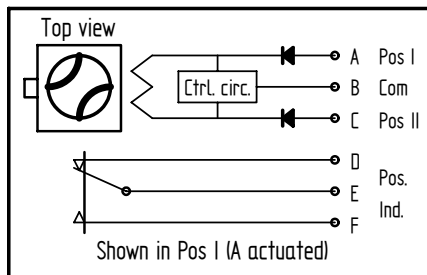
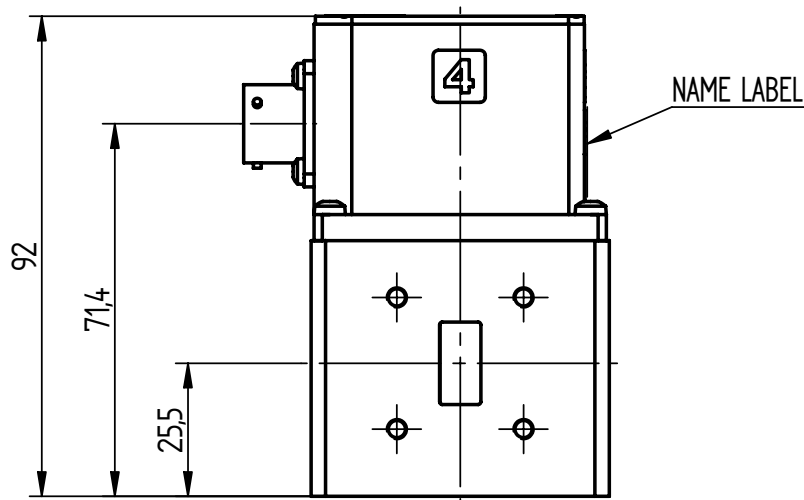
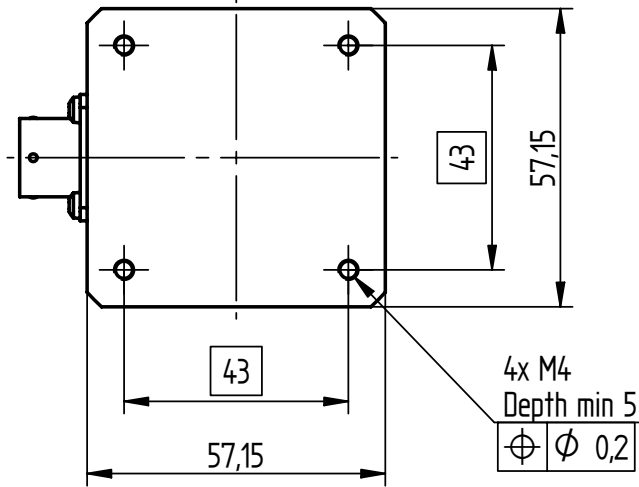
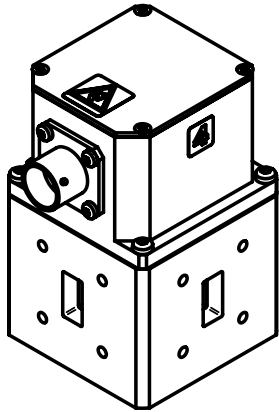


CAD-dokument
Får ej revideras manuellt

Issue	Modification	Date	Sign.	Chkd.
B	ECO	2003-1016	HNg	HW
C	ECO	2004-0205	HNg	HW



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Drawing principle	SS 1902	UNLESS OTHERWISE STATED THE FOLLOWING APPLIES: General tolerances, linear and angular dimensions: ISO 2768-c - Europ. proj.	Ref.	020107	Sign.	CEL
Tolerancing principle	ISO 8015		Chkd.		Sign.	
Dimensions in mm			Appvd.	5/2-04	Sign.	HW
	Title WAVEGUIDE SWITCH WR62/R140/WG18 Latching		Designed		Sheet	1 (2)
			Scale	1:1,5	Issue	C
			Doc. no.	WS8086P/00		

Reference	Approved	Origin date	Issue date	Issue	Page	Document
HNg	HW	2002-01-07	2004-02-05	C	2 (2)	WS 8086P/00

RF DATA

Frequency range	12.4 – 18.0 GHz
VSWR	1.08
Insertion loss	0.1 dB
Isolation	90 dB
Peak power	125 kW at 0.1 MPa abs., +25°C
Average power	2 kW
Waveguide size	WR62 / R140 / WG18
Hole dimensions according to	MIL-DTL-3922/53D-018 (6-32 UNC-2B) thread depth min 5

ACTUATOR DATA

Operating voltage	28±3 V DC
Operating current	1 A, Self cut off
Switching time	300 ms
Duty (min time between successive operations)	500 ms -40°C to +40°C linearly increasing to 2 s at +85°C
Connector	MS 3112E 10-6P
Mating connector	MS 3116F 10-6S or eq.

