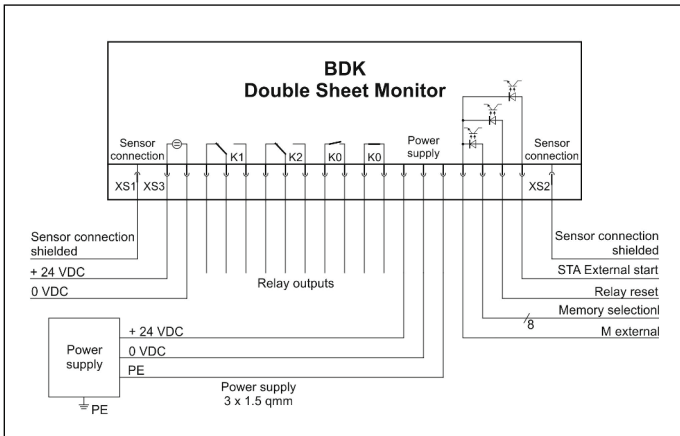
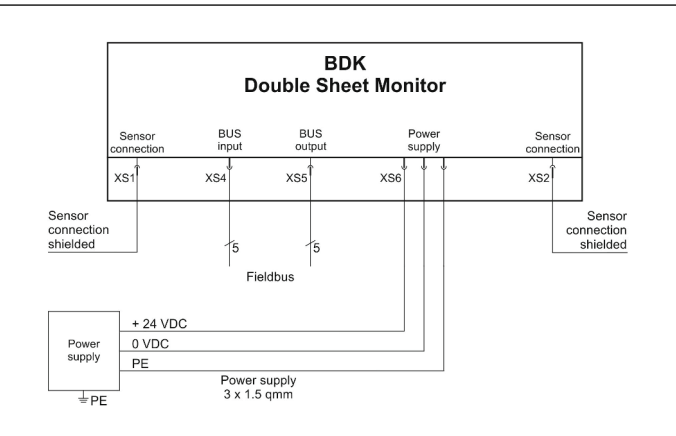


