NMG2 Software for Report and Analysis NMG2-USB/RS232-PROSOFT

Version: 1.4.1
Release Date: 01.02.2018

1. Scope of delivery

NMG2-USB/RS232-PROSOFT on CD or .ZIP download
Connection cable RS232
USB to RS232 adapter

2. System Requirements

Windows Version: XP, Vista, WIN 7, WIN 8, WIN10
Acrobat Reader from version 6
1 free interface RS232 or USB

NMG2 model with internal Memory – MEM, from Software version V5.20
NMG2-MEM
NMG2-P-MEM
NMG2-xxx-x-MEM

Older models can be upgraded to the latest version.

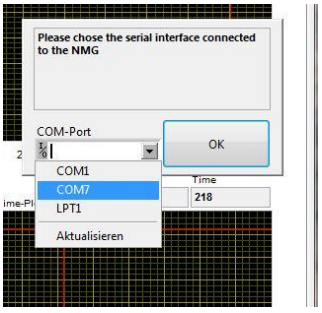
3. Installation

With a click on setup.exe in the NMG PROSOFT directory the installation will be started. In the Start menu an ICON NMG will be created.

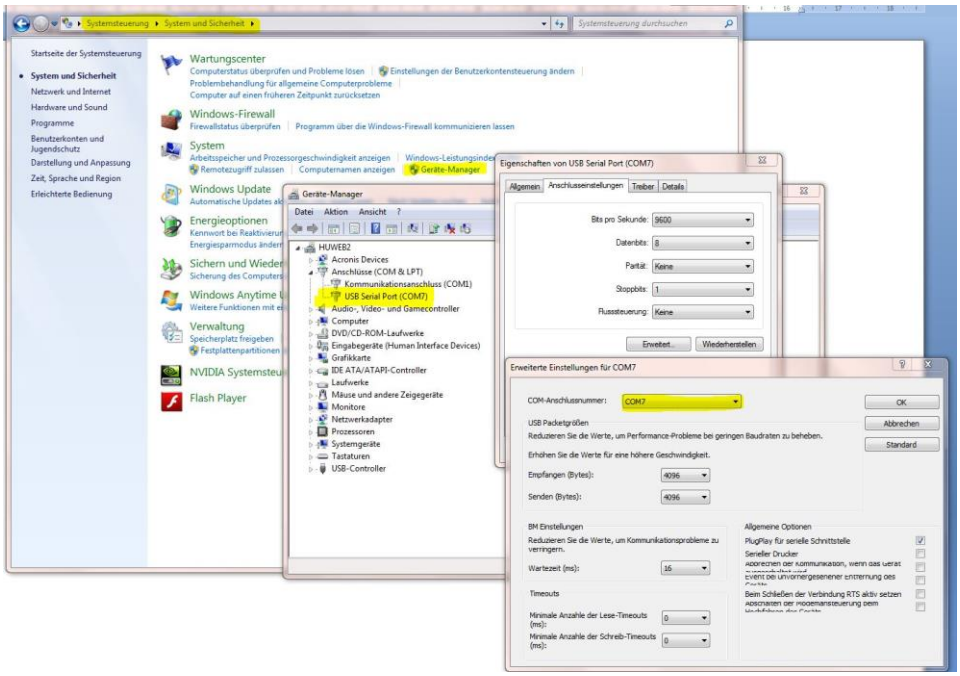
4. Program Operation

4.0 NMG2 connection and selection of the RS232 interface number

The RS232 port of NMG has to be connected to the computer. Optionally, an RS232 cable or an USB-RS232 adapter can be used (included in PROSOFT package).
By clicking on "COM Port" the correct port number can be selected.

