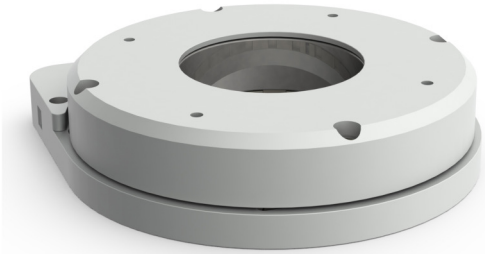
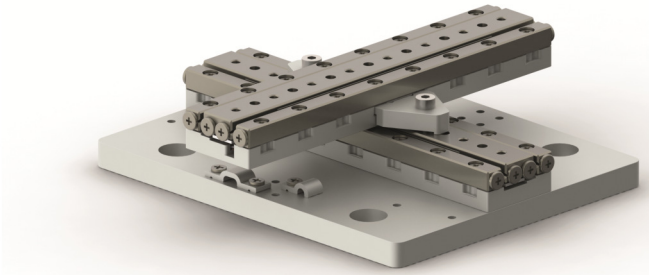
Stick-Slip Positioners

Mechanical and Electrical Interface Data Sheet





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The information given in this document has been checked carefully and is updated constantly. Nevertheless, it is not possible to fully exclude the presence of errors. In order to always get the latest information, please contact our technical sales team.

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1 *CONNECTOR PIN-ASSIGNMENT*

The pin assignment of SmarAct positioners for common connectors and sensor options are listed below. Different channels for combinations of more than one positioner are denoted with "CH1", "CH2" and "CH3". Use the reference on the Operation Parameter Sheet to find the connector for a specific positioner.

1.1 D-SUB, 15 pins, male

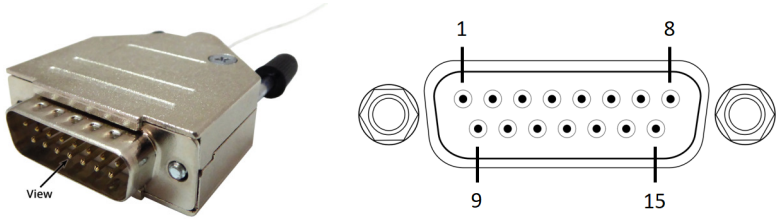

Figure 1.1: Connector D-Sub, 15pins, male with viewing direction and pin labelling

Table 1.1 – Pin Assignment of D-Sub, 15pins, male Connector

Pin	Open-Loop Signal	S- Sensor Signal	L- Sensor Signal	Function
1	A-HV	A-HV	A-HV	Positioner driving signal
2	d.n.c.	d.n.c.	d.n.c.	DO NOT CONNECT
3	d.n.c.	d.n.c.	d.n.c.	DO NOT CONNECT
4	d.n.c.	S-GND	S-GND	Sensor ground
5	d.n.c.	S-SIN+	S-SIN+	S-SIN+ signal from sensor
6	d.n.c.	S-COS+	S-COS+	S-COS+ signal from sensor
7	d.n.c.	S-REF+	S-REF+	S-REF+ signal from sensor
8	d.n.c.	d.n.c.	d.n.c.	DO NOT CONNECT
9	A-HV-GND	A-HV-GND	A-HV-GND	Positioner driving signal ground
10	d.n.c.	S-CLK	d.n.c.	Positioner clock
11	d.n.c.	S-DATA	d.n.c.	Positioner data
12	d.n.c.	S-SIN-	S-SIN-	S-SIN- signal from sensor

Continued on next page

Table 1.1 – *Continued from previous page*

Pin	Open-Loop Signal	S- Sensor Signal	L- Sensor Signal	Function
13	d.n.c.	S-COS-	S-COS-	S-COS- signal from sensor
14	d.n.c.	S-REF-	d.n.c.	S-REF- signal from sensor
15	d.n.c.	S-VCC	S-VCC	Power supply for sensor
Shield	S-Shield	S-Shield	S-Shield	Shield for positioner

