OPERATION MANUAL

RESISTOMAT® INTERFACE MANUAL
Model 2311

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Content

1 Important Notice

Commands are split into queries (ending with a „?“) and executables (ending with a „!“).
During an active measurement, the execution form of commands is blocked, with the exception of the “STOP!” command.
Queries however are possible at any time.

2 General commands

2.1 UPDA Perform display update

UPDA!

For time reasons, normal port communication does not update the device’s process display.

The explicit command UPDA! updates the device’s process display.

Host sends: <Address>sr<STX>UPDA!<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

UPDA?

This command does not have a query form.

2.2 STAR Start measurement

STAR!

The command STAR! starts a measurement.

Host sends: <Address>sr<STX>STAR!<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

STAR?

This command does not have a query form.

2.3 STOP Stop measurement

STOP!

The command STOP! stops a measurement.

Host sends: <Address>sr<STX> STOP!<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

STOP?

This command does not have a query form.

2.4 EIVE Switch-On Delay

EIVE!

The command EIVE! enters a switch-on delay between 1 and 20 Seconds.

Host sends: <Address>sr<STX> EIVE! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Switch-On delay	Value between 1 and 20

EIVE?

The EIVE? command queries the switch-on delay.

Host sends: <Address>sr<STX>EIVE?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Switch-On delay	Value between 1 and 20

3 Measurement Mode

3.1 BEWA Range Selection

BEWA!

The BEWA! command switches range selection between automatic and manual.

If 1 parameter, switches range selection in the currently selected measurement program.

Host sends: <Address>sr<STX> BEWA! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Range selection	0 -> manual 1 -> automatic

If 2 parameters, switches range selection in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> BEWA! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Range selection	0 -> manual 1 -> automatic

BEWA?

The BEWA? command queries the range selection.

If no parameters, the state of the range selection in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> BEWA?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Range selection	0 -> manual 1 -> automatic

If 1 parameter the state of the range selection in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> BEWA? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Range selection	0 -> manual 1 -> automatic

3.2 MABE Measuring range if manual range selection

MABE!

The MABE! command selects the measuring range if manual range selection.

If 1 parameter, selects the measuring range in the currently selected measurement program.

Host sends: <Address>sr<STX> MABE! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measuring range	1 -> 20 mOhm 2 -> 200 mOhm 3 -> 2 Ohm 4 -> 20 Ohm 5 -> 200 Ohm 6 -> 2 kOhm 7 -> 20 kOhm 8 -> 200 kOhm

If 2 parameters, selects the measuring range in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> MABE! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Measuring range	1 -> 20 mOhm 2 -> 200 mOhm 3 -> 2 Ohm 4 -> 20 Ohm 5 -> 200 Ohm 6 -> 2 kOhm 7 -> 20 kOhm 8 -> 200 kOhm

MABE?

The MABE? command queries the measuring range.

If no parameters, the measuring range in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> MABE?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measuring range	1 -> 20 mOhm 2 -> 200 mOhm 3 -> 2 Ohm 4 -> 20 Ohm 5 -> 200 Ohm 6 -> 2 kOhm 7 -> 20 kOhm 8 -> 200 kOhm

If 1 parameter the measuring range in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> MABE? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Measuring range	1 -> 20 mOhm 2 -> 200 mOhm 3 -> 2 Ohm 4 -> 20 Ohm 5 -> 200 Ohm 6 -> 2 kOhm 7 -> 20 kOhm 8 -> 200 kOhm

3.3 ABBE Min and Max Measuring range for automatic range selection

ABBE!

The ABBE! command selects min and max range for automatic range selection.

If 2 parameter, selects min/max range in the currently selected measurement program.

Host sends: <Address>sr<STX> ABBE! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Min range	1 -> 20 mOhm 2 -> 200 mOhm 3 -> 2 Ohm 4 -> 20 Ohm 5 -> 200 Ohm 6 -> 2 kOhm 7 -> 20 kOhm
P2	Max range	2 -> 200 mOhm 3 -> 2 Ohm 4 -> 20 Ohm 5 -> 200 Ohm 6 -> 2 kOhm 7 -> 20 kOhm 8 -> 200 kOhm

If 3 parameters, selects min/max range in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> ABBE! P1,P2,P3<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Min range	1 -> 20 mOhm 2 -> 200 mOhm 3 -> 2 Ohm 4 -> 20 Ohm 5 -> 200 Ohm 6 -> 2 kOhm 7 -> 20 kOhm
P3	Max range	2 -> 200 mOhm 3 -> 2 Ohm 4 -> 20 Ohm 5 -> 200 Ohm 6 -> 2 kOhm 7 -> 20 kOhm 8 -> 200 kOhm

ABBE?

The ABBE? command queries the min/max range.

If no parameters, min/max range in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> ABBE?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Min range	1 -> 20 mOhm 2 -> 200 mOhm 3 -> 2 Ohm 4 -> 20 Ohm 5 -> 200 Ohm 6 -> 2 kOhm 7 -> 20 kOhm
P2	Max range	2 -> 200 mOhm 3 -> 2 Ohm 4 -> 20 Ohm 5 -> 200 Ohm 6 -> 2 kOhm 7 -> 20 kOhm 8 -> 200 kOhm

If 1 parameter min/max range in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> ABBE? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2,P3<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Min range	1 -> 20 mOhm 2 -> 200 mOhm 3 -> 2 Ohm 4 -> 20 Ohm 5 -> 200 Ohm 6 -> 2 kOhm 7 -> 20 kOhm
P3	Max range	2 -> 200 mOhm 3 -> 2 Ohm 4 -> 20 Ohm 5 -> 200 Ohm 6 -> 2 kOhm 7 -> 20 kOhm 8 -> 200 kOhm

3.4 PRUE Resistance type R or Z(0-3)

PRUE!

The PRUE! command selects the resistance type between R and Z0-Z3. Z0 has the shortest time constant whereas Z3 has the longest one. When using Z, AUTO range selection is not possible.

If 1 parameter, the resistance type in the currently selected measurement program.

Host sends: <Address>sr<STX> PRUE! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Resistance type	0 -> R 1 -> Z0 2 -> Z1 3 -> Z2 4 -> Z3

If 2 parameters, the resistance type in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> PRUE! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Resistance type	0 -> R 1 -> Z0 2 -> Z1 3 -> Z2 4 -> Z3

PRUE?

The PRUE? command queries the resistance type.

If no parameters the resistance type in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> PRUE?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Resistance type	0 -> R 1 -> Z0 2 -> Z1 3 -> Z2 4 -> Z3

If 1 parameter the resistance type in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> PRUE? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Resistance type	0 -> R 1 -> Z0 2 -> Z1 3 -> Z2 4 -> Z3

3.5 EIDA Measuring Type

EIDA!

The EIDA! command selects the measuring type between single, continuous and n measurements.

If 1 parameter, the measuring type in the currently selected measurement program.

Host sends: <Address>sr<STX> EIDA! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measuring type	0 -> single 1 -> continuous 2 -> n measurements

If 2 parameters, the measuring type in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> EIDA! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Measuring type	0 -> single 1 -> continuous 2 -> n measurements

EIDA?

The EIDA? command queries the measuring type.

If no parameters the measuring type in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> EIDA?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measuring type	0 -> single 1 -> continuous 2 -> n measurements

If 1 parameter the measuring type in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> EIDA? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Measuring type	0 -> single 1 -> continuous 2 -> n measurements

3.6 KABE Cable Break Test

KABE!

The KABE! command selects the cable break test between off, once and always.

If 1 parameter, the cable break test in the currently selected measurement program.

Host sends: <Address>sr<STX> KABE! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Cable break test	0 -> off 1 -> once 2 -> always

If 2 parameters, the cable break test in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> KABE! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Cable break test	0 -> off 1 -> once 2 -> always

KABE?

The KABE? command queries the measuring type.

If no parameters the cable break test in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> KABE?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Cable break test	0 -> off 1 -> once 2 -> always

If 1 parameter the measuring type in the cable break test corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> KABE? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Cable break test	0 -> off 1 -> once 2 -> always

3.7 NMES Number of measurements until stop

NMES!

The NMES! number of measurements until stop, if measuring type is set to n measurements.

If 1 parameter, number of measurements in the currently selected measurement program.

Host sends: <Address>sr<STX> NMES! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Number of measurements	A value between 1 and 20

If 2 parameters, number of measurements in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> NMES! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Number of measurements	A value between 1 and 20

NMES?

The NMES? command queries the number of measurements.

If no parameters number of measurements in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> NMES?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Number of measurements	A value between 1 and 20

If 1 parameter number of measurements in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> NMES? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Number of measurements	A value between 1 and 20

3.8 MIWE Number of mean values

MIWE!

The MIWE! command sets the number of mean values to use.

If 1 parameter, number of mean values in the currently selected measurement program.

Host sends: <Address>sr<STX> MIWE! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Number of mean values	A value between 1 and 100

If 2 parameters, number of mean values in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> MIWE! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Number of mean values	A value between 1 and 100

MIWE?

The MIWE? command queries number of mean values.

If no parameters number of mean values in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> MIWE?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Number of mean values	A value between 1 and 100

If 1 parameter number of mean values in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> MIWE? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Number of mean values	A value between 1 and 100

3.9 MITT Averaging: renewing or moving

MITT!

The MITT! command sets the type of averaging.

If 1 parameter, the type of averaging in the currently selected measurement program.

Host sends: <Address>sr<STX> MITT! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Type of averaging	0 -> renewing 1 -> moving

If 2 parameters, type of averaging in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> MITT! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Type of averaging	0 -> renewing 1 -> moving

MITT?

The MITT? command queries type of averaging.

If no parameters type of averaging in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> MITT?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Type of averaging	0 -> renewing 1 -> moving

If 1 parameter type of averaging in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> MITT? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Type of averaging	0 -> renewing 1 -> moving

3.10 BGRZ Limiting: off, 20 mV or 2 V

BGRZ!

The BGRZ! command sets the limiting on or off. Please note that in the case of 20 mV limiting, only the ranges 200 mOhm and 2 Ohm are valid. Furthermore, in the case of 2V limiting, the 2311 ensures that the measuring current does not exceed 10mA.

If 1 parameter sets the limiting in the currently selected measurement program.

Host sends: <Address>sr<STX> BGRZ! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Limiting	0 -> off 1 -> 20 mV 2 -> 2 V

If 2 parameters, sets the limiting in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> BGRZ! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Limiting	0 -> off 1 -> 20 mV 2 -> 2 V

BGRZ?

The BGRZ? command queries the limiting.

If no parameters queries the limiting in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> BGRZ?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Limiting	0 -> off 1 -> 20 mV 2 -> 2 V

If 1 parameter queries the limiting in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> BGRZ? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Limiting	0 -> off 1 -> 20 mV 2 -> 2 V

3.11 KONV Number of Conversions

KONV!

The KONV! command sets the number of conversions.

If 1 parameter, the number of conversions in the currently selected measurement program.

Host sends: <Address>sr<STX> KONV! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Number of conversions	0 -> standard 1 -> minimal 2 -> medium 3 -> maximum

If 2 parameters, the number of conversions in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> KONV! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Number of conversions	0 -> standard 1 -> minimal 2 -> medium 3 -> maximum

KONV?

The KONV? command queries the number of conversions.

If no parameters the number of conversions in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> KONV?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Number of conversions	0 -> standard 1 -> minimal 2 -> medium 3 -> maximum

If 1 parameter the number of conversions in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> KONV? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Number of conversions	0 -> standard 1 -> minimal 2 -> medium 3 -> maximum

3.12 MEAB Measuring Process

MEAB!

The MEAB! command sets the measuring process.

