

## Section 7.54

### [Input/Output] - [Analog I/O]

#### What Is in This Section?

This section contains the following topics:

Topic	Page
[AI1 configuration] <i>R</i> , <i>1</i> - Menu	503
[AI2 configuration] <i>R</i> , <i>2</i> - Menu	506
[AI3 configuration] <i>R</i> , <i>3</i> - Menu	508
[AI4 configuration] <i>R</i> , <i>4</i> - Menu	509
[AI5 configuration] <i>R</i> , <i>5</i> - Menu	511
[AQ1 configuration] <i>R</i> <i>Q</i> <i>1</i> - Menu	512
[AQ2 configuration] <i>R</i> <i>Q</i> <i>2</i> - Menu	516
[Virtual AI1] <i>R</i> <i>u</i> <i>1</i> - Menu	518
[Virtual AI2] <i>R</i> <i>u</i> <i>2</i> - Menu	519
[Virtual AI3] <i>R</i> <i>u</i> <i>3</i> - Menu	519

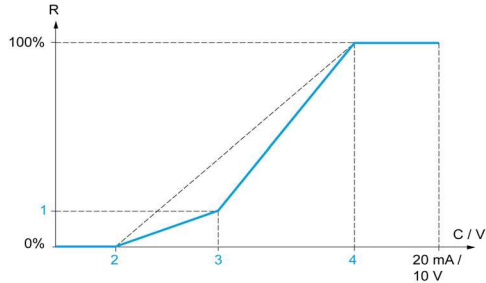
**Q 5 % 5 g g i b a Y d Q 7 , I - A Y d i**

**5 M g g**

Q cad VY g M Q d g → B d i H C i h i K → Q 5 E C → Q 5 % 5 g g i b a Y d i Q

**5 M i H H j A Y d i**

H A Y j d i H M b W X V j b U j V X V h b b j i j d U b j H Y a Y X U V d c j d i c b H Y j d i H 6 i k e i H M j Y c z h j d i h



- R' FYZ/YbW
- Q #W=7i fYdchJ cN[Y:di h
- % QVhMa:"c j j Q
- & QVjYhVCh t
- § QHMa:"c j j Q
- € QUk jUUVCh t

BOFB : c f Q H Ma : " c j j Q V h V g b b j g l e Q V j U i Q U b X % § t e Q U k j U U V Q

**Q 5 % 5 g g i b a Y d Q 7 , I A**

5 b U c j d i H 5 % 2 b M j b g U g j b a Y d i

F Y U c b i n a U a Y M Z W b c h W W b j i f X " H X g d U n g U H Y Z b M j b g U g j M Y X k j H j d i H 5 % 2 b c d X Y t e j Y j z z f Y i U a d Y Z z f W a d U j j m i d c V a g'

-z b c z b M j b g U j Y W W b U g j b Y Z Q c Q o j X g d U h X'

G M Q d j	Q c a Y # W U Y	B Y g M j d j b
Q c Q	n o	B d h U g j b V X
Q 5 % 5 g g i b a Y d i Q	R o 1	5 b U c j ' c i k e i H 5 E %
Q 5 & 5 g g i b a Y d i Q	R o 2	5 b U c j ' c i k e i H 5 E &
Q V Z F r e q u e n c y 1 Q	F r 1	F Y Z Y b W Z Y e i Y b M U b b Y % F U M j Y G M Q d j
Q V Z F r e q u e n c y 2 Q	F r 2	F Y Z Y b W Z Y e i Y b M U b b Y &
Q V Z F r e q u e n c y 3 G i a a j d j Q	S R 2	F Y Z Y b W Z Y e i Y b M g a a j d j
Q D S F W X U U j Q	P , F	D - W b h c Y F Z Y X U U j
Q G i M U M F Y Z F r e q 2 Q	d R 2	G i M U M F Y Z Y b W Z Y e i Y b M &
Q A U i U D i S R Y Z Q	P , n	A U i U g M Y X Y Z Y b W c z h Y D S W b h c Y F T U k e a U t t
Q D S R Y Z F r e q U b b Q	F P ,	D S Y Z Y b W Z Y e i Y b M h
Q V Z F r e q u e n c y 3 G i a a j d j Q	S R 3	F Y Z Y b W Z Y e i Y b M h ' g a a j d j
Q V Z F r e q u e n c y 3 Q	F r 1 b	F Y Z Y b W Z Y e i Y b M F 6
Q G i M U M F Y Z F r e q 3 Q	d R 3	G i M U M F Y Z Y b W Z Y e i Y b M h
Q c M K c M Q	F L o C	: c M K c M Y Z Y b W g i F W %
Q D e f F r e q u e n c y 2 a i T j d j M Q	n R 2	F Y Z Y b W Z Y e i Y b M k a i T j d j M
Q V Z F r e q u e n c y 3 a i T j d j M Q	n R 3	F Y Z Y b W Z Y e i Y b M h ' a i T j d j M
Q j h U 5 % 2 U b b Y Q	R , C 1	J j h U 5 % 2 U b b Y g Y W b z b M j b b
Q D i e I D Y 5 g g i j Q	P 5 1 A	G Y M A Y g i F W c z j b Y h d Y g j f Y g l g g f
Q D i I M D Y 5 s s i g n Q	P 5 2 A	G Y M A Y g i F W c z i F h d Y g j f Y g l g g f
Q g f F i c k 5 g g i j Q	F 5 1 A	Select the source of installation flow sensor
Q D i a p F i c k 5 g g i j Q	F 5 2 A	G Y M A Y g i F W c z i a d z c k g l g g f
Q D e v e l o p M G l g g i j Q	L C 5 A	@ j Y W b h c U b U c j g l g g f