1.2 D-SUB, 15pins, female

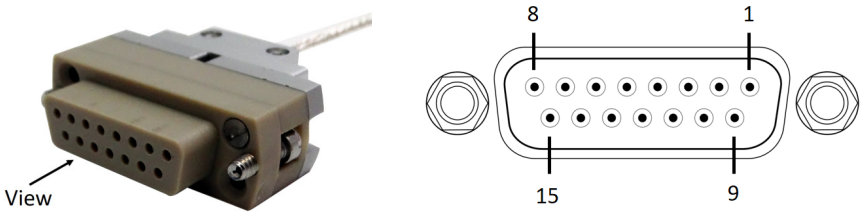

Figure 1.2: Connector D-SUB, 15pins, female with viewing direction and pin labelling

Table 1.2 – Pin Assignment of D-SUB, 15pins, female Connector

Pin	Open-Loop Signal	S- Sensor Signal	L- Sensor Signal	Function
1	A-HV	A-HV	A-HV	Positioner driving signal
2	d.n.c.	d.n.c.	d.n.c.	DO NOT CONNECT
3	d.n.c.	d.n.c.	d.n.c.	DO NOT CONNECT
4	d.n.c.	S-GND	S-GND	Sensor ground
5	d.n.c.	S-SIN+	S-SIN+	S-SIN+ signal from sensor
6	d.n.c.	S-COS+	S-COS+	S-COS+ signal from sensor
7	d.n.c.	S-REF+	S-REF+	S-REF+ signal from sensor
8	S-Shield	S-Shield	S-Shield	Shield for positioner
9	A-HV-GND	A-HV-GND	A-HV-GND	Positioner driving signal ground
10	d.n.c.	S-CLK	d.n.c.	Positioner clock
11	d.n.c.	S-DATA	d.n.c.	Positioner data
12	d.n.c.	S-SIN-	S-SIN-	S-SIN- signal from sensor
13	d.n.c.	S-COS-	S-COS-	S-COS- signal from sensor

Continued on next page

Table 1.2 – *Continued from previous page*

Pin	Open-Loop Signal	S- Sensor Signal	L- Sensor Signal	Function
14	d.n.c.	S-REF-	d.n.c.	S-REF- signal from sensor
15	d.n.c.	S-VCC	S-VCC	Power supply for sensor

1.3 Circular, 6 pins, male

Figure 1.3: Connector Circular, 6 pins, male with viewing direction and pin labelling

Table 1.3 – Pin Assignment of Circular, 6 pins, male Connector - for three positioners

Pin	Open-Loop Signal	Function
1	CH3 A-HV-GND	Positioner driving signal ground
2	CH3 A-HV	Positioner driving signal
3	CH2 A-HV-GND	Positioner driving signal ground
4	CH2 A-HV	Positioner driving signal
5	CH1 A-HV-GND	Positioner driving signal ground
6	CH1 A-HV	Positioner driving signal
Shield	S-Shield	Shield for positioner

1.4 Circular, 10 pins, female

Figure 1.4: Connector Circular, 10 pins, female with viewing direction and pin labelling

Table 1.4 – Pin Assignment of Circular, 10 pins, female Connector - for three open-loop positioners

Pin	Open-Loop Signal	Function
1	d.n.c.	DO NOT CONNECT
2	d.n.c.	DO NOT CONNECT
3	d.n.c.	DO NOT CONNECT
4	d.n.c.	DO NOT CONNECT
5	CH3 A-HV-GND	Positioner driving signal ground
6	CH3 A-HV	Positioner driving signal
7	CH2 A-HV-GND	Positioner driving signal ground
8	CH2 A-HV	Positioner driving signal
9	CH1 A-HV-GND	Positioner driving signal ground
10	CH1 A-HV	Positioner driving signal
Shield	S-Shield	Shield for positioner

1.5 Circular, 14 pins, male

Figure 1.5: Connector Circular, 14 pins, male with viewing direction and pin labelling