POSITION INDICATOR

Voltage / Current	30 V Max, 100 mA Max Resistive load
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MECHANICAL DATA

Material	Aluminium alloy, Cu free
Finishing	Chromate per MIL-C-5541 and black painted
Air pressure	0.1 MPa overpr. Max
Air leakage	10 cm ³ /min (0.1 MPa overpr.) Max
Weight	0,5 kg Max
Life	250 000 actuations

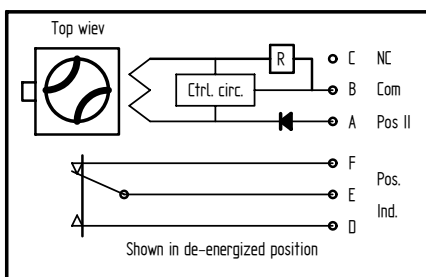
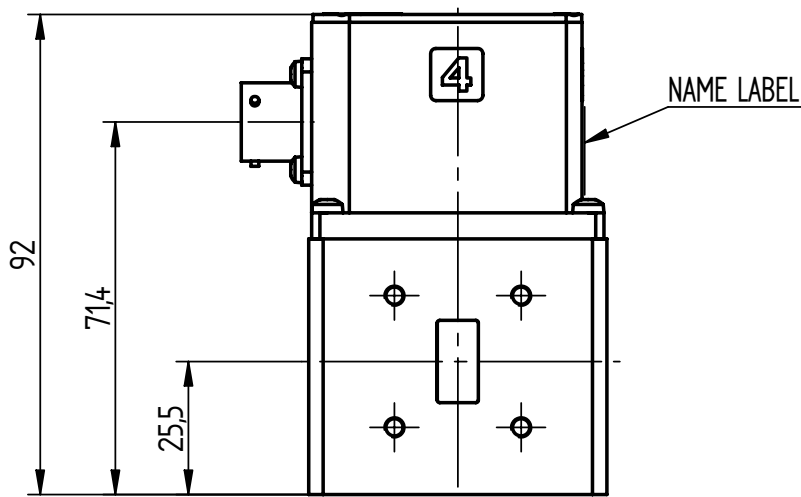
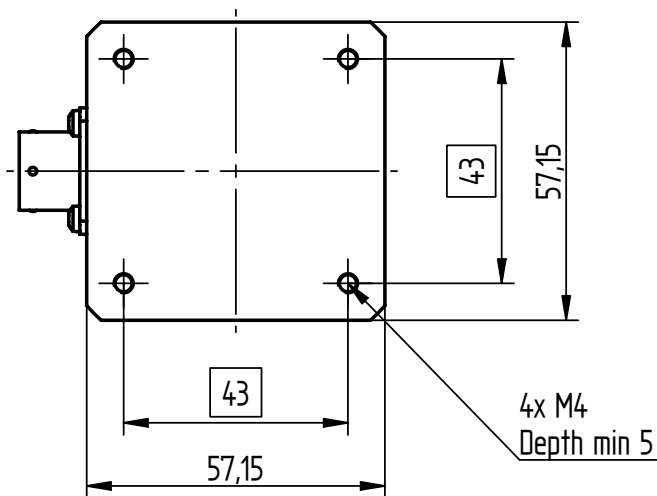
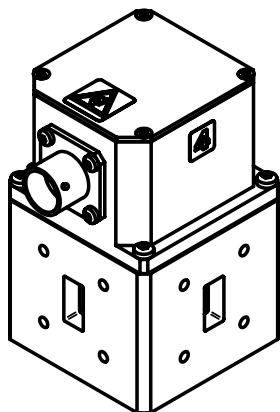
ENVIRONMENTAL DATA