If 1 parameter, the measuring process in the currently selected measurement program.

Host sends: <Address>sr<STX> MEAB! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measuring process	0 -> standard 1 -> comp. once 2 -> without comp. 3 -> ref. comp. 4 -> current test

If 2 parameters, the measuring process in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> MEAB! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Measuring process	0 -> standard 1 -> comp. once 2 -> without comp. 3 -> ref. comp. 4 -> current test

MEAB?

The MEAB? command queries the measuring process.

If no parameters the measuring process in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> MEAB?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measuring process	0 -> standard 1 -> comp. once 2 -> without comp. 3 -> ref. comp. 4 -> current test

If 1 parameter the measuring process in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> MEAB? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Measuring process	0 -> standard 1 -> comp. once 2 -> without comp. 3 -> ref. comp. 4 -> current test

3.13 MEST Measuring current: large or small

MEST!

The MEST! command sets the measuring current large or small.

If 1 parameter sets the measuring current in the currently selected measurement program.

Host sends: <Address>sr<STX> MEST! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measuring current	0 -> large 1 -> small

If 2 parameters, sets the measuring current in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> MEST! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Measuring current	0 -> large 1 -> small

MEST?

The MEST? command queries the measuring current.

If no parameters the measuring current in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> MEST?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measuring current	0 -> large 1 -> small

If 1 parameter the measuring current in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> MEST? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Measuring current	0 -> large 1 -> small

3.14 AUFL Resolution: 2000 or 20000 Digits

AUFL!

The AUFL! command sets the resolution to 2000 or 20000 digits.

If 1 parameter sets the resolution in the currently selected measurement program.

Host sends: <Address>sr<STX> AUFL! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	resolutiuon	0 -> 2000 digits 1 -> 20000 digits

If 2 parameters, sets the resolution in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> AUFL! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	resolutiuon	0 -> 2000 digits 1 -> 20000 digits

AUFL?

The AUFL? command queries the resolution.

If no parameters the resolution in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> AUFL?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	resolutiuon	0 -> 2000 digits 1 -> 20000 digits

If 1 parameter the resolution in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> AUFL? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	resolutiuon	0 -> 2000 digits 1 -> 20000 digits

3.15 WEFE Behavior in case of measurement error

WEFE!

The WEFE! command sets the behavior in case of a measurement error during continuous measurement: stop measuring or continue measuring. This option has no effect when measurement modes single or n measurements is selected.

If 1 parameter sets the behavior in case of measuring error in the currently selected measurement program.

Host sends: <Address>sr<STX> WEFE! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Behavior in case of measurement error	0 -> stop measuring 1 -> continue measuring

If 2 parameters, sets the behavior in case of a measurement error in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> WEFE! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Behavior in case of measurement error	0 -> stop measuring 1 -> continue measuring

WEFE?

The WEFE? command queries the behavior in case of a measurement error.

If no parameters queries the behavior in case of a measurement error in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> WEFE?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Behavior in case of measurement error	0 -> stop measuring 1 -> continue measuring

If 1 parameter queries the behavior in case of measurement error in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> WEFE? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Behavior in case of measurement error	0 -> stop measuring 1 -> continue measuring

4 Measured Value Display

4.1 MWAN Type of measured value display

MWAN!

The MWAN! command selects the type of measured value display between Ohm, d% and evaluation.

If 1 parameter, the type of display in the currently selected measurement program.

Host sends: <Address>sr<STX> MWAN! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Type of measured value display	0 -> Ohm 1 -> d% 2 -> evaluation

If 2 parameters, type of display in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> MWAN! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Type of measured value display	0 -> Ohm 1 -> d% 2 -> evaluation

MWAN?

The MWAN? command queries the measuring type.

If no parameters type of display in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> MWAN?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Type of measured value display	0 -> Ohm 1 -> d% 2 -> evaluation

If 1 parameter type of display in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> MWAN? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Type of measured value display	0 -> Ohm 1 -> d% 2 -> evaluation

4.2 SOWE Set Point if display in d%

SOWE!

With the SOWE! command the set point if display in d% is entered.

The values must be entered in Ohm without a unit.

If 1 parameter, the set point in the selected measurement program.

Host sends: <Address>sr<STX> SOWE! P1,<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Set point	Float value in Ohm between 0 and 220000

If 2 parameters the set point in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> SOWE! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Set point	Float value in Ohm between 0 and 220000

SOWE?

The SOWE? command queries the set point.

If no parameters the set point in the currently selected measurement program are queried.

The values are returned with the unit.

Host sends: <Address>sr<STX> SOWE?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Set point	Float value in mOhm, Ohm or kOhm

If 1 parameter the set point in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> SOWE? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2, <LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Set point	Float value in mOhm, Ohm or kOhm

5 Maximum / Minimum Function

5.1 FUMM Max / Min Function ON/OFF

FUMM!

The FUMM! command toggles the Max/Min Function ON/OFF.

If 1 parameter, Max/Min Function ON/OFF in the currently selected measurement program.

Host sends: <Address>sr<STX>FUMM! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Max/Min Function	0 -> OFF 1 -> ON

If 2 parameters, Max/Min Function ON/OFF in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX>FUMM! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Max/Min Function	0 -> OFF 1 -> ON

FUMM?

The FUMM? command queries whether Max/Min Function is ON or OFF.

If no parameters, the state of the Max/Min Function in the currently selected measurement program is queried.

Host sends: <Address>sr<STX>FUMM?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Max/Min Function	0 -> OFF 1 -> ON

If 1 parameter the state of the Max/Min Function in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX>FUMM? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Max/Min Function	0 -> OFF 1 -> ON

5.2 REMM Reset the determined Max / Min values

REMM!

The REMM! command resets the determined Max / Min values.

If no parameter, the determined Max / Min values in the currently selected measurement program are reset.

Host sends: <Address>sr<STX>REMM! <LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

If 1 parameters, the determined Max / Min values in the measurement program corresponding to the transferred number are reset.

Host sends: <Address>sr<STX>REMM! P1 <LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31

REMM?

This command does not have a query form.

5.3 GEMM Returns the determined Max / Min values

GEMM!

This command does not have a execute form.

GEMM?

The GEMM? command queries the determined Max / Min values.

If no parameters, the determined Max / Min values in the currently selected measurement program are queried.

Host sends: <Address>sr<STX>GEMM?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po <ENQ>

DIGIFORCE responds: <STX>P1,P2,P3<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Minimum	Float value
P2	Maximum	Float value
P3	Maximum - Minimum	Float value

If 1 parameter the determined Max / Min values in the measurement program corresponding to the transferred number are queried.

Host sends: <Address>sr<STX>GEMM? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2,P3,P4<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Maximum	Float value
P3	Maximum - Minimum	Float value
P4	Maximum - Minimum	Float value

6 Comparator Function

6.1 FUKO Comparator Function ON/OFF

FUKO!

The FUKO! command toggles the comparator function ON/OFF.

If 1 parameter, comparator function ON/OFF in the currently selected measurement program.

Host sends: <Address>sr<STX> FUKO! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Comparator function	0 -> OFF 1 -> ON

If 2 parameters, comparator function ON/OFF in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> FUKO! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Comparator function	0 -> OFF 1 -> ON

FUKO?

The FUKO? command queries whether Comparator Function is ON or OF.

If no parameters, the state of the comparator function in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> FUKO?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Comparator function	0 -> OFF 1 -> ON

If 1 parameter the state of the comparator function in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> FUKO? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Comparator function	0 -> OFF 1 -> ON

6.2 ANGR Comparator Number of Limits

ANGR!

The ANGR! command sets the number of limits (2 or 4).

If 1 parameter, number of limits in the currently selected measurement program.

Host sends: <Address>sr<STX> ANGR! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Number of limits	2 or 4

If 2 parameters, number of limits in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> ANGR! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Number of limits	2 or 4

ANGR?

The ANGR? command queries the number of limits (2 or 4).

If no parameters the number of limits in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> ANGR?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Number of limits	2 or 4

If 1 parameter the number of limits in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> ANGR? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Number of limits	2 or 4

6.3 FEKO Comparator: Behavior if error

FEKO!

The FEKO! command sets the behavior if error (Measured value is not used or is considered too big).

If 1 parameter, the behavior in the currently selected measurement program.

Host sends: <Address>sr<STX> FEKO! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Not used > or >>	0 1

If 2 parameters, the behavior in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> FEKO! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Not used > or >>	0 1

FEKO?

The FEKO? command queries the behavior if error.

If no parameters the behavior in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> FEKO?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Not used > or >>	0 1

If 1 parameter the behavior in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> FEKO? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Not used > or >>	0 1

6.4 GRKO Comparator: Input and query of limit values

GRKO!

With the GRKO! command the 4 limit values are entered. Limit_<<, Limit_<, Limit_> and Limit_>>.

If the number of limits is 2, Limit_<< and Limit_>> are not relevant. The following Condition must be met when entering the values: Limit_<< < Limit_< < Limit_> < Limit_>>.

The values must be entered in Ohm without a unit.

If 4 parameter, the 4l limits in the selected measurement program.

Host sends: <Address>sr<STX> GRKO! P1,P2,P3,P4<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Limit_<<	Float value in Ohm
P2	Limit_<	Float value in Ohm
P3	Limit_>	Float value in Ohm
P4	Limit_>>	Float value in Ohm

If 5 parameters the 4 limits in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> GRKO! P1,P2,P3,P4,P5<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Limit_<<	Float value in Ohm
P3	Limit_<	Float value in Ohm
P4	Limit_>	Float value in Ohm
P5	Limit_>>	Float value in Ohm

GRKO?

The GRKO? command queries the 4 limit values.

If no parameters the 4 limits in the currently selected measurement program are queried.

The values are returned with the unit.

Host sends: <Address>sr<STX> GRKO?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,P2,P3,P4<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Limit_<<	Max. 20 character string with unit
P2	Limit_<	Max. 20 character string with unit
P3	Limit_>	Max. 20 character string with unit
P4	Limit_>>	Max. 20 character string with unit

If 1 parameter the 4 limits in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> GRKO? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2,P3,P4,P5<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Limit_<<	Max. 20 character string with unit
P3	Limit_<	Max. 20 character string with unit
P4	Limit_>	Max. 20 character string with unit
P5	Limit_>>	Max. 20 character string with unit

6.5 REKO Reset Comparator Statistics Values

REKO!

The REKO! command resets the comparator statistics values.

If no parameter, resets the comparator statistics values in the currently selected measurement program.

Host sends: <Address>sr<STX> REKO! <LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

If 1 parameters, resets the comparator statistics values in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> REKO! P1 <LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31

REKO?

This command does not have a query form.

6.6 BEKO Returns the Comparator Statistics Values

BEKO!

This command does not have a execute form.

BEKO?

The BEKO? command queries the comparator statistics values.

If no parameters, the comparator statistics values in the currently selected measurement program are queried.

Host sends: <Address>sr<STX> BEKO?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ

DIGIFORCE responds: <STX>P1,P2,P3,P4,P5,P6<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

If 4 limits

Parameter	Meaning	Value
P1	Number of values < limit_<<	Integer value
P2	Number of values > limit_<< and < limit_<	Integer value
P3	Number of values > limit_< and < limit_>	Integer value
P4	Number of values > limit_> and < limit_>>	Integer value
P5	Number of values > limit_>>	Integer value
P6	Total number of values	Integer value

If 2 limits

Parameter	Meaning	Value
P1	Not relevant	Integer value
P2	Number of values < Limit_<	Integer value
P3	Number of values > limit_< and < limit_>	Integer value
P4	Number of values > limit_>	Integer value
P5	Not relevant	Integer value
P6	Total number of values	Integer value

If 1 parameter the comparator statistics values in the measurement program corresponding to the transferred number are queried.