Table 1.5 – Pin Assignment of Circular, 14 pins, male Connector

Pin	Open-Loop Signal	S- Sensor Signal	L- Sensor Signal	Function
1	d.n.c.	S-DATA	d.n.c.	Positioner data
2	d.n.c.	S-CLK	d.n.c.	Positioner clock
3	d.n.c.	d.n.c.	d.n.c.	DO NOT CONNECT
4	d.n.c.	d.n.c.	d.n.c.	DO NOT CONNECT
5	d.n.c.	S-VCC	S-VCC	Power supply for sensor
6	d.n.c.	S-REF-	d.n.c.	S-REF- signal from sensor
7	d.n.c.	S-REF+	S-REF+	S-REF+ signal from sensor
8	d.n.c.	S-COS-	S-COS-	S-COS- signal from sensor
9	d.n.c.	S-COS+	S-COS+	S-COS+ signal from sensor
10	d.n.c.	S-SIN-	S-SIN-	S-SIN- signal from sensor
11	d.n.c.	S-SIN+	S-SIN+	S-SIN+ signal from sensor
12	d.n.c.	S-GND	S-GND	Sensor ground
13	A-HV-GND	A-HV-GND	A-HV-GND	Positioner driving signal ground
14	A-HV	A-HV	A-HV	Positioner driving signal
Shield	S-Shield	S-Shield	S-Shield	Shield for positioner

1.6 Circular, 14 pins, male, UHV

Figure 1.6: Connector Circular, 14 pins, male, UHV with viewing direction and pin labelling

Table 1.6 – Pin Assignment of Circular, 14 pins, male, UHV Connector

Pin	Open-Loop Signal	S- Sensor Signal	L- Sensor Signal	Function
1	d.n.c.	S-REF-	d.n.c.	S-REF- signal from sensor

Continued on next page

Table 1.6 – *Continued from previous page*

Pin	Open-Loop Signal	S- Sensor Signal	L- Sensor Signal	Function
2	d.n.c.	S-REF+	S-REF+	S-REF+ signal from sensor
3	d.n.c.	S-COS-	S-COS-	S-COS- signal from sensor
4	d.n.c.	S-COS+	S-COS+	S-COS+ signal from sensor
5	d.n.c.	S-SIN-	S-SIN-	S-SIN- signal from sensor
6	d.n.c.	S-DATA	d.n.c.	Positioner data
7	d.n.c.	S-CLK	d.n.c.	Positioner clock
8	d.n.c.	d.n.c.	d.n.c.	DO NOT CONNECT
9	d.n.c.	d.n.c.	d.n.c.	DO NOT CONNECT
10	d.n.c.	S-VCC	S-VCC	Power supply for sensor
11	A-HV-GND	A-HV-GND	A-HV-GND	Positioner driving signal ground
12	A-HV	A-HV	A-HV	Positioner driving signal
13	d.n.c.	S-SIN+	S-SIN+	S-SIN+ signal from sensor
14	d.n.c.	S-GND	S-GND	Sensor ground
Shield	S-Shield	S-Shield	S-Shield	Shield for positioner

1.7 Circular, 14 pins, male, UHV, DLS ONLY

Figure 1.7: Connector Circular, 14 pins, male, UHV with viewing direction and pin labelling

Table 1.7 – Pin Assignment of Circular, 14 pins, male, UHV Connector, DLS ONLY

Pin	Open-Loop Signal	S- Sensor Signal	L- Sensor Signal	Function
1	d.n.c.	S-REF-	d.n.c.	S-REF- signal from sensor
2	d.n.c.	S-REF+	S-REF+	S-REF+ signal from sensor

Continued on next page

Table 1.7 – *Continued from previous page*

Pin	Open-Loop Signal	S- Sensor Signal	L- Sensor Signal	Function
3	d.n.c.	S-COS-	S-COS-	S-COS- signal from sensor
4	d.n.c.	S-COS+	S-COS+	S-COS+ signal from sensor
5	d.n.c.	S-SIN-	S-SIN-	S-SIN- signal from sensor
6	d.n.c.	S-DATA	d.n.c.	Positioner data
7	d.n.c.	S-CLK	d.n.c.	Positioner clock
8	d.n.c.	A2-HV-GND	d.n.c.	Scanner driving signal ground
9	d.n.c.	A2-HV	d.n.c.	Scanner driving signal
10	d.n.c.	S-VCC	S-VCC	Power supply for sensor
11	A1-HV-GND	A1-HV-GND	A1-HV-GND	Positioner driving signal ground
12	A1-HV	A1-HV	A1-HV	Positioner driving signal
13	d.n.c.	S-SIN+	S-SIN+	S-SIN+ signal from sensor
14	d.n.c.	S-GND	S-GND	Sensor ground
Shield	S-Shield	S-Shield	S-Shield	Shield for positioner

1.8 Circular, 32 pins, male

Figure 1.8: Connector Circular, 32 pins, male with viewing direction and pin labelling