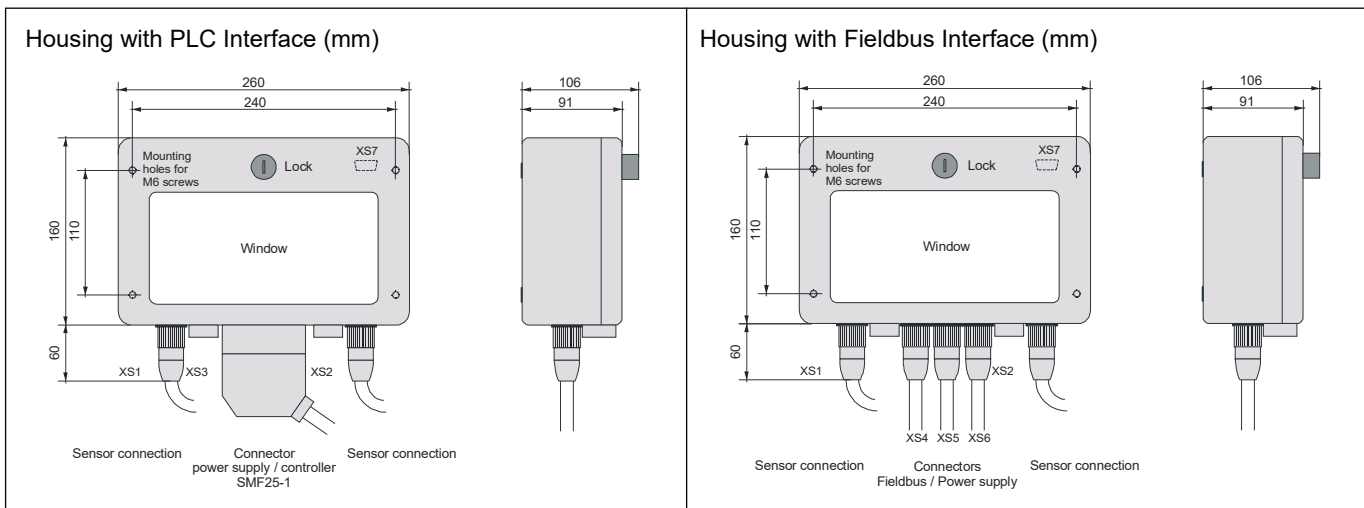
Wiring Diagram BDK with PLC Interface



Wiring Diagram BDK with Fieldbus Interface



11. Housing Dimensions



12. Sheet Metal Thickness Sensors

12.1. DSP, DSPW and BDWF for Single-Surface Contact Measurement

12.1.1. Mounting

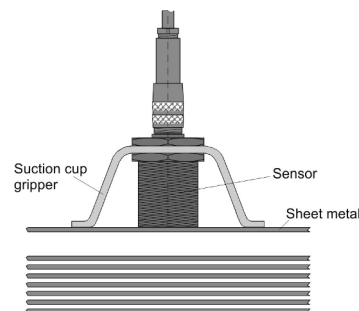
Preferably, the sensor should be built into an appropriately designed suction cup on the gripper.

The suction cup lifts the workpiece from the stack, bringing it near the proximity switch in the sensor. Just before the sensor touches the workpiece, the proximity switch recognises the sheet metal and initiates the measurement.

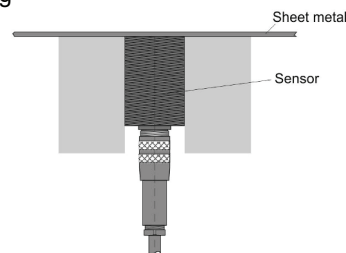
In the case of ferrous metals, the workpiece is held onto the sensor during the brief measuring time (≤ 110 ms). Instead of having a sensor in the suction cup gripper, it can be mounted also single-sided in a measuring station. In such case, however, the workpieces must remain motionless relative to the sensor during measurement. Mounting the sensor directly under and flush with the surface supporting the workpiece avoids accumulation of dirt and filings around the sensor (avoid air gap between sensor and workpiece).

A spring-mounted sensor is a suitable expedient if workpieces which are not flat and/or are very stiff (more than 1.5 mm thick) are to be processed. The workpieces must be large enough to completely cover the sensing face of the sensor during measurement.