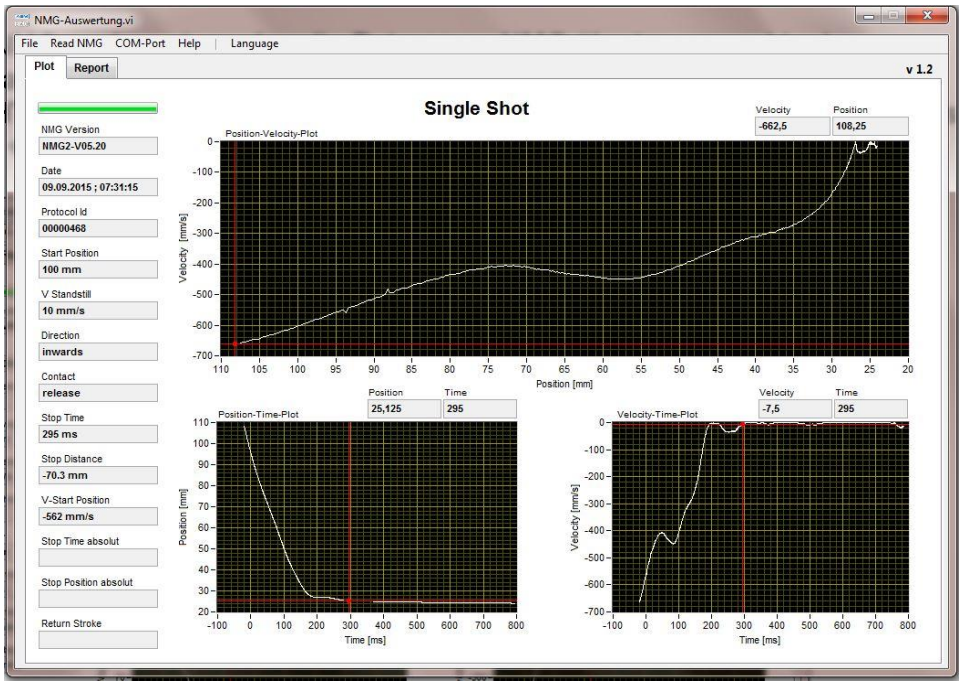


If you are unsure which interface is occupied by the USB adapter, it can be checked in the Control Panel. The interface number can also be assigned as desired in the Control Panel.



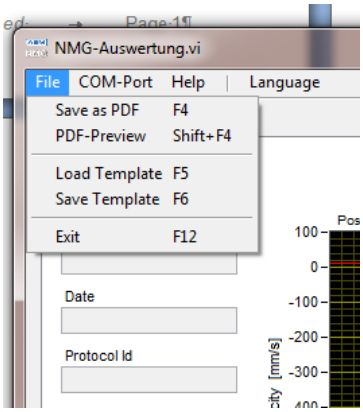
4.1 Evaluation of the measurement data, Graphical Analysis (Plot)

Clicking on „READ NMG will transfer the data from the NMG and show it in the diagrams.
IMPORTANT! The NMG has to be set to **[TEST RUN]** and a measurement has to be carried out. **[SINGLE]** must be selected.