Table 1.8 – Pin Assignment of Circular, 32 pins, male Connector - for three closed-loop positioners

Pin	Open-Loop Signal	S- Sensor Signal	L- Sensor Signal	Function
1	d.n.c.	CH1 S-SIN+	CH1 S-SIN+	S-SIN+ signal from sensor
2	d.n.c.	CH1 S-SIN-	CH1 S-SIN-	S-SIN- signal from sensor
3	d.n.c.	CH1 S-COS+	CH1 S-COS+	S-COS+ signal from sensor
4	d.n.c.	CH1 S-COS-	CH1 S-COS-	S-COS- signal from sensor
5	d.n.c.	CH1 S-REF+	CH1 S-REF+	S-REF+ signal from sensor
6	d.n.c.	CH2 S-SIN+	CH2 S-SIN+	S-SIN+ signal from sensor
7	d.n.c.	CH2 S-SIN-	CH2 S-SIN-	S-SIN- signal from sensor
8	d.n.c.	CH2 S-COS+	CH2 S-COS+	S-COS+ signal from sensor
9	d.n.c.	CH2 S-COS-	CH2 S-COS-	S-COS- signal from sensor
10	d.n.c.	CH2 S-REF+	CH2 S-REF+	S-REF+ signal from sensor
11	d.n.c.	CH2 S-REF-	d.n.c.	S-REF- signal from sensor
12	d.n.c.	CH3 S-SIN+	CH3 S-SIN+	S-SIN+ signal from sensor
13	d.n.c.	CH3 S-SIN-	CH3 S-SIN-	S-SIN- signal from sensor
14	d.n.c.	CH3 S-COS+	CH3 S-COS+	S-COS+ signal from sensor
15	d.n.c.	CH3 S-COS-	CH3 S-COS-	S-COS- signal from sensor
16	d.n.c.	CH3 S-REF+	CH3 S-REF+	S-REF+ signal from sensor
17	d.n.c.	CH3 S-REF-	d.n.c.	S-REF- signal from sensor
18	d.n.c.	CH1S-VCC	CH1S-VCC	Power supply for sensor
19	d.n.c.	CH1 S-GND	CH1 S-GND	Sensor ground
20	d.n.c.	CH1 S-REF-	d.n.c.	S-REF- signal from sensor
21	d.n.c.	CH2 S-GND	CH2 S-GND	Sensor ground
22	d.n.c.	CH2S-VCC	CH2S-VCC	Power supply for sensor
23	d.n.c.	d.n.c.	d.n.c.	DO NOT CONNECT
24	d.n.c.	d.n.c.	d.n.c.	DO NOT CONNECT
25	d.n.c.	CH3S-VCC	CH3S-VCC	Power supply for sensor
26	d.n.c.	CH3 S-GND	CH3 S-GND	Sensor ground
27	d.n.c.	CH3 A-HV-GND	CH3 A-HV-GND	Positioner driving signal ground
28	d.n.c.	CH1 A-HV	CH1 A-HV	Positioner driving signal
29	d.n.c.	CH1 A-HV-GND	CH1 A-HV-GND	Positioner driving signal ground
30	d.n.c.	CH2 A-HV-GND	CH2 A-HV-GND	Positioner driving signal ground

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Table 1.8 – *Continued from previous page*

Pin	Open-Loop Signal	S- Sensor Signal	L- Sensor Signal	Function
31	d.n.c.	CH2 A-HV	CH2 A-HV	Positioner driving signal
32	d.n.c.	CH3 A-HV	CH3 A-HV	Positioner driving signal
Shield	S-Shield	S-Shield	S-Shield	Shield for positioner

2 *POSITIONER DIMENSIONS*

With the Reference "Reference to Drawing" on the Operation Parameter Sheet and Table 2.1 the "Drawing Number", "Drawing Title" and the "File Name" can be identified for a specific positioner. Find the technical drawing for a specific positioner via the "File Name" on the supplied USB-Stick.

Please read the Stick-Slip Positioners Assembly Instructions and note the mounting instructions before installing the positioner.