Ambient temperature	-40°C to +85°C
Vibration	5 – 18 Hz, 3 mm amplitude 18 – 2000 Hz, 15 g
Humidity	100%RH if dry air in waveguide

WS 8086P/00

CAD-dokument
Får ej revideras manuellt

Issue	Modification	Date	Sign.	Chkd.
B	ECO	2003-1016	HNg	HW



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Drawing principle	SS 1902	UNLESS OTHERWISE STATED THE FOLLOWING APPLIES: General tolerances, linear and angular dimensions: ISO 2768-c • ◯ • ◯ Europ. proj.	Ref.	030214	Sign.	CEL
Tolerancing principle	ISO 8015		Chkd.		Sign.	HW
Dimensions in mm			Appvd.		Sign.	HW
SIVERS	Title		Designed	Sheet 1 (2)		
	WAVEGUIDE SWITCH WR62/R140/WG18 Fail-safe		Scale	1:1,5	Issue B	
			Doc. no.	WS8087P/00		

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Reference	Approved	Origin date	Issue date	Issue	Page	Document
HNg	HW	2003-02-14	2003-11-04	B	2 (2)	WS 8087P/00

RF DATA

Frequency range	12.4 – 18.0 GHz
VSWR	1.08
Insertion loss	0.1 dB
Isolation	90 dB
Peak power	125 kW at 0.1 MPa abs., +25°C
Average power	2 kW
Flange interface	MIL-DTL-3922/53D-005 Modified with 6-32 UNC-2B, thread depth min 5

ACTUATOR DATA

Operating voltage	28±3 V DC
Operating current	1 A, Auto switch on to holding current after 200 ms
Holding current	300 mA
Switching time	300 ms
Duty (min time between successive operations)	500 ms -40°C to +40°C linearly increasing to 2 s at +85°C
Connector	MS 3112E 10-6P
Mating connector	MS 3116F 10-6S or eq.

POSITION INDICATOR

Voltage / Current	30 V Max, 100 mA Max Resistive load
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MECHANICAL DATA

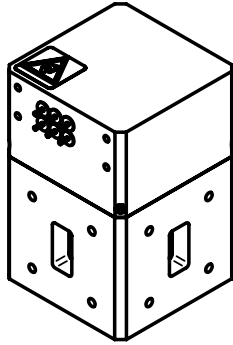
Material	Aluminium alloy, Cu free
Finishing	Chromate per MIL-C-5541 and black painted
Air pressure	0.1 MPa overpr. Max
Air leakage	10 cm ³ /min (0.1 MPa overpr.) Max
Weight	0.5 kg Max
Life	250 000 actuations

ENVIRONMENTAL DATA

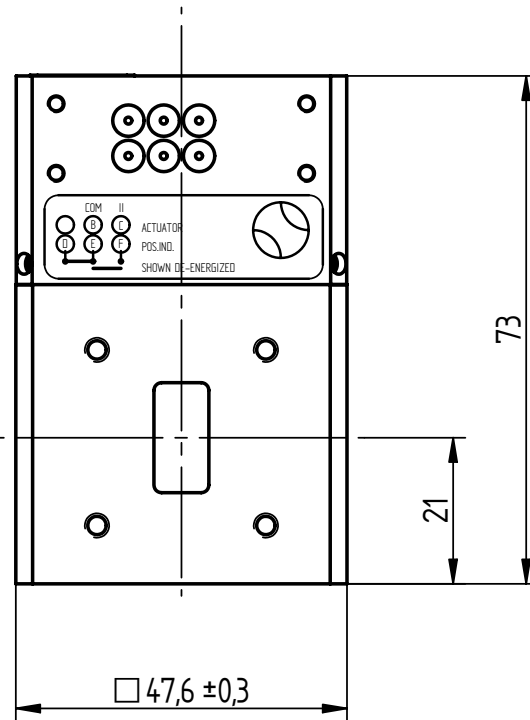
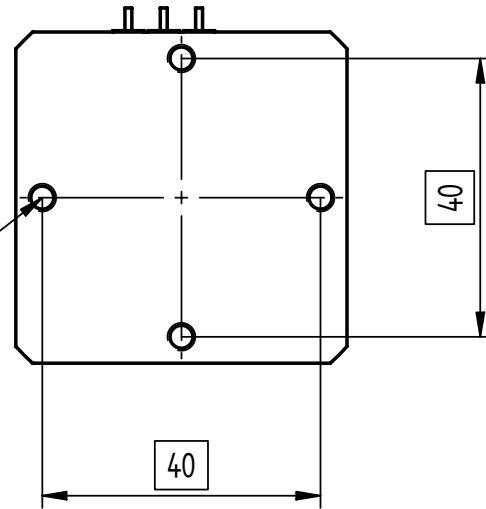
Ambient temperature	-40°C to +85°C
Vibration	5 – 18 Hz, 3 mm amplitude 18 – 2000 Hz, 15 g
Humidity	100%RH if dry air in waveguide