Host sends: <Address>sr<STX> BEKO? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2,P3,P4,P5,P6,P7<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

If 4 limits

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Number of values < limit_<<	Integer value
P3	Number of values > limit_<< and < limit_<	Integer value
P4	Number of values > limit_< and < limit_>	Integer value
P5	Number of values > limit_> and < limit_>>	Integer value
P6	Number of values > limit_>>	Integer value
P7	Total number of values	Integer value

If 2 limits

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Not relevant	Integer value
P3	Number of values < limit_<	Integer value
P4	Number of values > limit_< and < limit_>	Integer value
P5	Number of values > limit_>	Integer value
P6	Not relevant	Integer value
P7	Total number of values	Integer value

7 Scaling of voltage input

7.1 VILV Lower voltage for scaling of voltage input

VILV!

With the VILV! command the lower voltage for scaling of the voltage input is entered.

If 1 parameter, lower voltage of the selected measurement program.

Host sends: <Address>sr<STX> VILV! P1,<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Lower voltage	Float value in V between 0 and 11 V

If 2 parameters lower voltage in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> VILV! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Lower voltage	Float value in V between 0 and 11 V

VILV?

The VILV? command queries the lower voltage for scaling of the voltage.

If no parameters the lower voltage in the currently selected measurement program are queried.

The values are returned with the unit.

Host sends: <Address>sr<STX> VILV?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Lower voltage	Float value in V between 0 and 11 V

If 1 parameter the lower voltage in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> VILV? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2, <LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Lower voltage	Float value in V between 0 and 11 V

7.2 VIHV Higher voltage for scaling of voltage input

VIHV!

With the VIHV! command the higher voltage for scaling of the voltage input is entered.

If 1 parameter, higher voltage of the selected measurement program.

Host sends: <Address>sr<STX> VIHV! P1,<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Higher voltage	Float value in V between 0 and 11 V

If 2 parameters higher voltage in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> VIHV! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Higher voltage	Float value in V between 0 and 11 V

VIHV?

The VIHV? command queries the higher voltage for scaling of the voltage.

If no parameters the higher voltage in the currently selected measurement program are queried.

The values are returned with the unit.

Host sends: <Address>sr<STX> VIHV?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Higher voltage	Float value in V between 0 and 11 V

If 1 parameter the higher voltage in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> VIHV? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2, <LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Higher voltage	Float value in V between 0 and 11 V

7.3 VILT Lower temperature for scaling of voltage input

VILT!

With the VILT! command the lower temperature for scaling of the voltage input is entered.

If 1 parameter, lower temperature the selected measurement program.

Host sends: <Address>sr<STX> VILT! P1,<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Lower temperature	Float value in °C between -200 and 800

If 2 parameters lower temperature in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> VILT! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Lower temperature	Float value in °C between -200 and 800

VILT?

The VILT? command queries the lower temperature for scaling of the voltage.

If no parameters the lower temperature in the currently selected measurement program are queried.

The values are returned with the unit.

Host sends: <Address>sr<STX> VILT?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Lower temperature	Float value in °C between -200 and 800

If 1 parameter the lower temperature in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> VILT? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2, <LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Lower temperature	Float value in °C between -200 and 800

7.4 VIHT Higher temperature for scaling of voltage input

VIHT!

With the VIHT! command the higher temperature for scaling of the voltage input is entered.

If 1 parameter, higher temperature the selected measurement program

Host sends: <Address>sr<STX> VILT! P1,<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Higher temperature	Float value in °C between -200 and 800

If 2 parameters higher temperature in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> VILT! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Higher temperature	Float value in °C between -200 and 800

VIHT?

The VIHT? command queries the higher temperature for scaling of the voltage.

If no parameters the higher temperature in the currently selected measurement program are queried.

The values are returned with the unit.

Host sends: <Address>sr<STX> VIHT?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Higher temperature	Float value in °C between -200 and 800

If 1 parameter the higher temperature in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> VIHT? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2, <LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Higher temperature	Float value in °C between -200 and 800

8 Coefficients of Pt100 formula

8.1 KOFR Ro of Pt100 formula

KOFR!

With the KOFR! command Ro of the Pt100 formula is entered.

If 1 parameter, Ro in the selected measurement program.

Host sends: <Address>sr<STX> KOFR! P1,<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Ro	Float value between 90.0 and 110.0

If 2 parameters Ro in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> KOFR! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Ro	Float value between 90.0 and 110.0

KOFR?

The KOFR? command queries Ro of the Pt100 formula.

If no parameters Ro in the currently selected measurement program are queried.

The values are returned with the unit.

Host sends: <Address>sr<STX> KOFR?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Ro	Float value between 90.0 and 110.0

If 1 parameter Ro in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> KOFR? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2, <LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Ro	Float value between 90.0 and 110.0

8.2 KOFA Coefficient A of Pt100 formula

KOFA!

With the KOFA! command Coefficient A of the Pt100 formula is entered.

If 1 parameter, Coefficient A in the selected measurement program.

Host sends: <Address>sr<STX> KOFA! P1,<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Coefficient A	Float value between 3.0E-3 and 6.0E-3

If 2 parameters Coefficient A in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> KOFA! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Coefficient A	Float value between 3.0E-3 and 6.0E-3

KOFA?

The KOFA? command queries Coefficient A of the Pt100 formula.

If no parameters Coefficient A in the currently selected measurement program are queried.

The values are returned with the unit.

Host sends: <Address>sr<STX> KOFA?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Coefficient A	Float value between 3.0E-3 and 6.0E-3

If 1 parameter Coefficient A in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> KOFA? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2, <LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Coefficient A	Float value between 3.0E-3 and 6.0E-3

8.3 KOFB Coefficient B of Pt100 formula

KOFB!

With the KOFB! command Coefficient B of the Pt100 formula is entered.

If 1 parameter, Coefficient B in the selected measurement program.

Host sends: <Address>sr<STX> KOFB! P1,<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Coefficient B	Float value between -5.0E-6 and 5.0E-6

If 2 parameters Coefficient B in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> KOFB! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Coefficient B	Float value between -5.0E-6 and 5.0E-6

KOFB?

The KOFB? command queries Coefficient B of the Pt100 formula.

If no parameters Coefficient B in the currently selected measurement program are queried.

The values are returned with the unit.

Host sends: <Address>sr<STX> KOFB?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Coefficient B	Float value between -5.0E-6 and 5.0E-6

If 1 parameter Coefficient B in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> KOFB? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2, <LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Coefficient B	Float value between -5.0E-6 and 5.0E-6

8.4 KORE Resets the coefficients to their default values

KORE!

The KORE! command resets the coefficients to their default values.

If no parameter, the coefficients in the currently selected measurement program are reset.

Host sends: <Address>sr<STX> KORE! <LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

If 1 parameters, the coefficients in the measurement program corresponding to the transferred number are reset.

Host sends: <Address>sr<STX> KORE! P1 <LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31

KORE?

This command does not have a query form.

9 Temperature compensation

9.1 TEKO Temperature compensation: ON or OFF

TEKO!

The TEKO! command toggles the temperature compensation ON or OFF.

If 1 parameter toggles the compensation in the currently selected measurement program.

Host sends: <Address>sr<STX> TEKO! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	temperature compensation	0 -> OFF 1 -> ON

If 2 parameters, toggles the compensation in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> TEKO! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	temperature compensation	0 -> OFF 1 -> ON

TEKO?

The TEKO? command queries the compensation.

If no parameters queries the compensation in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> TEKO?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	temperature compensation	0 -> OFF 1 -> ON

If 1 parameter queries the compensation in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> TEKO? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	temperature compensation	0 -> OFF 1 -> ON

9.2 TEER Detection of Temperature

TEER!

The TEER! command selects the detection of temperature between Pt100, U input and manual.

If 1 parameter, the detection in the currently selected measurement program.

Host sends: <Address>sr<STX> TEER! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Detection of temperature	0 -> manual 1 -> Pt100 2 -> U input

If 2 parameters, the detection in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> TEER! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Detection of temperature	0 -> manual 1 -> Pt100 2 -> U input

TEER?

The TEER? command queries detection.

If no parameters the detection in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> TEER?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Detection of temperature	0 -> manual 1 -> Pt100 2 -> U input

If 1 parameter the detection in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> TEER? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Detection of temperature	0 -> manual 1 -> Pt100 2 -> U input

9.3 MATE Manual Temperature if manual temperature detection

MATE!

With the MATE! command the manual temperature is entered.

If 1 parameter, the manual temperature of the selected measurement program.

Host sends: <Address>sr<STX> MATE! P1,<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Manual temperature	Float value in °C between -200 and 999

If 2 parameters the manual temperature in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> MATE! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Manual temperature	Float value in °C between -200 and 999

MATE?

The MATE? command queries the manual temperature.

If no parameters the lower the manual temperature in the currently selected measurement program are queried.

The values are returned with the unit.

Host sends: <Address>sr<STX> MATE?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Manual temperature	Float value in °C between -200 and 999

If 1 parameter the the manual temperature in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> MATE? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2, <LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Manual temperature	Float value in °C between -200 and 999

9.4 BETE Reference Temperature

BETE!

With the BETE! command the reference temperature is entered.

If 1 parameter, the reference temperature of the selected measurement program.

Host sends: <Address>sr<STX> BETE! P1,<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Reference temperature	Float value in °C between -200 and 999

If 2 parameters the reference temperature in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> BETE! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Reference temperature	Float value in °C between -200 and 999

BETE?

The BETE? command queries the reference temperature.

If no parameters the lower the reference temperature in the currently selected measurement program are queried.

The values are returned with the unit.

Host sends: <Address>sr<STX> BETE?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Reference temperature	Float value in °C between -200 and 999

If 1 parameter the reference temperature in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> BETE? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2, <LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Reference temperature	Float value in °C between -200 and 999

9.5 KOEF Temperature coefficient is selected

KOEF!

The KOEF! command selects the temperature coefficient.

Coeffizients 0 to 8 are fix. Coeffizient 9 can be changed with BEKO! Command.

If 1 parameter, selects the temperature coefficient in the currently selected measurement program.

Host sends: <Address>sr<STX> KOEF! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Temperature coefficient	0 -> 1600 ppm/K 1 -> 1700 ppm/K 2 -> 2400 ppm/K 3 -> 3100 ppm/K 4 -> 3930 ppm/K 5 -> 4030 ppm/K 6 -> 4500 ppm/K 7 -> 4800 ppm/K 8 -> 6000 ppm/K 9 -> 6500 ppm/K

If 2 parameters, selects the temperature coefficient in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> KOEF! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Temperature coefficient	0 -> 1600 ppm/K 1 -> 1700 ppm/K 2 -> 2400 ppm/K 3 -> 3100 ppm/K 4 -> 3930 ppm/K 5 -> 4030 ppm/K 6 -> 4500 ppm/K 7 -> 4800 ppm/K 8 -> 6000 ppm/K 9 -> 6500 ppm/K

KOEF?

The KOEF? command queries the measuring range.

If no parameters, the temperature coefficient in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> KOEF?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Number of temperature coefficient	0 to 9
P2	Temperature coefficient without number	1600 ppm/K 1700 ppm/K 2400 ppm/K 3100 ppm/K 3930 ppm/K 4030 ppm/K 4500 ppm/K 4800 ppm/K 6000 ppm/K 6500 ppm/K

If 1 parameter the temperature coefficient in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> KOEF? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2,P3<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Number of temperature coefficient.	0 to 9
P3	Temperature coefficient without number.	1600 ppm/K 1700 ppm/K 2400 ppm/K 3100 ppm/K 3930 ppm/K 4030 ppm/K 4500 ppm/K 4800 ppm/K 6000 ppm/K 6500 ppm/K

9.6 BKOF User defined temperature coefficient

BKOF!