Table 2.1 – Reference between positioner and technical drawing

Positioner	Drawing No./Title	File Name
SLC-17-Series		
SLC-1720	EX-0031308-000/SLC-1720	EX-0031308-SLC-1720-S-with slide-_00_Parent.pdf
SLC-1730	EX-0045725-004/SLC-1730	EX-0045725-SLC17 product series-SLC-1730.pdf
SLC-1740	EX-0045725-004/SLC-1740	EX-0045725-SLC17 product series-SLC-1740.pdf
SLC-1750	EX-0045725-004/SLC-1750	EX-0045725-SLC17 product series-SLC-1750.pdf
SLC-1760	EX-0045725-004/SLC-1760	EX-0045725-SLC17 product series-SLC-1760.pdf
SLC-1770	EX-0045725-004/SLC-1770	EX-0045725-SLC17 product series-SLC-1770.pdf
SLC-1780	EX-0045725-004/SLC-1780	EX-0045725-SLC17 product series-SLC-1780.pdf
SLC-1720-W	EX-0009951-000/SLC-1720-W-S	EX-0009951-SLC-1720-W-S-00_Parent.pdf
SLC-1730-W	EX-0045725-004/SLC-1730-W	EX-0045725-SLC17 product series-SLC-1730-W.pdf
SLC-1740-W	EX-0045725-004/SLC-1740-W	EX-0045725-SLC17 product series-SLC-1740-W.pdf
SLC-1750-W	EX-0045725-004/SLC-1750-W	EX-0045725-SLC17 product series-SLC-1750-W.pdf
SLC-1760-W	EX-0045725-004/SLC-1760-W	EX-0045725-SLC17 product series-SLC-1760-W.pdf

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Table 2.1 – *Continued from previous page*

Positioner	Drawing No./Title	File Name
SLC-1770-W	EX-0045725-004/SLC-1770-W	EX-0045725-SLC17 product series-SLC-1770-W.pdf
SLC-1780-W	EX-0045725-004/SLC-1780-W	EX-0045725-SLC17 product series-SLC-1780-W.pdf
SLC-24-Series		
SLC-2430	EX-0003415-002/SLC-2430	EX-0003415-product series SLC-2430.pdf
SLC-2445	EX-0003415-002/SLC-2445	EX-0003415-product series SLC-2445.pdf
SLC-2460	EX-0003415-002/SLC-2460	EX-0003415-product series SLC-2460.pdf
SLC-2475	EX-0003415-002/SLC-2475	EX-0003415-product series SLC-2475.pdf
SLC-2490	EX-0003415-002/SLC-2490	EX-0003415-product series SLC-2490.pdf
SLC-24105	EX-0003415-002/SLC-24105	EX-0003415-product series SLC-24105.pdf
SLC-24120	EX-0003415-002/SLC-24120	EX-0003415-product series SLC-24120.pdf
SLC-24150	EX-0003415-002/SLC-24150	EX-0003415-product series SLC-24150.pdf
SLC-24180	EX-0003415-002/SLC-24180	EX-0003415-product series SLC-24180.pdf
SLC-2430-W	EX-0003415-002/SLC-2430-W	EX-0003415-product series SLC-2430-W.pdf
SLC-2445-W	EX-0003415-002/SLC-2445-W	EX-0003415-product series SLC-2445-W.pdf
SLC-2460-W	EX-0003415-002/SLC-2460-W	EX-0003415-product series SLC-2460-W.pdf
SLC-2475-W	EX-0003415-002/SLC-2475-W	EX-0003415-product series SLC-2475-W.pdf
SLC-2490-W	EX-0003415-002/SLC-2490-W	EX-0003415-product series SLC-2490-W.pdf
SLC-24105-W	EX-0003415-002/SLC-24105-W	EX-0003415-product series SLC-24105-W.pdf
SLC-24120–W	EX-0003415-002/SLC-24120–W	EX-0003415-product series SLC-24120-W.pdf
SLC-24150-W	EX-0003415-002/SLC-24150-W	EX-0003415-product series SLC-24150-W.pdf
SLC-24180-W	EX-0003415-002/SLC-24180-W	EX-0003415-product series SLC-24180-W.pdf
CLS-Series		
CLS-3232	EX-0045566-003/CLS-3232	EX-0045566-CLS-3232-00_Parent.pdf
CLS-3252	EX-0054823-000/CLS-3252	EX-0054823-CLS-3252-00_Parent.pdf
CLS-3282	EX-0048224-000/CLS-3282	EX-0048224-CLS-3282-00_Parent.pdf
CLS-5252	EX-0054717-000/CLS-5252	EX-0054717-CLS-5252-00_Parent.pdf
CLS-5282	EX-0048492-000/CLS-5282	EX-0048492-CLS-5282-00_Parent.pdf
CLS-9292	EX-0051006-000/CLS-9292	EX-0051006-CLS-9292-00_Parent.pdf
CLS-92152	EX-0054514-000/CLS-92152	EX-0054514-CLS-92152-00_Parent.pdf