CAD-dokument
Får ej revideras manuellt

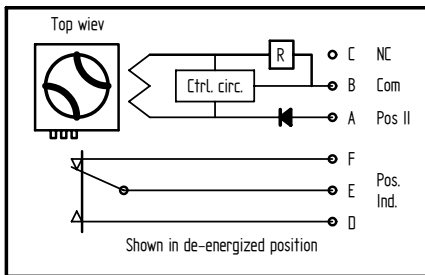
Issue	Modification	Date	Sign.	Chkd.
C	ECO	2004-04-26	HNg	HW



4x M4
Depth min 5
 $\begin{matrix} \oplus & \ominus \\ \oplus & \ominus \end{matrix} \quad \phi 0,2$



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Drawing principle	SS 1902	UNLESS OTHERWISE STATED THE FOLLOWING APPLIES: General tolerances, linear and angular dimensions: ISO 2768-c $\begin{matrix} \triangleleft & \oplus \\ \triangleleft & \oplus \end{matrix}$ Europ. proj.	Ref. 03-11-19	Sign. HNg
Tolerancing principle	ISO 8015		Chkd.	Sign.
Dimensions in mm			Appvd.	Sign.
	WAVEGUIDE SWITCH WR62/R140/WG18 Fail-safe	Designed	Sheet 1(2)	
		Scale 1:1	Issue C	
		Doc. no. WS8088P/00		

Reference	Approved	Origin date	Issue date	Issue	Page	Document
HNg	HW	1997-12-17	2004-04-26	C	2 (2)	WS 8088P/00

RF DATA

Frequency range	12.4 – 18.0 GHz
VSWR	1.08
Insertion loss	0.1 dB
Isolation	60 dB
Peak power	125 kW at 0.1 MPa abs., +25°C
Average power	2 kW
Flange interface	MIL-DTL-3922/53D-018 Modified with 6-32 UNC-2B, thread depth min 5

ACTUATOR DATA

Operating voltage	28±3 VDC
Operating current	1A, Self cut off
Holding current	0.3 A
Switching time	150 ms
Duty (min time between successive operations)	500 ms -40°C to +40°C linearly increasing to 2 s at +85°C
Connector	Soldering pins

POSITION INDICATOR

Position indicator current	60 V Max, 50 mA Max Resistive load
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MECHANICAL DATA

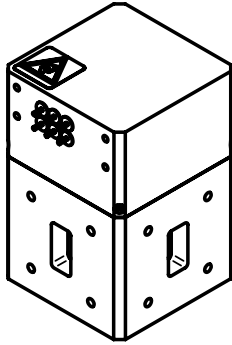
Material	Aluminium alloy, Cu free
Finishing	Chromate per MIL-C-5541 and black painted
Air pressure	0.1 MPa overpressure Max
Air leakage	10 cm ³ /min. (0.1 MPa overpr.) Max
Weight	0.35 kg Max
Life	250 000 actuations

ENVIRONMENTAL DATA

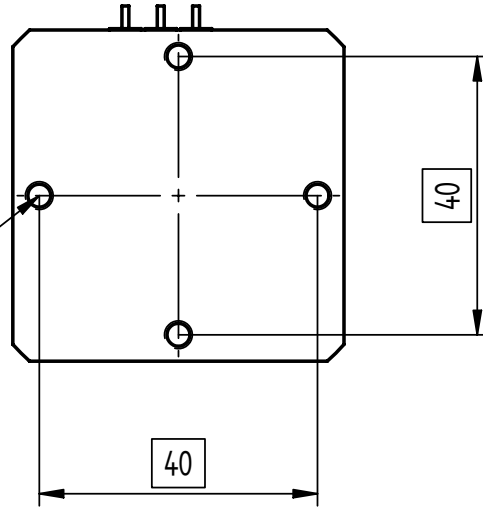
Ambient temperature	-40°C to +85°C
Vibration	5 – 18 Hz, 3 mm amplitude 18 – 2000 Hz, 15 g
Humidity	100%RH if dry air in waveguide