With the BKOF! command the user defined temperature coefficient is entered.

If 1 parameter, the coefficient of the selected measurement program.

Host sends: <Address>sr<STX> BKOF! P1,<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	User defined temperature coefficient	Integer value in between 1000 and 9999

If 2 parameters the coefficient in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> BKOF! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	User defined temperature coefficient	Integer value in between 1000 and 9999

BKOF?

The BKOF? command queries the user defined temperature coefficient.

If no parameters the coefficient in the currently selected measurement program are queried.

The values are returned with the unit.

Host sends: <Address>sr<STX> BKOF?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	User defined temperature coefficient	Integer value in between 1000 and 9999

If 1 parameter the coefficient in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> BKOF? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2, <LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	User defined temperature coefficient	Integer value in between 1000 and 9999

10 Cooling Curve Function

10.1 FUAB Cooling Curve Function ON/OFF

FUAB!

The FUAB! command switches the cooling curve function ON/OFF.

If 1 parameter, cooling curve function ON/OFF in the currently selected measurement program.

Host sends: <Address>sr<STX> FUAB! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Cooling curve function	0 -> OFF 1 -> ON

If 2 parameters, cooling curve function ON/OFF in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> FUAB! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Cooling curve function	0 -> OFF 1 -> ON

FUAB?

The FUAB? command queries whether cooling curve function is ON or OFF.

If no parameters, the state of the cooling curve function in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> FUAB?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Cooling curve function	0 -> OFF 1 -> ON

If 1 parameter the state of the cooling curve function in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> FUAB? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Cooling curve function	0 -> OFF 1 -> ON

10.2 INVT Cooling Curve Interval Time

INVT!

With the INVT! command the cooling curve interval time (in seconds) is entered.

If 1 parameter, the interval time in the selected measurement program.

Host sends: <Address>sr<STX> INVT! P1,<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Interval time	Integer value between 1 and 100

If 2 parameters, the interval time in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> INVT! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Interval time	Integer value between 1 and 100

INVT?

The INVT? command queries the cooling curve interval time (in seconds).

If no parameters, the interval time in the currently selected measurement program are queried.

The values are returned with the unit.

Host sends: <Address>sr<STX> INVT?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Interval time	Integer value between 1 and 100

If 1 parameter; the interval time in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> INVT? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2, <LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Interval time	Integer value between 1 and 100

10.3 EINT Cooling Curve Settling Time

EINT!

With the EINT! command the cooling curve settling time (in seconds) is entered.

If 1 parameter, the settling time in the selected measurement program.

Host sends: <Address>sr<STX> EINT! P1,<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Settling time	Integer value between 1 and 100

If 2 parameters, the settling time in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> EINT! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Settling time	Integer value between 1 and 100

EINT?

The EINT? command queries the cooling curve settling time (in seconds).

If no parameters, the settling time in the currently selected measurement program are queried.

The values are returned with the unit.

Host sends: <Address>sr<STX> EINT?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Settling time	Integer value between 1 and 100

If 1 parameter; the settling time in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> EINT? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2, <LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Settling time	Integer value between 1 and 100

10.4 MEND Cooling Curve Measuring End Time

MEND!

With the MEND! command the cooling measuring end time (in seconds) is entered.

If 1 parameter, the measuring end time in the selected measurement program.

Host sends: <Address>sr<STX> MEND! P1,<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measuring end time	Integer value between 10 and 100 000

If 2 parameters, the measuring end time in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> MEND! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Measuring end time	Integer value between 10 and 100 000

MEND?

The MEND? command queries the cooling curve measuring end time (in seconds).

If no parameters, measuring end time in the currently selected measurement program are queried.

The values are returned with the unit.

Host sends: <Address>sr<STX> MEND?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measuring end time	Integer value between 10 and 100 000

If 1 parameter; the measuring end time in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> MEND? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2, <LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Measuring end time	Integer value between 10 and 100 000

10.5 ABMW Query Cooling Curve Measurement Values

ABMW!

This command does not have a execute form.

ABMW?

The ABMW? command queries the cooling curve measurement values.

If 1 parameter, the cooling curve measurement values in the selected measurement program.

The values are returned with the unit.

Host sends: <Address>sr<STX> ABMW? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2,P3, P4<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Number of stored measurement value (starting with 0)	Integer value
P2	Timestamp in Seconds	Float value
P3	State (bit coded)	10 bit value Logical **OR** combined status: 0: No Error 1: Measurement range exceeded 2: Current overflow 4: Voltage overflow 8: Temperature compensation error 16: PT100 Measurement error 32: Cable break 64: Zero compensation error 128: First Value after Start of Measurement 256: USB-Logging error 512: Cooling Curve active
P4	Measured Resistance value with unit (mOhm, Ohm or kOhm)	Float value with unit

If 2 parameter; the cooling curve measurement values in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> ABMW? P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P3, P4, P5<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Number of stored measurement value (starting with 0)	Integer value
P3	Timestamp in Seconds	Float value
P4	State (bit coded)	10 bit value Logical **OR** combined status: 0: No Error 1: Measurement range exceeded 2: Current overflow 4: Voltage overflow 8: Temperature compensation error 16: PT100 Measurement error 32: Cable break 64: Zero compensation error 128: First Value after Start of Measurement 256: USB-Logging error 512: Cooling Curve active
P5	Measured Resistance value with unit (mOhm, Ohm or kOhm)	Float value with unit

10.6 ENLO End Load of Cooling Curve

ENLO!

The ENLO! command signals the load end of the inductive device under test before the cooling curve is recorded.

Host sends:	<Address>sr<STX>ENLO!<LF><ETX>[<BCC>]
DIGIFORCE responds:	<ACK>
Host sends:	<EOT>

ENLO?

This command does not have a query form.

11 Datalogger Function

11.1 DAFU Datalogger Function ON/OFF

DAFU!

The DAFU! command toggles the datalogger function ON/OFF.

If 1 parameter, datalogger function ON/OFF in the currently selected measurement program.

Host sends: <Address>sr<STX> DAFU! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Datalogger function	0 -> OFF 1 -> ON

If 2 parameters, datalogger function ON/OFF in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> DAFU! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Datalogger function	0 -> OFF 1 -> ON

DAFU?

The DAFU? command queries whether datalogger function is ON or OFF.

If no parameters, the state of the datalogger function in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> DAFU?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Datalogger function	0 -> OFF 1 -> ON

If 1 parameter the state of the datalogger function in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> DAFU? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Datalogger function	0 -> OFF 1 -> ON

11.2 DAFI Datalogger Filter

DAFI!

The DAFI! command selects the datalogger filter.

If 1 parameter, selects the datalogger filter in the currently selected measurement program.

Host sends: <Address>sr<STX> DAFI! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Datalogger filter	0 -> Record all values 1 -> Record only valid values 2 -> Record only invalid values 3 -> Record every n. value 4 -> Record if time > Delta t 5 -> Record if |value(i) – value(i-1)| >= Delta R

If 2 parameters, selects the datalogger filter in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> DAFI! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Datalogger filter	0 -> Record all values 1 -> Record only valid values 2 -> Record only invalid values 3 -> Record every n. value 4 -> Record if time > Delta t 5 -> Record if |value(i) – value(i-1)| >= Delta R

DAFI?

The DAFI? command queries the datalogger filter.

If no parameters, the datalogger filter in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> DAFI?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Datalogger filter	0 -> Record all values 1 -> Record only valid values 2 -> Record only invalid values 3 -> Record every n. value 4 -> Record if time > Delta t 5 -> Record if |value(i) – value(i-1)| >= Delta R

If 1 parameter the datalogger filter in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> DAFI? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Datalogger filter	0 -> Record all values 1 -> Record only valid values 2 -> Record only invalid values 3 -> Record every n. value 4 -> Record if time > Delta t 5 -> Record if |value(i) – value(i-1)| >= Delta R

11.3 DANW N. Value (Filter Parameter)

DANW!

With the DANW! command the filter parameter n. value is entered.

If 1 parameter, n. value in the currently selected measurement program.

Host sends: <Address>sr<STX> DANW! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	N. value	A value between 2 and 200

If 2 parameters, n. value in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> DANW! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	N. value	A value between 2 and 200

DANW?

The DANW? command queries n. value.

If no parameters n. value in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> DANW?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	N. value	A value between 2 and 200

If 1 parameter n. value in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> DANW? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	N. value	A value between 2 and 200

11.4 DADT Delta t (Filter Parameter)

DADT!

With the DADT! command the filter parameter delta t is entered.

If 3 parameter, delta t in the currently selected measurement program.

Host sends: <Address>sr<STX> DADT! P1;P2,P3<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Hours	A value between 0 and 99
P2	Minutes	A value between 0 and 59
P3	Seconds	A value between 0 and 59

If 4 parameters, delta t in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> DADT! P1,P2,P3,P4<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Hours	A value between 0 and 99
P3	Minutes	A value between 0 and 59
P4	Seconds	A value between 0 and 59

DADT?

The DADT? command queries delta t.

If no parameters delta t in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> DADT?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,P2,P3<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Hours	A value between 0 and 100
P2	Minutes	A value between 0 and 59
P3	Seconds	A value between 0 and 59

If 1 parameter delta t in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> DADT? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2,P3,P4<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Hours	A value between 0 and 100
P3	Minutes	A value between 0 and 59
P4	Seconds	A value between 0 and 59

11.5 DADR Delta R (Filter Parameter)

DADR!

With the DADR! command the filter parameter delta R is entered.

If 1 parameter, delta R in the currently selected measurement program.

Host sends: <Address>sr<STX> DADR! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Delta R	A value between 0 and 200000 Ohm

If 2 parameters, delta R in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> DADR! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Delta R	A value between 0 and 200000 Ohm

DADR?

The DADR? command queries delta R.

If no parameters delta R in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> DADR?<LF><ETX>[<BCC>]
DIGIFORCE responds: <ACK>
Host sends: <EOT>

Host sends: <Address>po<ENQ>
DIGIFORCE responds: <STX>P1 <LF><ETX>[<BCC>]
Host sends: <ACK>
DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Delta R	A value between 0 and 200000 Ohm

If 1 parameter delta R in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> DADR? P1<LF><ETX>[<BCC>]
DIGIFORCE responds: <ACK>
Host sends: <EOT>

Host sends: <Address>po<ENQ>
DIGIFORCE responds: <STX>P2 <LF><ETX>[<BCC>]
Host sends: <ACK>
DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Delta R	A value between 0 and 200000 Ohm

11.6 DABE Datalogger Designation

DABE!

With the DABE! command the designation of the datalogger is entered.

If 1 parameter, designation in the currently selected measurement program.

Host sends: <Address>sr<STX> DABE! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Designation	String of max 50 characters

If 2 parameters, designation in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> DABE! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Designation	String of max 50 characters

DABE?

The DABE? command queries the designation.

If no parameters the designation in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> DADR?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1 <LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Designation	String of max 50 characters

If 1 parameter the designation in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> DABE? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2 <LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Designation	String of max 50 characters

11.7 DAFS Returns the free Datalogger space

DAFS!

This command does not have a execute form.

DAFS?

The DAFS? command queries the free datalogger space.

If no parameters, the free datalogger space in the currently selected measurement program are queried.

Host sends: <Address>sr<STX> DAFS?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po <ENQ>

DIGIFORCE responds: <STX>P1, <LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Free datalogger space	Integer value

If 1 parameter the free datalogger space in the measurement program corresponding to the transferred number are queried.