Q%FhMCA , lE

7cb[i fU]bcZUbUc[ ]pd H5%

GMP[	ZcY#WUW	BvgMqbb
QGN[MQ	10u	\$\$%JXW FUMngMq[
QimMQ	DR	\$\$a5
QFB Alh[YaYbQ	P L C	%e* D7 f]g]Uk
QHQD	K L Y	%?HM(C
QF68Q	1 P E 2	%D%\$\$WbbWk]h &k]Yg
QF68Q	1 P E 3	%D%\$\$WbbWk]h &k]Yg

Q%ajjUWQ , L I★

5% cN[YgM]h[ dUa YPF cZ\$ "

H.jdUa YPF Mb WUWg]X]Z%FhMCA , lE jgMhC QcN[MQ 10u"

GMP[	BvgMqbb
\$\$""\$\$JXW	GMP[ TUb[Y FUMngMq[. \$\$JXW

Q%aujUWQ , H I★

5% cN[YgM]h[ dUa YPF cZ%\$ "

H.jdUa YPF Mb WUWg]X]Z%FhMCA , lE jgMhC QcN[MQ 10u"

GMP[	BvgMqbb
\$\$""\$\$JXW	GMP[ TUb[Y FUMngMq[.%\$\$JXW

Q%ahjUWQ , L I★

5%MMhdgM]h[ dUa YPF cZ\$ "

H.jdUa YPF Mb WUWg]X]Z%FhMCA , lE jgMhC QimMQ DR"

GMP[	BvgMqbb
\$\$""\$\$a5	GMP[ TUb[Y FUMngMq[. \$\$a5

Q%ah:jUWQ , H I★

5%MMhdgM]h[ dUa YPF cZ%\$ "

H.jdUa YPF Mb WUWg]X]Z%FhMCA , lE jgMhC QimMQ DR"

GMP[	BvgMqbb
\$\$""\$\$a5	GMP[ TUb[Y FUMngMq[. \$\$a5

Q%Q]MCA , lF

5%MeZ]a YcZHY'ck ]M'

GMP[	BvgMqbb
\$\$""\$\$g	GMP[ TUb[Y FUMngMq[. \$\$g

## G%&amp; HMa'p]DOR , IE

bd hXV]pU]H]pbdc]hMcX]bUY'DVMbU[YcZHYdrg]W]pd hg]bU'

\$ VmYgbbYgle[G%a]j]U]VQL IL IL

%% VmYgbbYgle[G%a]j]U]VQL IH IL

GMP]	BYg]p]b
\$""\$	GMP] T]b]Y FUMngMg]. \$

## G%&amp;VMbMa'p]DOR , IS

bd hXV]pU]H]pbdc]hMcX]bUYZVeI YbMNYZTMbU'

DVMbU[YcZHY]p]bU ZVeI YbMNYZTMbU]VmYgbb]b] TeHY[G%& HMa'p]DOR , IE

dVMbU[YcZdrg]W]pd hg]bU'

GMP]	BYg]p]b
\$""\$	GMP] T]b]Y FUMngMg]. \$

[AI2 configuration] R , 2 - Menu

Access

[Complete settings] → [Input/Output] → [AI/AQ] → [AI2 configuration]

[AI2 Assignment] R , 2 R

AI2 functions assignment.  
 Identical to [AI1 Assignment] R , 1 R (see page 503).

[AI2 Type] R , 2 E

Configuration of analog input AI2.