CAD-dokument
Får ej revideras manuellt

Issue	Modification	Date	Sign.	Chkd.
C	ECO	2004-04-26	HNg	HW

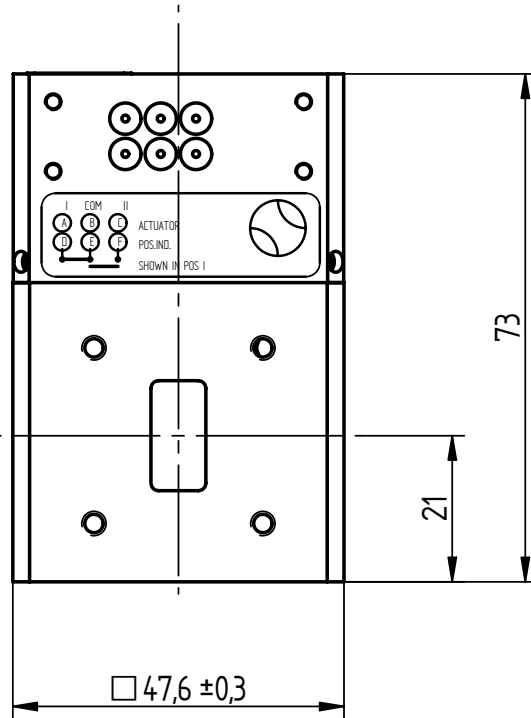
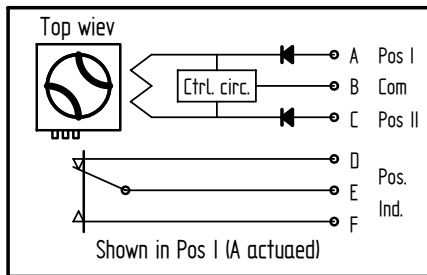


4x M4
Depth min 5
 $\begin{matrix} \oplus & \ominus \\ \oplus & \ominus \end{matrix} \quad \phi 0,2$



CAUTION!
Never connect supply voltages to pins A and C simultaneously. Severe damage will result.

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Tolerancing principle	ISO 8015		Chkd.	Sign.
Dimensions in mm			Appvd.	Sign.
	Title		Designed	Sheet 1(2)
	WAVEGUIDE SWITCH WR62/R140/WG18 Latching		Scale 1:1	Issue C
			Doc. no. WS8089P/00	

Reference HNg	Approved <i>HW</i>	Origin date 1997-12-16	Issue date 2004-04-26	Issue C	Page 2 (2)	Document WS 8089P/00
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RF DATA

Frequency range	12.4 – 18.0 GHz
VSWR	1.08
Insertion loss	0.1 dB
Isolation	60 dB
Peak power	125 kW at 0.1 MPa abs., +25°C
Average power	2 kW
Flange interface	MIL-DTL-3922/53D-018 Modified with 6-32 UNC-2B, thread depth min 5

ACTUATOR DATA

Operating voltage	28±3 VDC
Operating current	1 A, Self cut off
Switching time	150 ms
Duty (min time between successive operations)	500 ms -40°C to +40°C linearly increasing to 2 s at +85°C
Connector	Soldering pins

POSITION INDICATOR

Position indicator current	60 V Max, 50 mA Max Resistive load
----------------------------	------------------------------------

