AGS
SHS42GS	Spring loaded sensor bracket with vacuum cup for P42GS and P42AGS
SHK	Clamping bracket
2395110	Rubber lips for vacuum suction cup
PWS E10	Program selection box, also for E20 suitable
RPP	Software for parameter back up on a PC (Version C only)