Symbol	Unit	Default
[Voltage]	V	1.0
[Current]	A	0.0
[AI2 Type]		0
[AI2 Min. Value]		0.0
[AI2 Max. Value]		1.0
[AI2 Filter]		0.0
[AI2 Min. Value]		0.0
[AI2 Max. Value]		1.0
[AI2 Filter]		0.0
[AI2 Min. Value]		0.0
[AI2 Max. Value]		1.0

[AI2 min value] U , L 2 ★

AI2 voltage scaling parameter of 0%.  
 This parameter can be accessed if [AI2 Type] R , 2 E is set to [Voltage] V.  
 Identical to [AI1 min value] U , L 1 (see page 504).

[AI2 max value] U , H 2 ★

AI2 voltage scaling parameter of 100%.  
 This parameter can be accessed if [AI2 Type] R , 2 E is set to [Voltage] V.  
 Identical to [AI1 max value] U , H 1 (see page 504).

[AI2 min. value] C r L 2 ★

AI2 current scaling parameter of 0%.  
 This parameter can be accessed if [AI2 Type] R , 2 E is set to [Current] A.  
 Identical to [AI1 min. value] C r L 1 (see page 504).

[AI2 max. value] C r H 2 ★

AI2 current scaling parameter of 100%.  
 This parameter can be accessed if [AI2 Type] R , 2 E is set to [Current] A.  
 Identical to [AI1 max. value] C r H 1 (see page 504).

[AI2 filter] R , 2 F

AI2 filter time constant.  
 Identical to [AI1 filter] R , 1 F (see page 504).

Q&K HMa"pbjD , 2 E

5&XV]pMU]Hjbb]di hYj Y"

→Xb]W]e Q&K HMa"pbjD , 1 E **gWd(Y)gE**

Q&MhMa"pbjD , 2 S

5&XV]pMU]Hjbb]di hYj Y"

→Xb]W]e Q&MhMa"pbjD , 1 S **gWd(Y)gE**

### [AI3 configuration] R , 3 - Menu

#### Access

[Complete settings] → [Input/Output] → [AI/AQ] → [AI3 configuration]

#### [AI3 Assignment] R , 3 R

AI3 functions assignment.

Identical to [AI1 Assignment] R , 1 R (see page 503).

#### [AI3 Type] R , 3 E

Configuration of analog input AI3.

Identical to [AI2 Type] R , 2 E (see page 506) with factory setting: [Current] D R.

#### [AI3 min value] u , L 3 ★

AI3 voltage scaling parameter of 0%.

Identical to [AI1 min value] u , L 1 (see page 504).

This parameter can be accessed if [AI3 Type] R , 3 E is set to [Voltage] I D u.

#### [AI3 max] juuVQ , H 3 ★

AI3 voltage scaling parameter of 100%.

Identical to [AI1 max] juuVQ , H 1 (see page 504).

This parameter can be accessed if [AI3 Type] R , 3 E is set to [Voltage] I D u.

#### [AI3 min] r L 3 ★

AI3 voltage scaling parameter of 0%.

Identical to [AI1 min] r L 1 (see page 504).

This parameter can be accessed if [AI3 Type] R , 3 E is set to [Voltage] I D u.

#### [AI3 max] r H 3 ★

AI3 voltage scaling parameter of 100%.

Identical to [AI1 max] r H 1 (see page 504).

This parameter can be accessed if [AI3 Type] R , 3 E is set to [Voltage] I D u.

#### [AI3 Type] , 3 F

AI3 voltage scaling parameter of 0%.

Identical to [AI1 Type] , 1 F (see page 506).

#### [AI3 min] , 3 E

AI3 voltage scaling parameter of 0%.

Identical to [AI1 min] , 1 E (see page 504).

#### [AI3 max] , 3 S

AI3 voltage scaling parameter of 100%.

Identical to [AI1 max] , 1 S (see page 504).

**QK Wbzjijubq , 4 - VYci**

5Mgg

QcadVWgMqdg → QpikDihik → QSEEC → QK Wbzjijubq

**QK 5ggjbaVbq , 4A★**

5( Z bMqbgUgj ba VdH  
 H\_jgdUla YPFVabWUWggXZJK' 5 & \$ :C'YI Hbgjba'ckI Y\UgVWb]bgMPX"  
 >XbqWleQ%5ggjbaVbq , 1A **YpMg(Y)\$E'**

**QK Fhdq , 4E★**

7cbq i fu]bcZUBUq ]di H5("   
 H\_jgdUla YPFVabWUWggXZJK' 5 & \$ :C'YI Hbgjba'ckI Y\UgVWb]bgMPX"