MECHANICAL DATA

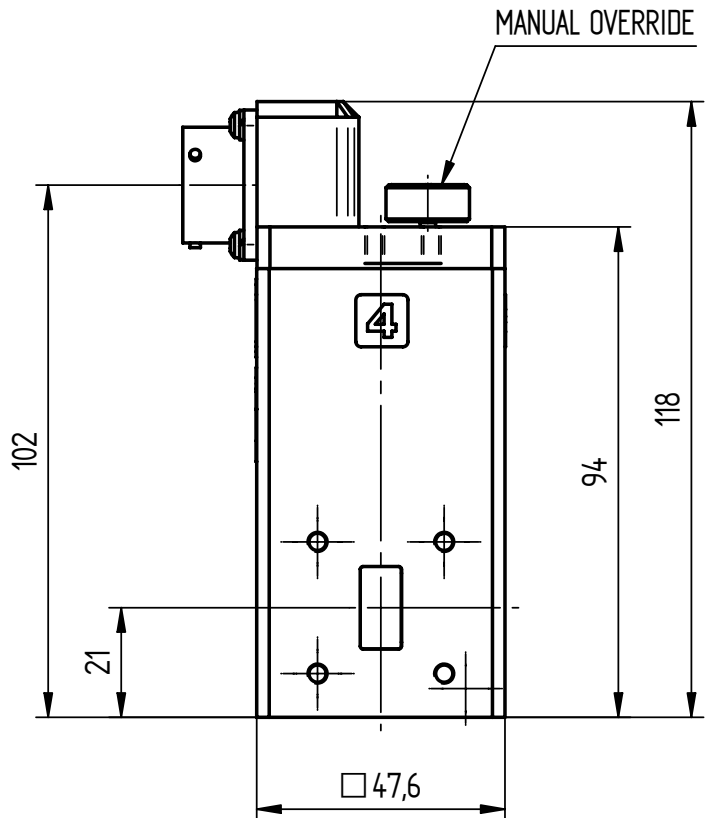
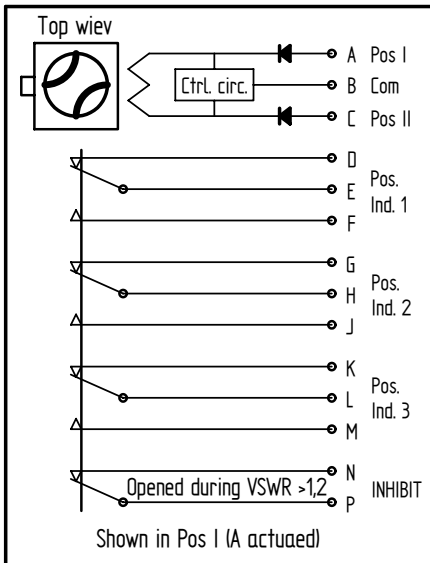
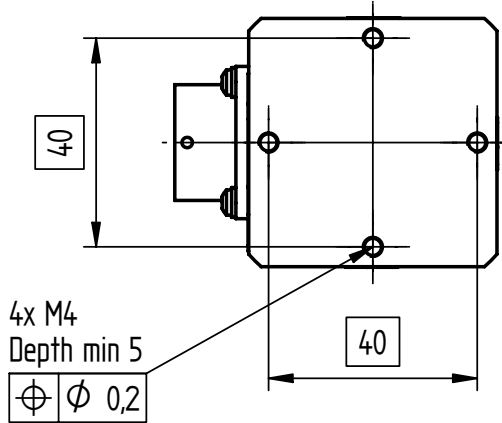
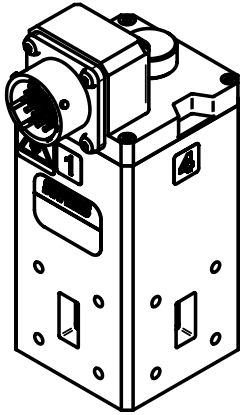
Material	Aluminium alloy, Cu free
Finishing	Chromate per MIL-C-5541 and black painted
Air pressure	0.1 MPa overpressure Max
Air leakage	10 cm ³ /min. (0.1 MPa overpr.) Max
Weight	0.35 kg Max
Life	250 000 actuations

ENVIRONMENTAL DATA

Ambient temperature	-40°C to +85°C
Vibration	5 – 18 Hz, 3 mm amplitude 18 – 2000 Hz, 15 g
Humidity	100%RH if dry air in waveguide

CAD-dokument
Får ej revideras manuellt

Issue	Modification	Date	Sign.	Chkd.
F	ECO	2004-04-26	HNg	HW



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Drawing principle	SS 1902	UNLESS OTHERWISE STATED THE FOLLOWING APPLIES: General tolerances, linear and angular dimensions: ISO 2768-c - Europ. proj.	Ref. 2004-0426	Sign. HNg
Tolerancing principle	ISO 8015		Chkd.	Sign.
Dimensions in mm			Appvd.	Sign.
	Title	WAVEGUIDE SWITCH WR62/R140/WG18 Latching	Designed	Sheet 1 (2)
			Scale 1:1,5	Issue F
			Doc. no	WS 8189P/00