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Table 2.1 – *Continued from previous page*

Positioner	Drawing No./Title	File Name
DLS-Series		
DLS-3232	EX-0062858-000/DLS3232	EX-0062858-DLS3232-S.pdf
DLS-5252	EX-0070970-000/DLS5252	EX-0070970-DLS5252-S.pdf
SL-Series		
SL-0610	EX-0005779-000/SL-0610	EX-0005779-SLB1111-_00_Parent.pdf
SL-0620	EX-0005863-000/SL-0620	EX-0005863-SLB-1121-_00_Parent.pdf
SL-0630	EX-0005904-000/SL-0630	EX-0005904-SLB-1131-_00_Parent.pdf
SR-Series		
SR-1908	EX-0005716-000/SR-1908	EX-0005716-SRM-20-9-_00_Parent.pdf
SR-2013	EX-0011453-001/SR-2013	EX-0011453-SRP2011-_00_Parent.pdf
SR-2812	EX-0011385-000/SR-2812	EX-0011385-SRP3012-S-_00_Parent.pdf
SR-3211	EX-0022515-000/SR-3211	EX-0022515-SRP3211-_00_Parent.pdf
SR-4011	EX-0020211-000/SR-4011	EX-0020211-SRM4011-S-_00_Parent.pdf
SR-4513	EX-0009598-000/SR-4513	EX-0009598-SRN4514-S-_00_Parent.pdf
SR-5014	EX-0013408-000/SR-5014	EX-0013408-SRN5014-S-_00_Parent.pdf
SR-5714	EX-0010934-001/SR-5714	EX-0010934-SR-5714 - Rotation Stage-Sheet1.pdf
SR-5714C	EX-0010175-000/SR-5714C	EX-0010175-SRP5714-S-_00_Parent.pdf
SR-7012	EX-0011706-000/SR-7012	EX-0011706-SRM7012-_00_Parent.pdf
SR-9219	EX-0046354-000/SR-9219	EX-0046354-SRN9017-_00_Parent.pdf
SR-9219C	EX-0040799-000/SR-9219C	EX-0040799-SRP9219C-_00_Parent.pdf
SR-12012	EX-0018664-00/SR-12012	EX-0018664-SRM120-S-_00_Parent.pdf
SLL-Series		
SLL12	EX-0016493-000/SLL12	EX-0016493-SLV27-S-M-L-_00_Parent.pdf
SLLV42	EX-0014777-001/SLLV42	EX-0014777-SLV60-_00_Parent.pdf
CLL-Series		
CLLV42	EX-0070927-000/CLLV42	EX-0070927-CLLV42.pdf
SGO-Series		
SGO-60.5	EX-0012017-004/SGO-60.5	EX-0012017-product series SGO-60.5.pdf
SGO-77.5	EX-0014989-000/SGO-77.5	EX-0014989-SGO-5077.5-_00_Parent.pdf
SGO-93.5	EX-0019109-001/SGO-93.5	EX-0019109-SGG-93.5-S-_00_Parent.pdf

Continued on next page

Table 2.1 – *Continued from previous page*

Positioner	Drawing No./Title	File Name
CGO-Series		
CGO-60.5	EX-0063845-000/CGO-5060.5	EX-0063845-CGO-5060.5.pdf
CGO-77.5	EX-0056557-000/CGO-5077.5	EX-0056557-CGO-5077.5.pdf
STT-Series		
STT-12.7	EX-0005272-000/STT-12.7	EX-0005272-STT12.7-_00_Parent.pdf
STT-25.4	EX-0012022-000/STT-25.4-I	EX-0012022-STT25.4-I-_00_Parent.pdf
STT-50.8	EX-0012027-000/STT-50.8-I	EX-0012027-STT50.8-I-_00_Parent.pdf

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