Host sends: <Address>sr<STX> DAFS? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2, <LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Free datalogger space	Integer value

11.8 DARE Clear Datalogger

DARE!

The DARE! command clears the datalogger.

If no parameter, clears the datalogger in the currently selected measurement program.

Host sends: <Address>sr<STX> DARE! <LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

If 1 parameters, clears the datalogger in the measurement program corresponding to the transferred number are reset.

Host sends: <Address>sr<STX> DARE! P1 <LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31

DARE?

This command does not have a query form.

11.9 DAAW Returns the Number of stored Values

DAAW!

This command does not have a execute form.

DAAW?

The DAAW? command queries the number of stored values.

If no parameters, the number of stored values in the currently selected measurement program are queried.

Host sends: <Address>sr<STX> DAAW?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po <ENQ>

DIGIFORCE responds: <STX>P1,<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Number of stored values	Integer value

If 1 parameter the number of stored values in the measurement program corresponding to the transferred number are queried.

Host sends: <Address>sr<STX> DAAW? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2, <LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Number of stored values	Integer value

11.10 DAMW Returns stored Measurement Values

DAMW!

This command does not have a execute form.

DAMW?

The DAMW? command queries the stored measurement values.

If 1 parameters, the stored measurement values in the currently selected measurement program are queried.

Host sends: <Address>sr<STX> DAMW? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po <ENQ>

DIGIFORCE responds: <STX>P2,P3,P4,P5,P6,<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Storage number	Integer value
P2	Date	dd.mm.yyyy
P3	Time	hh:mm:ss
P4	Delta Time in ms	Integer value
P5	State (bit coded)	10 bit value Logical **OR** combined status: 0: No Error 1: Measurement range exceeded 2: Current overflow 4: Voltage overflow 8: Temperature compensation error 16: PT100 Measurement error 32: Cable break 64: Zero compensation error 128: First Value after Start of Measurement 256: USB-Logging error 512: Cooling Curve active
P6	Stored Resistance value	Float value

If 2 parameter the stored measurement values in the measurement program corresponding to the transferred number are queried.

Host sends: <Address>sr<STX> DAMW? P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P3,P4,P5,P6,P7 <LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Storage number	Integer value
P3	Date	dd.mm.yyyy
P4	Time	hh:mm:ss
P5	Delta Time in ms	Integer value
P6	State (bit coded)	10 bit value Logical **OR** combined status: 0: No Error 1: Measurement range exceeded 2: Current overflow 4: Voltage overflow 8: Temperature compensation error 16: PT100 Measurement error 32: Cable break 64: Zero compensation error 128: First Value after Start of Measurement 256: USB-Logging error 512: Cooling Curve active
P7	Stored Resistance value	Float value

11.11 DAST Returns stored Statistic Values

DAST!

This command does not have a execute form.

DAST?

The DAST? command queries the stored statistic values.

If no parameters, the stored statistic values in the currently selected measurement program are queried.

Host sends: <Address>sr<STX> DAST?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po <ENQ>

DIGIFORCE responds: <STX>P1,P2,P3,P4<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Minimum	Float value with unit
P2	Maximum	Float value with unit
P3	Average	Float value with unit
P4	Deviation	Float value with unit

If 1 parameter the stored statistic values in the measurement program corresponding to the transferred number are queried.

Host sends: <Address>sr<STX> DAST? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2,P3,P4,P5,P <LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Minimum	Float value with unit
P3	Maximum	Float value with unit
P4	Average	Float value with unit
P5	Deviation	Float value with unit

12 Assigning function keys

12.1 FKEY Set or query function key assignments

FKEY!

The FKEY! command sets the F key assignments 1 to 3 in the measurement menus.

Host sends: <Address>sr<STX>FKEY! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	F key number	0 -> F1 key 1 -> F2 key 2 -> F3 key
P2	Assignment	0 -> OFF 1 -> Start/stop measurement 2 -> Increment measurement program 3 -> Decrement measurement program 4 -> End Load 5 -> Increment range 6 -> Decrement range

FKEY?

The FKEY? command queries the F key assignments.

Host sends: <Address>sr<STX>FKEY? P1<LF><ETX>[<BCC>]
DIGIFORCE responds: <ACK>
Host sends: <EOT>

Host sends: <Address>po<ENQ>
DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]
Host sends: <ACK>
DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	F key number	0 -> F1 key 1 -> F2 key 2 -> F3 key
P2	Assignment	0 -> OFF 1 -> Start/stop measurement 2 -> Increment measurement program 3 -> Decrement measurement program 4 -> End Load 5 -> Increment range 6 -> Decrement range

12.2 FKAU Hide or show function keys

FKAU!

The FKAU! command defines whether the function keys are always shown or hidden in the measurement menus.

Host sends: <Address>sr<STX>FKAU! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	F keys always shown or hidden	0 -> Hidden 1 -> Always shown

FKAU?

The FKAU? command queries whether the function keys are always shown or hidden in the measurement menus.

Host sends: <Address>sr<STX>FKAU?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	F keys always shown or hidden	0 -> Hidden 1 -> Always shown

13 Test Mode

13.1 TEST Switch ON test mode for numerical configuration

NOTE: Command not allowed when measurement running

TEST!

The TEST! command enables or disables the test mode. With test mode ON, no measurements can be started. Although the device continues to read in the PLC inputs, it does not respond to them.

Host sends: <Address>sr<STX>TEST! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Test mode ON/OFF	0 -> Test mode is switched OFF 1 -> Test mode is switched ON

TEST?

The TEST? command queries the current status of the test mode.

Host sends: <Address>sr<STX>TEST?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Test mode ON/OFF	0 -> Test mode is switched OFF 1 -> Test mode is switched ON

14 PLC outputs/inputs

14.1 SPSA Set selectable PLC output assignments

SPSA!

The SPSA! command sets the selectable PLC output assignments.

Host sends: <Address>sr<STX>SPSA! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Number of the PLC output	0 -> Output 1 (pin 14) 1 -> Output 2 (pin 15) 2 -> Output 3 (pin 16) 3 -> Output 4 (pin 17) 4 -> Output 5 (pin 18) 5 -> Output 6 (pin 19) 6 -> Output 7 (pin 20) 7 -> Output 8 (pin 21) 8 -> Output 9 (pin 22) 9 -> Output 10 (pin 23) 10 -> Output 11 (pin 24) 11 -> Output 12 (pin 25)
P2	Assignment of the PLC output	0 -> OUT_READY 1 -> OUT_MEAS_END 2 -> OUT_MEAS_ERR 3 -> OUT_STROBE 4 -> OUT_PROG0 5 -> OUT_PROG1 6 -> OUT_PROG2 7 -> OUT_PROG3 8 -> OUT_PROG4 9 -> OUT_ERROR 10 -> OUT_COMP_>> 11 -> OUT_COMP_> 12 -> OUT_COMP_= 13 -> OUT_COMP_< 14 -> OUT_COMP_< 15 -> OUT_AUX0 16 -> OUT_AUX1 17 -> OUT_AUX2 18 -> OUT_AUX3

SPSA?

The SPSA? command queries the selectable PLC output assignments.

Host sends: <Address>sr<STX>SPSA? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Number of the PLC output	0 -> Output 1 (pin 14) 1 -> Output 2 (pin 15) 2 -> Output 3 (pin 16) 3 -> Output 4 (pin 17) 4 -> Output 5 (pin 18) 5 -> Output 6 (pin 19) 6 -> Output 7 (pin 20) 7 -> Output 8 (pin 21) 8 -> Output 9 (pin 22) 9 -> Output 10 (pin 23) 10 -> Output 11 (pin 24) 11 -> Output 12 (pin 25)
P2	Assignment of the PLC output	0 -> OUT_READY 1 -> OUT_MEAS_END 2 -> OUT_MEAS_ERR 3 -> OUT_STROBE 4 -> OUT_PROG0 5 -> OUT_PROG1 6 -> OUT_PROG2 7 -> OUT_PROG3 8 -> OUT_PROG4 9 -> OUT_ERROR 10 -> OUT_COMP_>> 11 -> OUT_COMP_> 12 -> OUT_COMP_= 13 -> OUT_COMP_< 14 -> OUT_COMP_< 15 -> OUT_AUX0 16 -> OUT_AUX1 17 -> OUT_AUX2 18 -> OUT_AUX3

14.2 SPSO Set PLC outputs

SPSO!

NOTE: This command is permitted only when test mode ON.

The SPSO! command selectively sets the PLC outputs for test purposes.

Host sends: <Address>sr<STX>SPSO! P1,P2,P3<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	PLC output byte 1	In hex format; see table
P2	PLC output byte 2	In hex format; see table
P3	Fieldbus out 32 bit	In hex format; see table

SPSO?

The SPSO? command queries the current status of the PLC outputs.

Host sends: <Address>sr<STX>SPSO?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,P2,P3<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	PLC output byte 1	In hex format; see table
P2	PLC output byte 2	In hex format; see table
P3	Fieldbus out 32 bit	In hex format; see table

PLC output register assignment

	D7	D6	D5	D4	D3	D2	D!	D0
Out 1	WHL11	WHL6	WHL5	WHL4	WHL3	WHL2	WHL1	WHL0
Out 2	----	----	----	----	WHL10	WHL9	WHL8	WHL7

WHL0 -> Output 1 (pin 14)
WHL1 -> Output 2 (pin 15)
WHL2 -> Output 3 (pin 16
WHL3 -> Output 4 (pin 17)
WHL4 -> Output 5 (pin 18)
WHL5 -> Output 6 (pin 19)
WHL6 -> Output 7 (pin 20)
WHL7 -> Output 8 (pin 21)
WHL8 -> Output 9 (pin 22)
WHL9 -> Output 10 (pin 23)
WHL10 -> Output 11 (pin 24)
WHL11 -> Output 12 (pin 25)

Fieldbus out

Bit	Meaning
D0	READY
D1	NC
D2	Measurement Ended
D3	Measurement Error
D4	ERROR
D5	NC
D6	NC
D7	NC
D8	Out-Prog0
D9	Out-Prog1
D10	Out-Prog2
D11	Out-Prog3
D12	Out-Prog4
D13	NC
D14	NC
D15	Out-Prog-Strobe
D16	NC
D17	NC
D18	NC
D19	NC
D20	Out-AUX0
D21	Out-AUX1
D22	Out-AUX2
D23	Out-AUX3
D24	Comparator >>
D25	Comparator >
D26	Comparator =
D27	Comparator <
D28	Comparator <<
D29	NC
D30	NC
D31	NC

14.3 SPIC Set selectable PLC input assignments

SPIC!

The SPIC! command sets the selectable PLC input assignments.

Host sends: <Address>sr<STX>SPIC! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Number of the PLC input	0 -> Input 1 (pin 4) 1 -> Input 2 (pin 5) 2 -> Input 3 (pin 6) 3 -> Input 4 (pin 7) 4 -> Input 8 (pin 11)
P2	Assignment of the PLC input	0 -> SPS_IN_WHL_AUTO 1 -> SPS_IN_WHL_RESET_STAT 2 -> SPS_IN_WHL_STROBE 3 -> SPS_IN_WHL_ASK_ERROR 4 -> SPS_IN_WHL_COMP_START 5 -> SPS_IN_WHL_MAX_MIN_START 6 -> SPS_IN_WHL_LOGGER_START 7 -> SPS_IN_WHL_END_LOAD 8 -> SPS_IN_WHL_AUX0 9 -> SPS_IN_WHL_AUX1 10 -> SPS_IN_WHL_AUX2 11 -> SPS_IN_WHL_AUX3

SPIC?

The SPIC? command queries the selectable PLC input assignments.