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Reference	Approved	Origin date	Issue date	Issue	Page	Document
HNg	HW	1997-10-16	2004-04-26	F	2 (2)	WS 8189P/00

RF DATA

Frequency range	12.4 – 18.0 GHz
VSWR	1.05
Insertion loss	0.1 dB
Isolation	60 dB
Peak power	125 kW at 0.1 MPa abs., +25°C
Average power	2 kW
Flange interface	MIL-DTL-3922/53D-018 Modified with 6-32 UNC-2B, thread depth min 5

ACTUATOR DATA

Operating voltage	28±3 VDC
Operating current	1 A, Self cut off
Switching time	100 ms
Duty (min time between successive operations)	500 ms -20°C to +40°C linearly increasing to 2 s at +70°C
Connector	MS 3112E 14-19P
Mating connector	MS 3116F 14-19S or eq.

POSITION INDICATOR

Voltage / Current	30 V Max, 100 mA Max Resistive load
Position indicator	Three sets of C-form contacts and one set of inhibit contact, opened during VSWR >1.2

MECHANICAL DATA

Material	Aluminium alloy, Cu free
Finishing	Chromate per MIL-C-5541 and black painted
Air pressure	0.1 MPa overpr. Max
Air leakage	10 cm ³ /min (0.1 MPa overpr.) Max
Weight	0.45 kg Max
Life	250 000 actuations

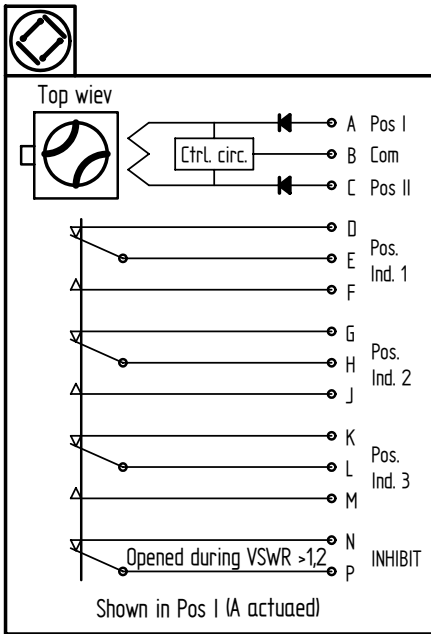
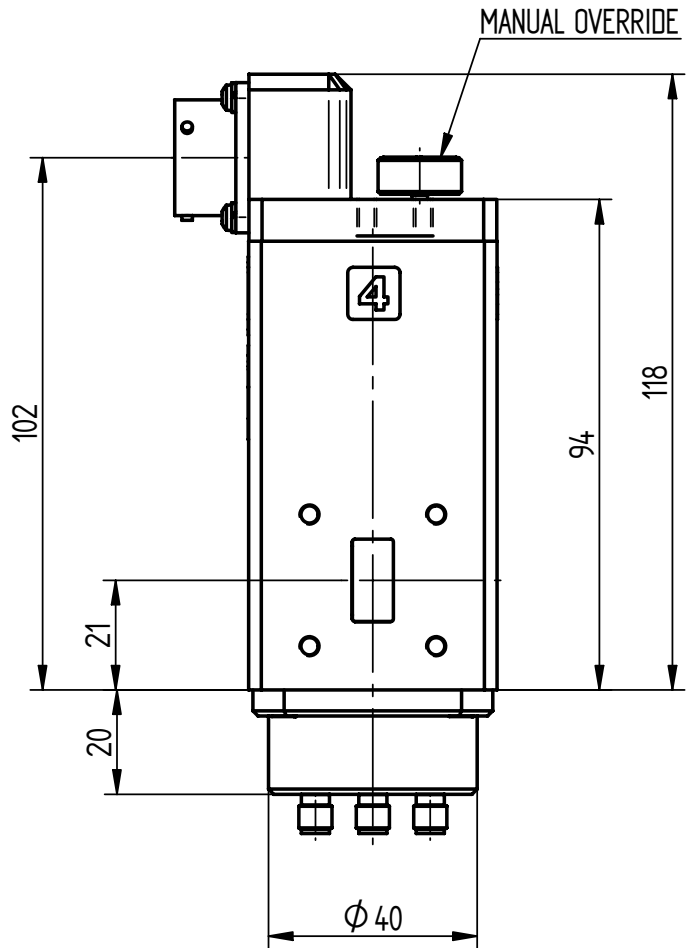
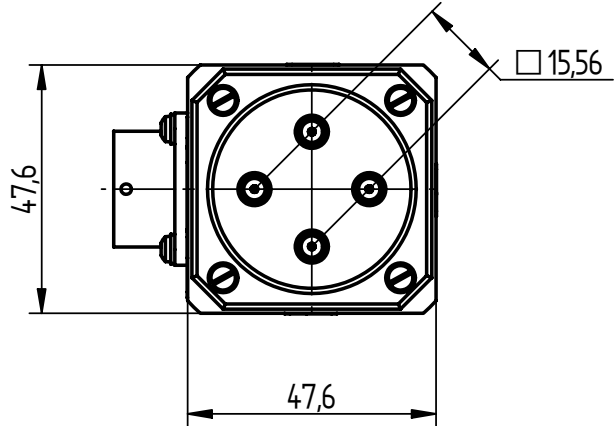
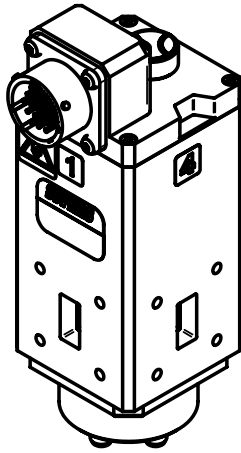
ENVIRONMENTAL DATA