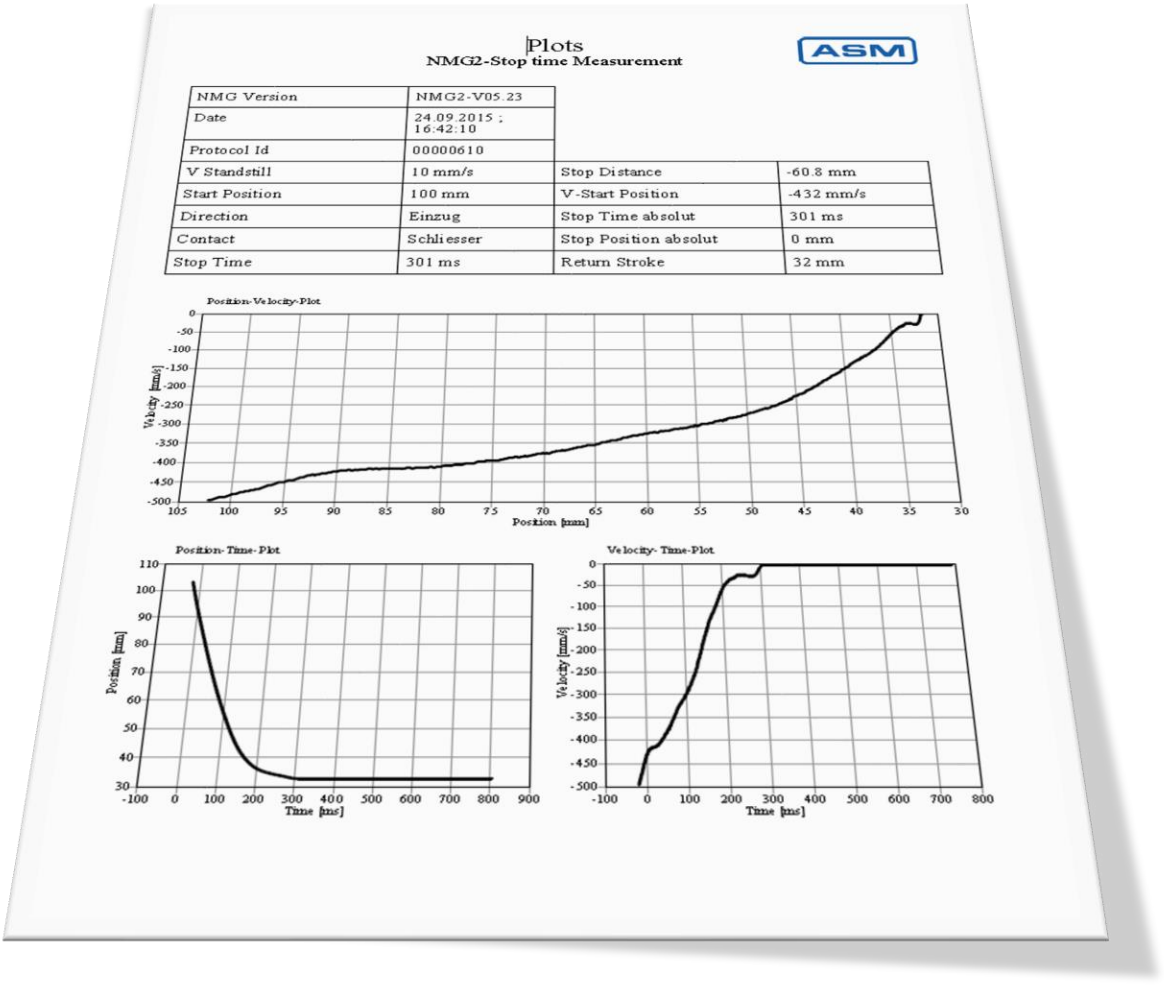


With a cursor the data can be analyzed and the values will be displayed.

In the [**FILE**] Menu a PDF printout can be generated.



Sample printout (Plot):



Plots

NMG2-Stop time Measurement

ASM

NMG Version	NMG2-V05.23		
Date	24.09.2015 ; 16:42:10		
Protocol Id	00000610		
V Standstill	10 mm/s	Stop Distance	-60.8 mm
Start Position	100 mm	V-Start Position	-432 mm/s
Direction	Einzug	Stop Time absolut	301 ms
Contact	Schliesser	Stop Position absolut	0 mm
Stop Time	301 ms	Return Stroke	32 mm

Position-Velocity-Plot

Velocity [mm/s]

Position [mm]

Position-Time-Plot

Position [mm]

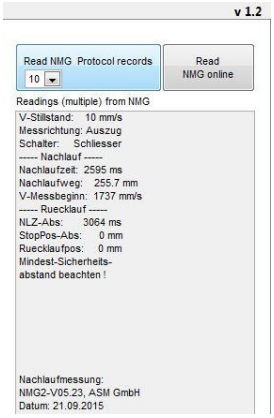
Time [ms]

Velocity-Time-Plot

Velocity [mm/s]