Host sends: <Address>sr<STX>SPIC? P1<LF><ETX>[<BCC>]
DIGIFORCE responds: <ACK>
Host sends: <EOT>

Host sends: <Address>po<ENQ>
DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]
Host sends: <ACK>
DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Number of the PLC input	0 -> Input 1 (pin 4) 1 -> Input 2 (pin 5) 2 -> Input 3 (pin 6) 3 -> Input 4 (pin 7) 4 -> Input 8 (pin 11)
P2	Assignment of the PLC input	0 -> SPS_IN_WHL_AUTO 1 -> SPS_IN_WHL_RESET_STAT 2 -> SPS_IN_WHL_STROBE 3 -> SPS_IN_WHL_ASK_ERROR 4 -> SPS_IN_WHL_COMP_START 5 -> SPS_IN_WHL_MAX_MIN_START 6 -> SPS_IN_WHL_LOGGER_START 7 -> SPS_IN_WHL_END_LOAD 8 -> SPS_IN_WHL_AUX0 9 -> SPS_IN_WHL_AUX1 10 -> SPS_IN_WHL_AUX2 11 -> SPS_IN_WHL_AUX3

NOTE: There are some restrictions:

Only pins 4, 5, 6, 7 and 11 can be freely configured, the remaining ones are statically assigned.

14.4 SPSI Fetch PLC inputs

SPSI!

This command does not have a execute form.

SPSI?

The SPSI? command reads the PLC inputs.

Host sends: <Address>sr<STX>SPSI?<LF><ETX>[<BCC>]
DIGIFORCE responds: <ACK>
Host sends: <EOT>

Host sends: <Address>po<ENQ>
DIGIFORCE responds: <STX>P1,P2,P3<LF><ETX>[<BCC>]
Host sends: <ACK>
DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	PLC input register 1 (SPSI1)	Byte hex coded (see table)
P2	PLC input register 2 (SPSI2)	Byte hex coded (see table)
P3	Input Fieldbus	32 bit hex Code (see table)

PLC input register assignment

	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
SPSI1	----	----	----	WHL4	WHL3	WHL2	WHL1	WHL0
SPSI2	----	----	----	----	PROG3	PROG2	PROG1	PROG0

Input Fieldbus

Bit	Meaning
D0	Ready
D1	Measurement Ended
D2	Measurement Error
D3	Program Strobe
D4	Program Bit 0
D5	Program Bit 1
D6	Program Bit 2
D7	Program Bit 3
D8	Program Bit 4
D9	Device Error
D10	Comparator >>
D11	Comparator >
D12	Comparator =
D13	Comparator <
D14	Comparator <<
D15	In-AUX0
D16	In-AUX1
D17	In-AUX2
D18	In-AUX3
D19	NC
D20	NC
D21	NC
D22	NC
D23	NC
D24	NC
D25	NC
D26	NC
D27	NC
D28	NC
D29	NC
D30	NC
D31	NC

CAUTION: The unused bits are always 1.

15 Access permissions

15.1 MPAS Enter or query master password

MPAS!

The MPAS! command lets the user enter a new master password.

Host sends: <Address>sr<STX>MPAS! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	The new master password	It must consist of 4 numerics (0 to 9)

MPAS?

The MPAS? command queries the master password.

Host sends: <Address>sr<STX>MPAS?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	The set master password	4 numerics (0 to 9)

15.2 MRES Reset master password to default

MRES!

The MRES! command resets the master password to its default.

Host sends: <Address>sr<STX>MRES!<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

MPAS?

This command does not have a query form.

15.3 UPAS Enter or query user password

UPAS!

The UPAS! command lets the user enter a new user password.

Host sends: <Address>sr<STX>UPAS! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	The new user password	It must consist of 4 numerics (0 to 9)

UPAS?

The UPAS? command queries the user password.

Host sends: <Address>sr<STX>UPAS?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	The set user password	4 numerics (0 to 9)

15.4 PASP Query or enable/disable password protection

PASP!

The PASP! command enables or disables password protection.

Host sends: <Address>sr<STX>PASP! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Setting password protection	0 -> Password protection OFF 1 -> Password protection ON

PASP?

The PASP? command queries the password protection setting.

Host sends: <Address>sr<STX>PASP?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	The set password protection	0 -> Password protection OFF 1 -> Password protection ON

15.5 ZUGR Enable/lock or query access levels

ZUGR!

The ZUGR! command locks or disables the various access levels.

Host sends: <Address>sr<STX>ZUGR! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Access level number	0 -> Basic Setup 1 -> Program selection 2 -> Program copy 3 -> Measurement mode 4 -> Test operation 5 -> External memory 6 -> Comparator 7 -> Max / Min 8 -> Data Logger 9 -> Temp. Comp. 10 -> Pt100 11 -> Volt. Input 12 -> Disp. Meas. 13 -> Max / Min Analysis 14 -> Comparator Analysis 15 -> Data Logger Analysis 16 -> Cooling Curve 17 -> Calibration
P2	Setting the access level	0 -> Access level locked 1 -> Access level enabled

ZUGR?

The ZUGR? command queries the access level settings.

Host sends: <Address>sr<STX>ZUGR? P1<LF><ETX>[<BCC>]
DIGIFORCE responds: <ACK>
Host sends: <EOT>

Host sends: <Address>po<ENQ>
DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]
Host sends: <ACK>
DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Access level number	0 -> Basic Setup 1 -> Program selection 2 -> Program copy 3 -> Measurement mode 4 -> Test operation 5 -> External memory 6 -> Comparator 7 -> Max / Min 8 -> Data Logger 9 -> Temp. Comp. 10 -> Pt100 11 -> Volt. Input 12 -> Disp. Meas. 13 -> Max / Min Analysis 14 -> Comparator Analysis 15 -> Data Logger Analysis 16 -> Cooling Curve 17 -> Calibration
P2	Setting the access level	0 -> Access level locked 1 -> Access level enabled

15.6 ZUDI DigiControl access ON/OFF

ZUDI!

The command ZUDI! sets the digicontrol access flag.

Host sends: <Address>sr<STX>ZUDI! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Digicontrol access flag	0 -> Digicontrol access locked 1 -> Digicontrol access enabled

ZUDI?

The command ZUDI? queries the digicontrol access flag.

Host sends: <Address>sr<STX>ZUDI?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Digicontrol access flag	0 -> Digicontrol access locked 1 -> Digicontrol access enabled

16 Device status

16.1 FSTA 2311 Query device status

FSTA!

This command does not have a execute form.

FSTA?

With the command FSTA? queries the device error status. Once read out, the error status is reset. The error status is a bit-coded 32-bit word. More than one bit can be set when multiple events have occurred since the last readout. The error status is in hexadecimal. Except for USB stick errors, the error bits are set only when the evaluation or the execution of a port command encounters an error.

Host sends: <Address>sr<STX>FSTA?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value	
P1	Device Status	0x00000000	No error
		0x00000001	PREFIX addressing fault
		0x00000002	Enquiry received in Device mode
		0x00000004	Blockcheck error
		0x00000008	Command fault
		0x00000010	Parameter error
		0x00000020	Timeout Receive Timer
		0x00000040	Timeout Response Timer
		0x00000080	Invalid ! or ?
		0x00000100	Invalid configuration
		0x00001000	EEPROM read error
		0x00010000	Calibration failed
		0x00040000	NETX Checksum error
		0x20000000	USB flash error

16.2 DEST 2311 Query device state and info

DEST!

This command does not have a execute form.

DEST?

The command DEST? queries the device state and info. Both the device status and the device info are bit-coded 16-bit words respectively. More than one bit can be set when multiple events have occurred during the last startup.

Host sends: <Address>sr<STX>DEST?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value	
P1	Device Status	0x00000000 0x00000004 0x00000040 0x00000080	No error Calibration data missing Error while reading serial number Error while reading MAC-Address
P2	Device info	0x00000000 0x00000001 0x00000002	No info Data reset due to version change New analog EEPROM detected

17 Info menu

17.1 INFO Device info query

INFO!

This command does not have a execute form.

INFO?

The INFO? command queries the device information.

Host sends: <Address>sr<STX>INFO?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,P2,P3,P4,P5,P6,P7,P8,<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Device identifier	Resistomat Typ 2311 (19 character ASCII string)
P2	Serial number	Max 11 character ASCII string
P3	Device software version	Max 15 character ASCII string
P4	Boot software version	Max 15 character ASCII string
P5	Fieldbus ID	0 -> No Fieldbus 1 -> PROFIBUS 2 -> EtherCAT (not available at present) 3 -> PROFINET 4 -> Ethernet/IP
P6	Fieldbus software version	Max 15 character ASCII string (not relevant if no Fieldbus)
P7	Internal	0
P8	Analogue card calibration date	Max 10 character ASCII string

17.2 SERN Serial number

SERN!

The STAN! command lets the user enter the station name.

Host sends: <Address>sr<STX>SERN! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	The serial number	Max 11 character ASCII string

SERN?

The SERN? command queries the serial number.

Host sends: <Address>sr<STX>SERN?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	The serial number	Max 11 character ASCII string

17.3 STAN Station name

STAN!

The STAN! command lets the user enter the station name.

Host sends: <Address>sr<STX>STAN! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	The station name	Max 15 character ASCII string

STAN?

The STAN? command queries the station name.

Host sends: <Address>sr<STX>STAN?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	The station name	Max 15 character ASCII string

18 LCD setting

18.1 LCDK Set LCD contrast

LCDK!

The LCDK! command sets the LCD display contrast.

Host sends: <Address>sr<STX>LCDK! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	The LCD contrast	Value between 1 and 10 10 -> Max contrast

LCDK?

The LCDK? command queries the LCD display contrast.

Host sends: <Address>sr<STX>LCDK?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	The LCD contrast	Value between 1 and 10 10 -> Max contrast

19 Date and Time

19.1 DATE Set or query date

DATE!

The DATE! command sets the RTC date.

Host sends: <Address>sr<STX>DATE! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	The date	String in the form: dd/mm/yyyy Example: 23/07/2009

DATE?

The DATE? command queries the RTC date.

Host sends: <Address>sr<STX>DATE?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	The date	String in the form: dd/mm/yyyy Example: 23/07/2009

19.2 TIME Set or query the time of day

TIME!

The TIME! command sets the RTC time.

Host sends: <Address>sr<STX> TIME! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	The time of day	String in the form: hh:mm:ss Example: 08:11:34

TIME?

The TIME? command queries the RTC time.

Host sends: <Address>sr<STX> TIME?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	The time of day	String in the form: hh:mm:ss Example: 08:11:34

20 User languages

20.1 SPRA Set or query user language

SPRA!

The SPRA! command sets the user language.

Host sends: <Address>sr<STX> SPRA! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Operating language	0 -> German 1 -> English 2 -> French 3 -> Spanish 4 -> Italian

SPRA?

The SPRA? command queries the user language.

Host sends: <Address>sr<STX> SPRA?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Operating language	0 -> German 1 -> English 2 -> French 3 -> Spanish 4 -> Italian

21 Fieldbus

21.1 FELD Which Fieldbus is implemented on the NETX circuit board

FELD!

This command does not have a execute form.

FELD?

The FELD? command queries which fieldbus is implemented.

Host sends: <Address>sr<STX> FELD?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Version	0 -> No Fieldbus 1 -> PROFIBUS 2 -> EtherCAT 3 -> PROFINET 4 -> EtherNet/IP 9 -> Invalid setting

21.2 PBIN Device controlled via Fieldbus or PLC

PBIN!

The PBIN! command sets the source of device control.

Host sends: <Address>sr<STX> PBIN! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Source of device control	0 -> PLC 1 -> Fieldbus

PBIN?