Qm]q	7cVWVUW	Bngq]cb
Qcb]q	10u	\$\$JXW
Qim]q	0A	\$\$a5
Qcb]VZ]q	n 10u	-10/+10 Vdc FUMngMq]

**QK aj]UWq , 4★**

5(jcN[YgM]q dUla YPFcZ\$ "  
 >XbqWleQ%aj]UWq , 4 | **YpMg(Y)\$E'**

**QK auk]UWq , 4★**

5(jcN[YgM]q dUla YPFcZ/\$\$ "  
 >XbqWleQ%auk]UWq , 4 | **YpMg(Y)\$E'**

**QK aj]UWq r 4★**

5(WFVhgM]q dUla YPFcZ\$ "  
 >XbqWleQ%aj]UWq r 4 | **YpMg(Y)\$E'**

**QK auk]UWq r 4★**

5(WFVhgM]q dUla YPFcZ/\$\$ "  
 >XbqWleQ%auk]UWq r 4 | **YpMg(Y)\$E'**

**QK qMq , 4F★**

5(WeZqjaYcZHYck qM"  
 H\_jgdUla YPFVabWUWggXZJK' 5 & \$ :C'YI Hbgjba'ckI Y\UgVWb]bgMPX"  
 >XbqWleQ%qMq , 1F **YpMg(Y)\$E'**

**QK K HMa'cb]q , 4E★**

5(XV]pU]H]cb]di hY Y"  
 H\_jgdUla YPFVabWUWggXZJK' 5 & \$ :C'YI Hbgjba'ckI Y\UgVWb]bgMPX"  
 >XbqWleQ%K HMa'cb]q , 1E **YpMg(Y)\$E'**



OK (VbMa"pdp) , 45★

5( XV]pUqHfbbci ki hVj Y"

H]gdUu YPfVbWUMg)XZK' 5 &\$ :C YI Pbgjbacki Y\UgVWb]gVfX'

≠Vb]Wte(G%VbMa"pdp) , 15 **gYd(Y)9E**

**5) WbZjifubjQr , 5 - AWci****5MWg**

0cadWYgMfjg → BpdHClpK → 055EC → 5) WbZjifubjQr

**5) 5ggjbaVbQr , 5A★**

5) Z bMfbgUgjba VdH

HjgdUba YPFVbWUWggXZJK' 5 &#x27; :C YI Mbgb'acki Y\UgWVb]bgMPX"

≠Vb]Wte 5) 5ggjbaVbQr , 5A | **5) Yd(Y)\$E**

**5) HpdQr , 5E★**

7cbZji fUjbcZUBUc] ]bd H5)"

HjgdUba YPFVbWUWggXZJK' 5 &#x27; :C YI Mbgb'acki Y\UgWVb]bgMPX"

≠Vb]Wte 5) HpdQr , 5E | **5) Yd(Y)\$E**

**5) ajbjUWQr , 5L★**

5) jcn[YgW]j[ dUba YPFcZ " "

≠Vb]Wte 5) ajbjUWQr , 5L | **5) Yd(Y)\$E**

**5) alkjUWQr , 5H★**

5) jcn[YgW]j[ dUba YPFcZ? " "

≠Vb]Wte 5) alkjUWQr , 5H | **5) Yd(Y)\$E**

**5) aj'bjUWQr r 5L★**

5) WMYdgW]j[ dUba YPFcZ " "

≠Vb]Wte 5) aj'bjUWQr r 5L | **5) Yd(Y)\$E**

**5) alk'jUWQr r 5H★**

5) WMYdgW]j[ dUba YPFcZ? " "

≠Vb]Wte 5) alk'jUWQr r 5H | **5) Yd(Y)\$E**

**5) qMQR , 5F★**

5) Wbzja YcZHYck qM'

HjgdUba YPFVbWUWggXZJK' 5 &#x27; :C YI Mbgb'acki Y\UgWVb]bgMPX"

≠Vb]Wte 5) qMQR , 5F | **5) Yd(Y)\$E**

**5) K hMa'pajQr , 5E★**

A15 delinearization input level.

This parameter can be accessed if VW3A3203 I/O extension module has been inserted.

Identical to 5) K hMa'pajQr , 5E | **5) Yd(Y)\$E**

**5) MbMa'pajQr , 55★**

5) Xv]WU]Ujbb'ci ldi Hvj Y'

HjgdUba YPFVbWUWggXZJK' 5 &#x27; :C YI Mbgb'acki Y\UgWVb]bgMPX"

≠Vb]Wte 5) MbMa'pajQr , 55 (see page 505)