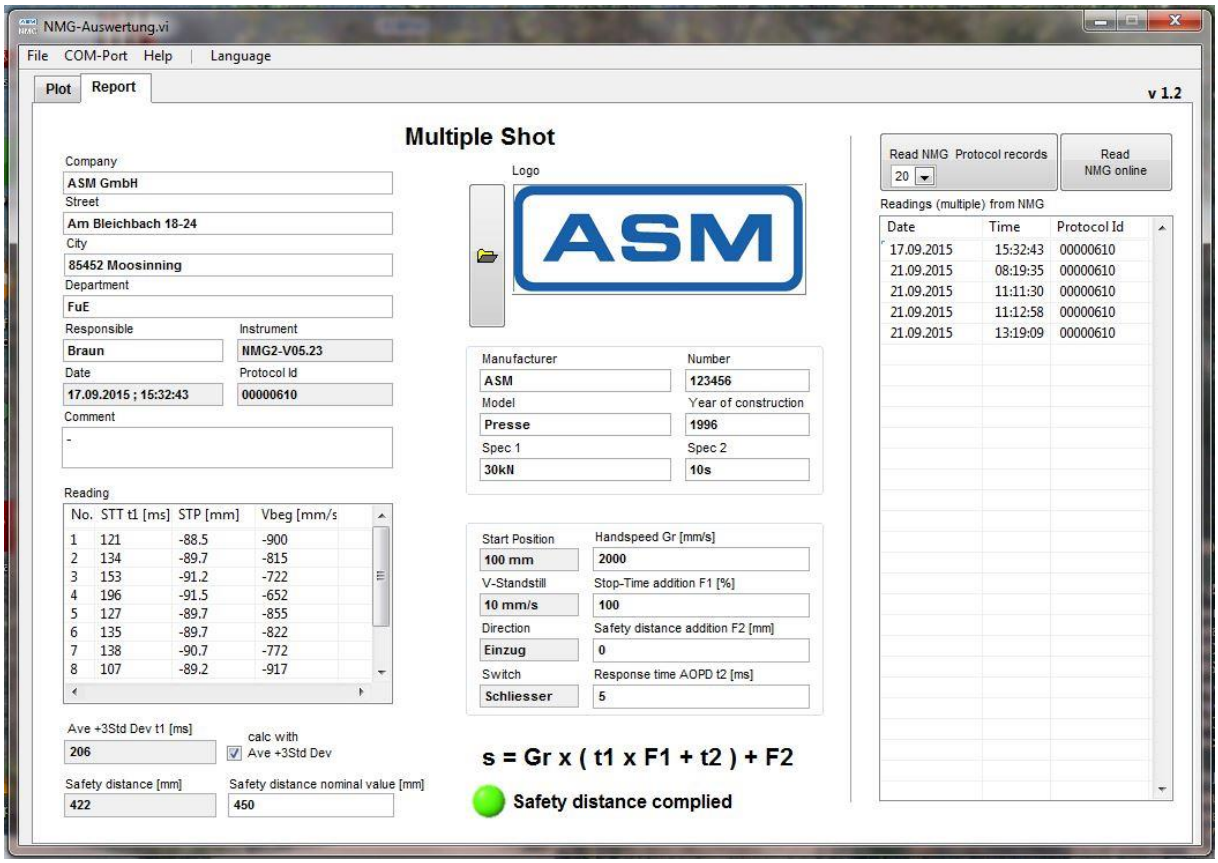
Time [ms]

4.2 Report – Creation of test reports



With [**Read NMG protocol records**] the protocol data is transferred into the software.
Important! The NMG has to be in the Mode [**ADJUST**]. Only multiple measurements will be transferred 10 measurements are recommended. (NMG default setting in Mode [**MULTIPLE**])
The Number of protocols which should be read, can be chosen.
After the transfer the desired protocol data can be selected.
The data will be shown on the screen.

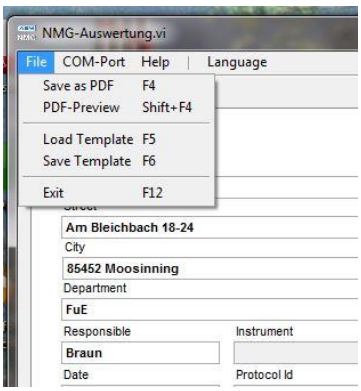
With [**Read NMG online**] the protocol data can be read during the measurement.
When Multiple Shot is chosen, the protocol data will be transferred into the desktop.



The operator can fill additional fields and issue a pdf report.

The field ***Safety distance*** shows the calculated value by the NMG.

In the field ***Safety distance Nominal value*** the real distance can be put in.



Sample printout Test Report:

Test Protocol
NMG2-Stop time Measurement

Company ASM GmbH
Street Am Bleichbach 18-24
City 85452 Moosinning
Date 17.09.2015 ; 15:32:43

Responsible	Braun	Department	FuE
Instrument	NMG2-V05.23	Protocol Id	00000610
Comment	-		

Machine

Manufacturer	ASM	Year of construction	1996
Model	Presse	Number	123456
Spec 1	30kN	Spec 2	10s

Parameter

Start Position	100 mm	Handspeed Gr [mm/s]	2000
V-Standstill	10 mm/s	Stop-Time addition F1 [%]	100
Direction	Einzug	Safety distance addition F2 [mm]	0
Switch	Schliesser	Response time AOPD t2 [ms]	5

Reading (n = 10)

No.	STT t1 [ms]	STP [mm]	V beg [mm/s]
1	121	-88.5	-900
2	134	-89.7	-815
3	153	-91.2	-722
4	196	-91.5	-652
5	127	-89.7	-855
6	135	-89.7	-822
7	138	-90.7	-772
8	107	-89.2	-917
9	119	-88.7	-870
10	117	-87.9	-937

Calculation of safety distance S according to ISO 13855
S = (K x T) + C

S = Gr x (t1 x F1 + t2) + F2 (NMG Formula)

Result

Ave +3Std Dev t1 [ms] 206
Safety distance [mm] 422
Safety distance nominal value [mm] 450
Safety distance complied

24.09.2015
Date Responsible Page 1 of 1

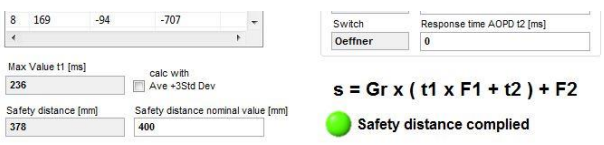
Comment:

If a multi-line comment is entered the comment will be printed on a second page. This feature can be used to create individual forms and reports.