The PBIN? command queries the source of device control.

Host sends: <Address>sr<STX> PBIN?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Source of device control	0 -> PLC 1 -> Fieldbus

21.3 FBKS Enter and query the Fieldbus board serial number

FBKS!

This command does not have a execute form.

FBKS?

FBKS? queries the serial number received form the fieldbus board during booting.

Host sends: <Address>sr<STX> FBKS?<LF><ETX>[<BCC>]
DIGIFORCE responds: <ACK>
Host sends: <EOT>

Host sends: <Address>po<ENQ>
DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]
Host sends: <ACK>
DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Fieldbus board serial number	Max 20 character string

21.4 FBMA Enter and query the Fieldbus board MAC addresses

FBMA!

This command does not have a execute form.

FBMA?

FBMA? queries the MAC addresses received from the fieldbus board during booting.

Host sends: <Address>sr<STX> FBMA?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,P2,P3<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Device MAC address of the Fieldbus board	String in the form: 00-23-6e-xx-xx-xx
P2	Port1 MAC address of the Fieldbus board	String in the form: 00-23-6e-xx-xx-xx
P3	Port2 MAC address of the Fieldbus board	String in the form: 00-23-6e-xx-xx-xx

21.5 FSER Fieldbus board flash memory

FSER!

This command does not have a execute form.

FSER?

The FSER? command checks whether a serial number has been programmed in the fieldbus board flash memory.

The Coldfire reads this data directly out of the NETX flash memory.

Host sends: <Address>sr<STX> FSER?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Is the serial number programmed into the Fieldbus board flash memory?	0 -> There is no serial number 1 -> There is a serial number
P2	Otherwise, if none is programmed in flash memory, the serial number is a string of 0s	The serial number as a string. If there is **none**, then 11 0s

21.6 FMAC Checks whether the MAC addresses have been programmed in the Fieldbus board flash memory

FMAC!

This command does not have a execute form.

FMAC?

The FMAC? command checks whether the 3 MAC addresses have been programmed in the fieldbus board flash memory.

Coldfire reads it directly out of thed NETX flash memory.

Host sends: <Address>sr<STX> FMAC?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,P2,P3,P4<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Are the MAC addresses programmed in the Fieldbus board flash memory?	0 -> There are no MAC addresses 1 -> There are MAC addresses
P2	Device MAC address, if programmed Else 0s	00-23-6e-xx-xx-xx 00-00-00-00-00-00, if no MAC
P3	Port 1 MAC address, if programmed Else 0s	00-23-6e-xx-xx-xx 00-00-00-00-00-00, if no MAC
P4	Port 2 MAC address, if programmed Else 0s	00-23-6e-xx-xx-xx 00-00-00-00-00-00, if no MAC

22 EtherCAT settings

22.1 EINF EtherCAT info

EINF!

This command does not have a execute form.

EINF?

The EINF? command queries the EtherCAT information.

Host sends: <Address>sr<STX> EINF?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Version	Max 20 character string
P2	EtherCAT operating state	0 -> INIT 1 -> PREOP 2 -> SAVEOP 3 -> OP 4 -> BOOTSTRAP 5 -> Invalid state

22.2 EDID Set or query EtherCAT Device ID

EDID!

The EDID! command sets the EtherCat Device ID.

Host sends: <Address>sr<STX> EDID! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	EtherCAT Device ID	0 - 65535

EDID?

The EDID? command queries the EtherCat Device ID.

Host sends: <Address>sr<STX> EDID?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	EtherCAT Device ID	0 - 65535

23 PROFINET settings

23.1 PNIF PROFINET info

PNIF!

This command does not have a execute form.

PNIF?

The PNIF? command queries the PROFINET information.

Host sends: <Address>sr<STX> PNIF?<LF><ETX>[<BCC>]
DIGIFORCE responds: <ACK>
Host sends: <EOT>

Host sends: <Address>po<ENQ>
DIGIFORCE responds: <STX>P1,P2,P3,P4,P5<LF><ETX>[<BCC>]
Host sends: <ACK>
DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	PROFINET SW version	Max 20 character string
P2	PROFINET device name	Max 63 character string
P3	PROFINET IP address	15 character string
P4	PROFINET subnet mask	15 character string
P5	PROFINET gateway IP address	15 character string

24 EtherNet/IP settings

24.1 ETHI EtherNet/IP settings

ETHI!

The ETHI! command transfers the Ethernet/IP settings.

Host sends: <Address>sr<STX> ETHI! P1,P2,P3<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	EtherNet/IP IP address	15 character string in the form xxx.xxx.xxx.xxx
P2	EtherNet/IP subnet mask	15 character string in the form xxx.xxx.xxx.xxx
P3	EtherNet/IP gateway address	15 character string in the form xxx.xxx.xxx.xxx

ETHI?

The ETHI? command queries the Ethernet/IP settings.

Host sends: <Address>sr<STX> ETHI?<LF><ETX>[<BCC>]
DIGIFORCE responds: <ACK>
Host sends: <EOT>

Host sends: <Address>po<ENQ>
DIGIFORCE responds: <STX>P1,P2,P3,P4,P5<LF><ETX>[<BCC>]
Host sends: <ACK>
DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	EtherNet/IP SW version	Max 20 character string
P2	EtherNet/IP IP configuration	0 -> DHCP 1 -> BOOTP 2 -> Static 3 -> DHCP and BOOTP
P3	EtherNet/IP IP address	15 character string in the form xxx.xxx.xxx.xxx
P4	EtherNet/IP subnet mask	15 character string in the form xxx.xxx.xxx.xxx
P5	EtherNet/IP gateway address	15 character string in the form xxx.xxx.xxx.xxx

25 Measurement Program Selection

25.1 PRNR Select measurement program

PRNR!

The PRNR! command selects a measurement program.

Host sends: <Address>sr<STX>PRNR! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31

PRNR?

The command PRNR? reads out the set measurement program.

Host sends: <Address>sr<STX>PRNR?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Number of the set measurement program	A value between 0 and 31

25.2 PNAM Enter or query the name of the measurement program

PNAM!

The PNAM! command assigns a name to a measurement program.

If 1 parameter, a name is assigned to the measurement program currently selected.

Host sends: <Address>sr<STX>PNAM! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measuring program name	ASCII string <= 20 characters

If 2 parameters, a name is assigned to the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX>PNAM! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Number of the measurement program	A value between 0 and 31
P2	Measuring program name	ASCII string <= 20 characters

PNAN?

If no parameters: Query the name of the measurement program currently selected.

Host sends: <Address>sr<STX>PNAM?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measuring program name	ASCII string <= 20 characters

If 1 parameter: Query the name of the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX>PNAM? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Number of the measurement program	A value between 0 and 31
P2	Measuring program name	ASCII string <= 20 characters

25.3 CMPR Checks the measurement program names

CMPR!

This command does not have a execute form.

CMPR?

The command CMPR? checks all measurement program names for differences form the default.

Host sends: <Address>sr<STX>CMPR?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	A string of length 32, consisting of 1s and 0s	A “0” in the string means the measurement program has the default name. A “1” in the string means the measuring program name has changed. The position in the string corresponds to the measurement program number. 0 to 31

26 Saving to USB stick

26.1 USPR USB stick logging ON/OFF

USPR!

The USPR! command enables/disables logging on the USB stick.

If 1 parameter, logging is enabled in the currently selected measurement program.

Host sends: <Address>sr<STX>USPR! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Logging on USB stick	0 -> OFF 1 -> ON

If 2 parameters, logging is enabled in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX>USPR! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 15
P2	Logging on USB stick	0 -> OFF 1 -> ON

USPR?

The USPR? command queries whether logging has been enabled or disabled on the USB stick.

If no parameters, the logging activated in the currently selected measurement program is queried.

Host sends: <Address>sr<STX>USPR?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Logging on USB stick	0 -> OFF 1 -> ON

If 1 parameter, the logging enabled in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX>USPR? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 15
P2	Logging on USB stick	0 -> OFF 1 -> ON

26.2 USFO Format the USB stick connected to the device

USFO!

The **USFO**! command formats the USB stick connected to the Resistomat 2311.

Host sends: <Address>sr<STX>USFO!<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

CAUTION: ACK is returned when formatting has ended. The time taken depends on the USB stick. NAK is returned when no USB stick is connected.

USPE?

This command does not have a query form.

26.3 USMO Mount the USB stick connected to the device

USMO!

The **USMO**! command mounts the USB stick connected to the Resistomat 2311

Host sends: <Address>sr<STX>USMO!<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

CAUTION: ACK is returned when mounting has ended. The time taken depends on the USB stick. NAK is returned when no USB stick is connected.

USMO?

This command does not have a query form.

26.4 USST Read out USB stick status

USST!

This command does not have a execute form.

USST?

The **USST**? queries the USB stick status.

Host sends: <Address>sr<STX>USST?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	USB stick status	0 -> Cannot read USB status (should not occur) 1 -> USB_STICK_NOT_ATTACHED 2 -> USB_STICK_ATTACHED_BUT_NOT_MOUNTED 3 -> USB_STICK_ATTACHED_AND_MOUNTED
P2	Free memory on USB stick	Value in MB with unit when attached and mounted. Else 0 is returned.

26.5 URDY USB ready control ON/OFF

URDY!

The **URDY**! command defines whether the USB ready control is ON or OFF.

Host sends: <Address>sr<STX>URDY! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	USB ready control	0 -> OFF 1 -> ON

URDY?

The **URDY**? command queries whether the USB ready control is ON or OFF.

Host sends: <Address>sr<STX>URDY?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	USB ready control	0 -> OFF 1 -> ON

26.6 UZST USB stick logging of timestamp ON/OFF

UZST!

The UZST! command enables/disables logging of the timestamp on the USB stick.

If 1 parameter, timestamp logging is enabled in the currently selected measurement program.

Host sends: <Address>sr<STX> UZST! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Logging of timestamp on USB stick	0 -> OFF 1 -> ON

If 2 parameters, timestamp logging is enabled in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> UZST! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 15
P2	Logging of timestamp on USB stick	0 -> OFF 1 -> ON

UZST?

The UZST? command queries whether timestamp logging has been enabled or disabled on the USB stick.

If no parameters, the timestamp logging activated in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> UZST?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Logging of timestamp on USB stick	0 -> OFF 1 -> ON

If 1 parameter, the timestamp logging enabled in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> UZST? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 15
P2	Logging of timestamp on USB stick	0 -> OFF 1 -> ON

26.7 UNUM USB stick logging of numerator ON/OFF

UNUM!

The UNUM! command enables/disables logging of the numerator on the USB stick.

If 1 parameter, numerator logging is enabled in the currently selected measurement program.

Host sends: <Address>sr<STX> UNUM! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Logging of numerator on USB stick	0 -> OFF 1 -> ON

If 2 parameters, numerator logging is enabled in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> UNUM! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 15
P2	Logging of numerator on USB stick	0 -> OFF 1 -> ON

UNUM?

The UNUM? command queries whether numerator logging has been enabled or disabled on the USB stick.

If no parameters, the numerator logging activated in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> UNUM?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Logging of numerator on USB stick	0 -> OFF 1 -> ON

If 1 parameter, the numerator logging enabled in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> UNUM? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 15
P2	Logging of numerator on USB stick	0 -> OFF 1 -> ON

26.8 UAUF USB stick logging of order sheet ON/OFF

UAUF!

The UAUF! command enables/disables logging of the order sheet on the USB stick.

If 1 parameter, order sheet logging is enabled in the currently selected measurement program.