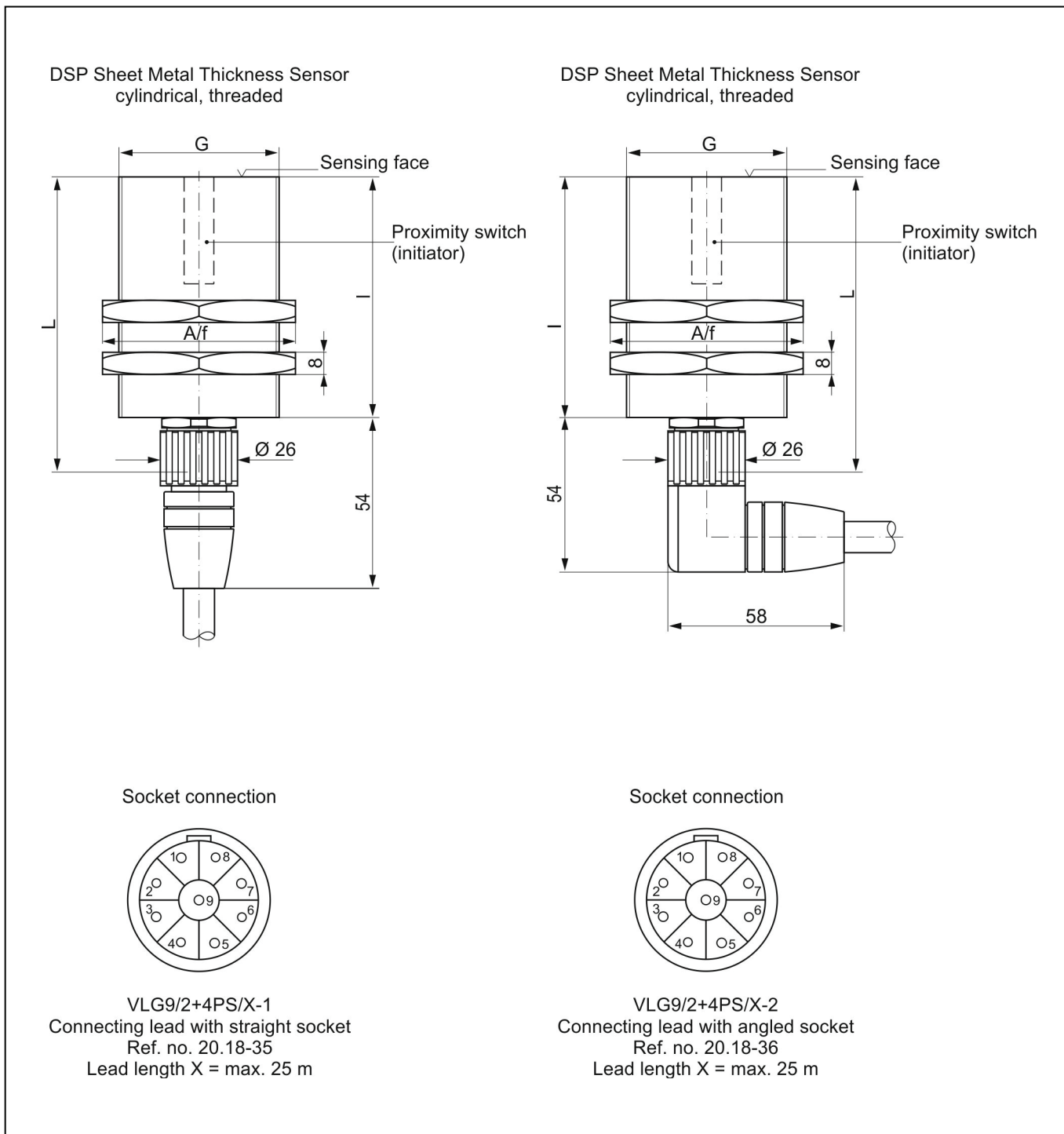
Mounting in the Suction Cup Gripper



Flush Mounting

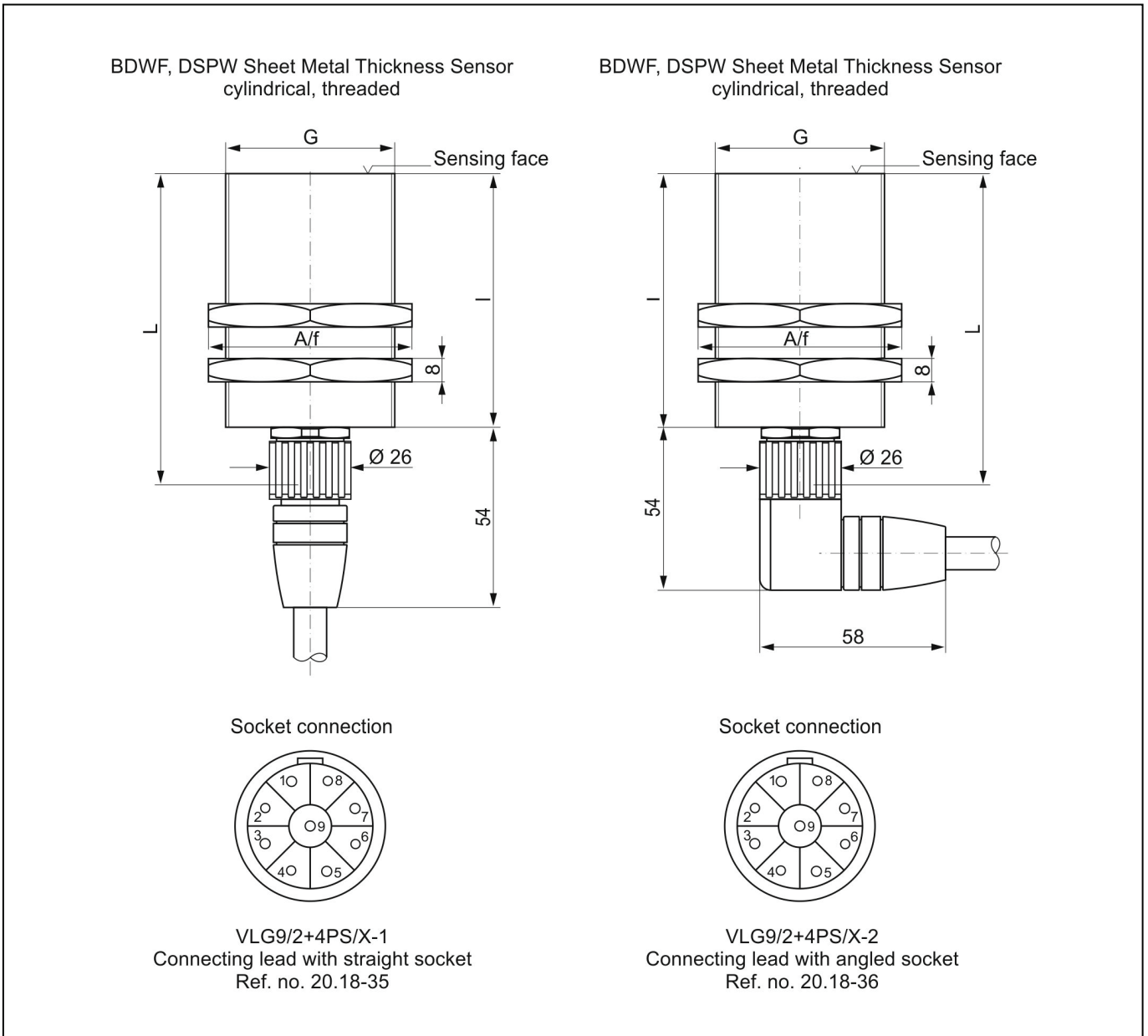


12.1.6. Housing Dimensions DSP (Fe sheets, single-surface contact measurement)



Type	Ref. no.	Meas. Range mm	Fe sheets up to mm	Meas. time ms	L mm	l mm	G Thread	A/f	Weight g
DSP-36sg-1s	13.05-86	0.2 ... 2.0	1.5	< 20	90	65	M36 x 1.5	55	380
DSP-42sg-1s	13.05-87	0.2 ... 3.0	2.5	< 30	100	75	M42 x 1.5	65	910
DSP-54sg-1s	13.05-89	0.2 ... 4.0	3.5	< 50	107	81	M54 x 0.75	65	1200
DSP-75sg-1s	13.05-90	0.2 ... 6.0	5.5	< 110	126	100	M75 x 1.5	90	3010

**12.1.7. Housing Dimensions DSPW (Fe and NE sheets, single-surface contact measurement)
 BDWF (NE sheets, single-surface contact measurement)**



Type	Ref. no.	Meas. range mm	Max. thickn. mm	Meas. time ms	L mm	I mm	G Thread	A/f	D mm	Weight g	Max. lead length m
DSPW-42sg-1s **)	13.05-66	Fe: 0.2 ... 3.5 NE: 0.2 ... 2.5 NE: 0.2 ... 4.0*)	3.0 2.0 3.0	< 70	117	96	M42 x 1.5	55	42	900	25
DSPW-54sg-1s	13.05-67	Fe: 0.2 ... 4.0 NE: 0.2 ... 3.0 NE: 0.2 ... 5.0*)	3.5 2.5 4.0	< 70	117	96	M54 x 0.75	65	54	1200	25
BDWF-m54rg-2s	13.05-73	NE: 0.2 ... 6.0	5.5	< 100	101	81	M54 x 0.75	65	54	650	50

*) The measuring range for non-ferrous (NE) sheets can be extended to **4 mm** or **5 mm** by use of a special adapter.

When using an unsuitable adapter, the accuracy and linearity of the sensor may deteriorate.

We like to provide you our support to work out the best solution.

**) For using the DSPW-42sg-1s sensor, the evaluation device has to be equipped with software version E118 or higher.