4.2.1 Choosing the method for calculating the safety distance:

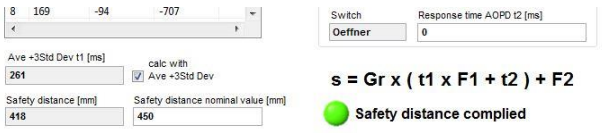
1. Maximum value

The maximum value of the stop time will be used in the formula to calculate the safety distance.



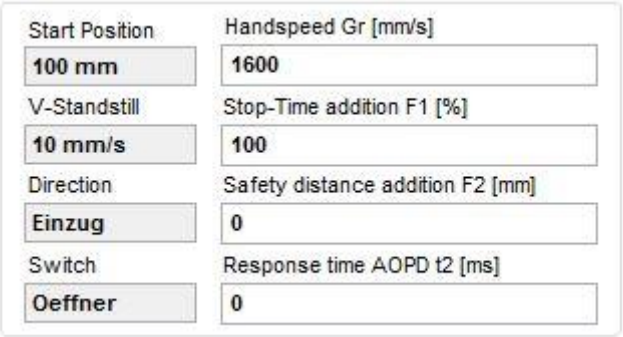
2. Mean Value with standard deviation

The mean value of the stop time will be calculated and 3 times the standard deviation will be added. The result will be used in the formula to calculate the safety distance.



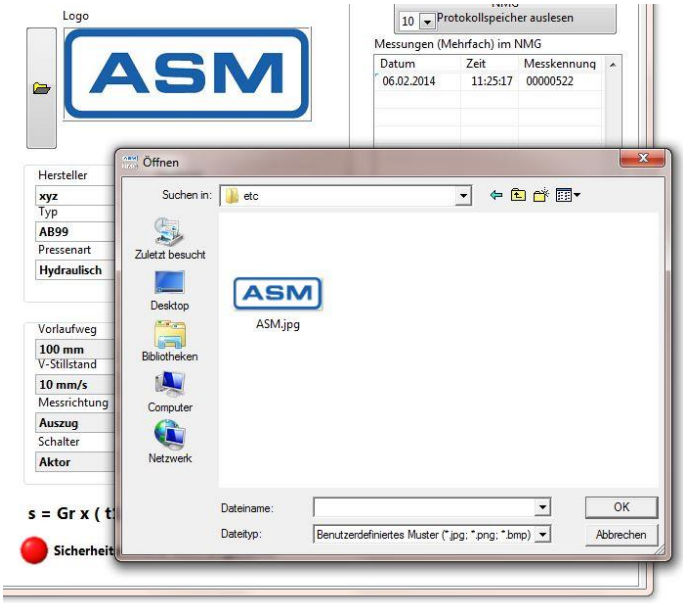
4.2.2 Changing the parameters for the safety distance calculation

If required different parameters for the safety distance calculation can be entered in the program.
f.e. reaction time of the light curtain..
The internal values of the NMG are set by default.



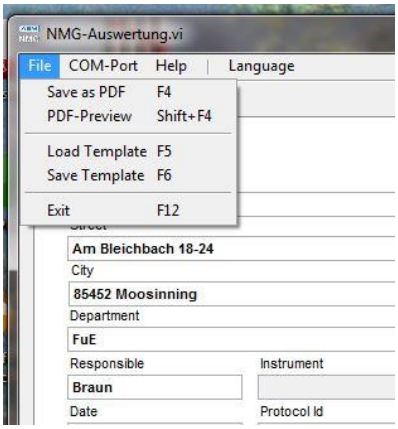
4.2.3 Customer specific Logo

A Logo can be selected for the test report
The recommended resolution is 400 x 150px.



4.2.3 Creating report templates

Report templates can be stored. If the same machine is measured again the template can be loaded and the data need not be entered again.



5. Legal information