Ambient temperature	-20°C to +70°C
Vibration	5 – 18 Hz, 3 mm amplitude 18 – 2000 Hz, 15 g
Humidity	100%RH if dry air in waveguide

WS 8189P/00

CAD-dokument
Får ej revideras manuellt

Issue	Modification	Date	Sign.	Chkd.
C	Coax connectors twisted 45°	030710	MTr	HW
D	Paragraphs added	2003-1015	HNg	HW



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Tolerancing principle	ISO 8015		Chkd.		Sign.	HW
Dimensions in mm			Appvd.		Sign.	HW
SIVERS	Title		Designed	Sheet 1 (2)		
	WAVEGUIDE SWITCH WR62/R140/WG18 Latching with COAX DPDT		Scale	1:2	Issue	D
			Doc. no.	WS8189P/70		



Reference	Approved	Origin date	Issue date	Issue	Page	Document
HNg	HW	2002-11-29	2003-11-05	D	2 (2)	WS 8189P/70

RF DATA**Waveguide**

Frequency range	12.4 – 18.0 GHz
VSWR	1.05
Insertion loss	0.1 dB
Isolation	60 dB
Peak power	125 kW at 0.1 MPa abs., +25°C
Average power	2 kW
Flange interface	MIL-DTL-3922/53D-018 Modified with 6 – 32 UNF-2B, thread depth min 6

Coax

Frequency range	12.4 – 18.0 GHz
VSWR	1.5
Insertion loss	0.5 dB
Isolation	40 dB
Peak power	5 kW
Average power	15 W max
Coax connector	SMA-female

Isolation, waveguide-coax

120 dB

ACTUATOR DATA

Operating voltage	28±3 V DC
Operating current	1 A, Self cut off
Switching time	100 ms
Connector	MS 3112E 14-19P
Mating connector	MS 3116F 14-19S or eq.

POSITION INDICATOR

Voltage / Current	30 V Max, 100 mA Max Resistive load
Position indicator	Three sets of C-form contacts and one set of inhibit contact, opened during VSWR >1.2

MECHANICAL DATA

Material	Aluminium alloy; Cu-free
Finishing	Chromate per MIL-C-5541
Air pressure	0.1 MPa overpr. Max
Air leakage	10 cm ³ /min (0.1 MPa overpr.) Max
Weight	0.6 kg Max
Life	250 000 actuations

ENVIRONMENTAL DATA

Ambient temperature	-20°C to +70°C
Vibration	5 – 18 Hz, 3 mm amplitude 18 – 2000 Hz, 15 g
Humidity	100%RH if dry air in waveguide

WS 8189P/70