Host sends: <Address>sr<STX> UAUF! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Logging of order sheet on USB stick	0 -> OFF 1 -> ON

If 2 parameters, order sheet logging is enabled in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> UAUF! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 15
P2	Logging of order sheet on USB stick	0 -> OFF 1 -> ON

UAUF?

The UAUF? command queries whether order sheet logging has been enabled or disabled on the USB stick.

If no parameters, the order sheet logging activated in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> UAUF?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Logging of order sheet on USB stick	0 -> OFF 1 -> ON

If 1 parameter, the order sheet logging enabled in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> UAUF? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 15
P2	Logging of order sheet on USB stick	0 -> OFF 1 -> ON

26.9 UDET Delta t

UDET!

With the UDET! command delta t is entered.

If 3 parameters, delta t in the currently selected measurement program.

Host sends: <Address>sr<STX> DADT! P1;P2,P3<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Hours	A value between 0 and 99
P2	Minutes	A value between 0 and 59
P3	Seconds	A value between 0 and 59

If 4 parameters, delta t in the measurement program corresponding to the transferred number.

Host sends: <Address>sr<STX> UDET! P1,P2,P3,P4<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Hours	A value between 0 and 99
P3	Minutes	A value between 0 and 59
P4	Seconds	A value between 0 and 59

UDET?

The UDET? command queries delta t.

If no parameters delta t in the currently selected measurement program is queried.

Host sends: <Address>sr<STX> UDET?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1,P2,P3<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Hours	A value between 0 and 100
P2	Minutes	A value between 0 and 59
P3	Seconds	A value between 0 and 59

If 1 parameter delta t in the measurement program corresponding to the transferred number is queried.

Host sends: <Address>sr<STX> UDET? P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P2,P3,P4<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement program number	A value between 0 and 31
P2	Hours	A value between 0 and 100
P3	Minutes	A value between 0 and 59
P4	Seconds	A value between 0 and 59

27 Order sheet

27.1 AUWE Order sheet: Operator

AUWE!

The AUWE! command lets the user enter the worker's name given on the order sheet.

Host sends: <Address>sr<STX> AUWE! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Worker's name	Max 64 character ASCII string

AUWE?

The AUWE? command queries the worker's name given on the order sheet.

Host sends: <Address>sr<STX> AUWE?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Worker's name	Max 64 character ASCII string

27.2 AUNR Order sheet: Order number

AUNR!

The AUNR! command lets the user enter the order number given on the order sheet.

Host sends: <Address>sr<STX> AUNR! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Order number	Max 64 character ASCII string

AUNR?

The AUNR? command queries the order number given on the order sheet.

Host sends: <Address>sr<STX> AUNR?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Order number	Max 64 character ASCII string

27.3 AUCH Order sheet: Batch

AUCH!

The AUCH! command lets the user enter the batch given on the order sheet.

Host sends: <Address>sr<STX> AUCH! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Batch	Max 64 character ASCII string

AUCH?

The AUCH? command queries the batch given on the order sheet.

Host sends: <Address>sr<STX> AUCH?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Batch	Max 64 character ASCII string

27.4 AUBA Order sheet: Component identification

AUBA!

The AUBA! command lets the user enter the component identification given on the order sheet.

Host sends: <Address>sr<STX> AUBA! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Component identification	Max 64 character ASCII string

AUBA?

The AUBA? command queries the component identification given on the order sheet.

Host sends: <Address>sr<STX> AUBA?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Component identification	Max 64 character ASCII string

27.5 AUS1 Order sheet Serial number 1

AUS1!

The AUS1! command lets the user enter serial number 1 given on the order sheet.

Host sends: <Address>sr<STX> AUS1! P1<LF><ETX>[<BCC>]
DIGIFORCE responds: <ACK>
Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Serial number 1	Max 64 character ASCII string

AUS1?

The AUS1? command queries serial number 1 given on the order sheet.

Host sends: <Address>sr<STX> AUS1?<LF><ETX>[<BCC>]
DIGIFORCE responds: <ACK>
Host sends: <EOT>

Host sends: <Address>po<ENQ>
DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]
Host sends: <ACK>
DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Serial number 1	Max 64 character ASCII string

27.6 AUS2 Order sheet Serial number 2

AUS2!

The AUS2! command lets the user enter serial number 2 given on the order sheet.

Host sends: <Address>sr<STX> AUS2! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Serial number 2	Max 64 character ASCII string

AUS2?

The AUS2? command queries serial number 2 given on the order sheet.

Host sends: <Address>sr<STX> AUS2?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Serial number 2	Max 64 character ASCII string

28 Initializing and copying measurement programs

28.1 PRKO Copy all data between measurement programs

PRKO!

The PRKO! command copies all of the configuration data from a measurement program to others. (Source is copied from the start to end targets.)

Host sends: <Address>sr<STX>PRKO! P1,P2,P3<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Number of source measurement program	A value between 0 and 31
P2	Number of start target measurement program	A value between 0 and 31
P3	Number of end target measurement program	A value between 0 and 31

CAUTION: The number of the start target measurement program may not be greater than the number of the end target measurement program.

PRKO?

This command does not have a query form.

28.2 INIT Default initialization of measurement programs

INIT!

The INIT! command executes a default initialization of the transferred measurement programs.

Host sends: <Address>sr<STX>INIT! P1,P2<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Number of start measurement program	A value between 0 and 31
P2	Number of end measurement program	A value between 0 and 31

CAUTION: The number of the start target measurement program may not be greater than the number of the end target measurement program.

INIT?

This command does not have a query form.

28.3 GINI Default initialization of all measurement programs and device parameters

GINI!

The GINI! command executes a default initialization of all device settings, which includes the reset of all measurement programs. Please note that settings such as the Ethernet configuration will also be reset and will cause a loss of connection, requiring reconfiguration using another interface.

Host sends: <Address>sr<STX>GINI!<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

GINI?

This command does not have a query form.

28.4 MEKO Copy measurement data between measurement programs

MEKO!

The MEKO! command copies the measuremenet data (meassurementl settings) from a measurement program to others. (Source is copied from the start to end targets.)

Host sends: <Address>sr<STX>MEKO? P1,P2,P3<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Number of source measurement program	A value between 0 and 31
P2	Number of start target measurement program	A value between 0 and 31
P3	Number of end target measurement program	A value between 0 and 31

CAUTION: The number of the start target measurement program may not be greater than the number of the end target measurement program.

MEKO?

This command does not have a query form.

29 Measurement Commands

29.1 STAR Start Measurement

STAR!

The STAR! command starts a measurement.

Host sends: <Address>sr<STX>STAR!<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

STAR?

This command does not have a query form.

29.2 STOP Stop Measurement

STOP!

The STOP! command stops a measurement.

Host sends: <Address>sr<STX>STOP!<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

STOP?

This command does not have a query form.

29.3 MLAU Query whether Measurement is running

MLAU!

This command does not have a execute form.

MLAU?

The MLAU! command queries whether Measurement is running.

Host sends: <Address>sr<STX>MLAU?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Running state of Measurement	0 -> Measurement stopped 1 -> Measurement running

29.4 BERE Query Range, Current and Voltage

BERE!

This command does not have a execute form.

BERE?

The BERE! command queries range, current and voltage.

Host sends: <Address>sr<STX>BERE?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address,>po<ENQ>

DIGIFORCE responds: <STX>P1,P2,P3<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Range	String: value plus appropriate Ohm unit
P2	Current	String: value plus unit
P3	Voltage	String: value plus unit

29.5 TEMP Query Temperature

TEMP!

This command does not have a execute form.

TEMP?

The TEMP! command queries temperature value for temperature compensation.

Host sends: <Address>sr<STX>TEMP?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address,>po<ENQ>

DIGIFORCE responds: <STX>P1 <LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Temperature	String: value in °C

29.6 RESI Query measured Resistance Value

RESI!

This command does not have a execute form.

RESI?

The RESI? command queries the measured resistance value.

Host sends: <Address>sr<STX>RESI?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address,>po<ENQ>

DIGIFORCE responds: <STX>P1,P2,P3 ,P4,P5<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Measurement counter	0 to 65536
P2	Measurement status	Logical **OR** combined status: 0: No Error 1: Measurement range exceeded 2: Current overflow 4: Voltage overflow 8: Temperature compensation error 16: PT100 Measurement error 32: Cable break 64: Zero compensation error 256: USB-Logging error 1024: Measurement result not valid yet
P3	Result of Evaluation	String
P4	Delta % of Set Point	String
P5	Resistance	String: value plus appropriate Ohm unit

30 Record errors/events in the logfile

30.1 LOGS Port operation logging ON/OFF

LOGS!

The command LOGS! enables or disables error/event logging during port operations.

Host sends: <Address>sr<STX>LOGS! P1<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Error/event logging	1 -> Logging ON 0 -> Logging OFF

LOGS?

The command LOGS? queries whether error/event logging during port operations is enabled or disabled.

Host sends: <Address>sr<STX> LOGS?<LF><ETX>[<BCC>]

DIGIFORCE responds: <ACK>

Host sends: <EOT>

Host sends: <Address>po<ENQ>

DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]

Host sends: <ACK>

DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Error/event logging	1 -> Logging ON 0 -> Logging OFF

30.2 LOGL Query index of last entry

LOGD!

This command does not have a execute form.

LOGL?

The command LOGL? queries the index of the last entry.

Host sends: <Address>sr<STX>LOGL?<LF><ETX>[<BCC>]
DIGIFORCE responds: <ACK>
Host sends: <EOT>

Host sends: <Address>po<ENQ>
DIGIFORCE responds: <STX>P1<LF><ETX>[<BCC>]
Host sends: <ACK>
DIGIFORCE responds: <EOT>

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Index of last entry	0 to 255

30.3 LOGD Query logfile entries

LOGD!

This command does not have a execute form.

LOGD?

The command LOGD? queries a logfile entry.

Host sends: <Address>sr<STX>LOGD? P1<LF><ETX>[<BCC>]
DIGIFORCE responds: <ACK>
Host sends: <EOT>

Host sends: <Address>po<ENQ>
DIGIFORCE responds: <STX>P2,P3,….,P11<LF><ETX>[<BCC>]
Host sends: <ACK>
DIGIFORCE responds: <EOT>

NOTE: Parameter meaning on next page

Meaning of parameter Pn

Parameter	Meaning	Value
P1	Entry index	0 to 255
P2	Entry code	0 -> no error 1 -> Memory error detected 4 -> Main analog board EEPROM error detected 39 -> Start of measurement without READY 40 -> Change of analog interface 42 -> Device power up 130 -> Menu: Measurement mode 136 -> Menu: Assignment PLC-Outputs 137 -> Menu: Assignment PLC-Inputs 139 -> Menu: Interface USB 140 -> Menu: Interface Ethernet 141 -> Copy Measurement setup 142 -> Initialize target program(s) 143 -> Copy whole setup 145 -> Menu: Comparator 146 -> Menu: Max / Min 147 -> Menu: Datalogger 148 -> Menu: Temp. Comp 149 -> Menu: Pt100 150 -> Menu: Volt Input 151 -> Menu: Disp. Meas 152 -> Menu: Cooling Curve 153 -> Menu: USB-Logging
P3	Measurement program number	0 to 31
P4	Access	0 -> No access protection 1 -> Master access 2 -> User access 4 -> Access via port
P5	Date: year	Integer value (unsigned 16 bit)
P6	Date: month	Integer value (unsigned 16 bit)
P7	Date: day	Integer value (unsigned 16 bit)
P8	Date: hour	Integer value (unsigned 16 bit)
P9	Date: minute	Integer value (unsigned 16 bit)
P10	Date: second	Integer value (unsigned 16 bit)
P11	Repetitions	Integer value (unsigned 16 bit)