

Reference	Approved	Origin date	Issue date	Issue	Page	Document
HNg	HW	2002-08-06	2003-11-03	B	2 (2)	WS 8086X/00

RF DATA

Frequency range	8.2 – 12.4 GHz
VSWR	1.08
Insertion loss	0.1 dB
Isolation	90 dB
Peak power	250 kW at 0.1 MPa abs., +25°C
Average power	3 kW
Flange interface	MIL-DTL-3922/53D-016 modified with M4, thread depth min 5

ACTUATOR DATA

Operating voltage	28±3 V DC
Operating current	1 A
Switching time	300 ms, Self cut off
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

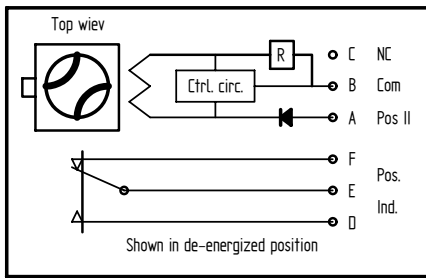
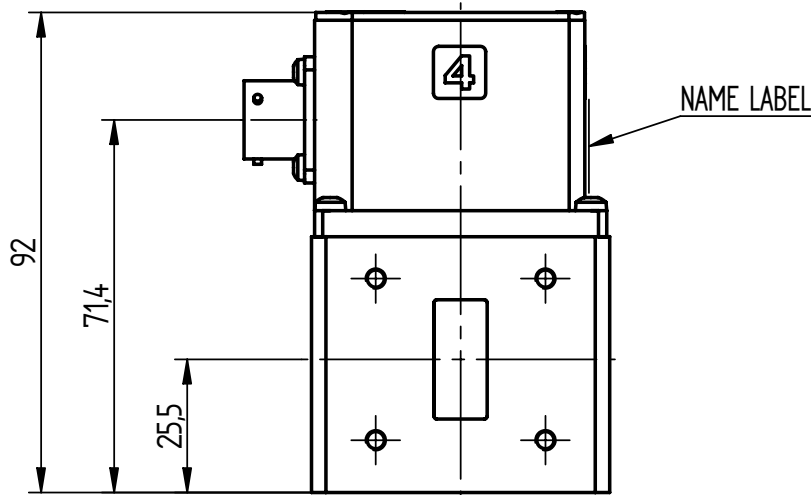
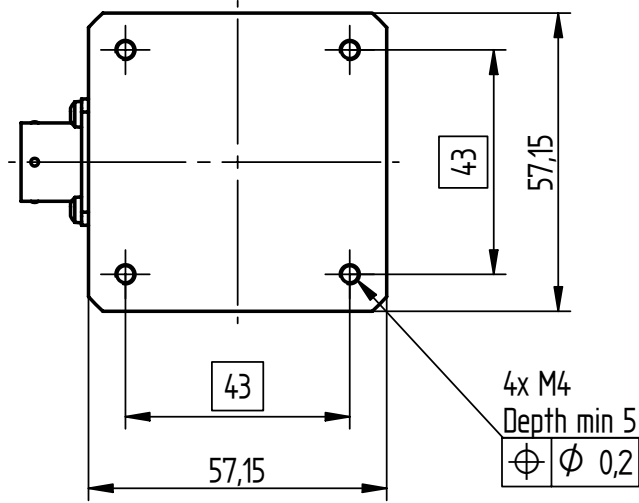
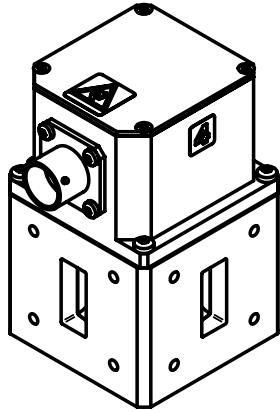
ENVIRONMENTAL DATA

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 8086X/00

CAD-dokument
Får ej revideras manuellt

Issue	Modification	Date	Sign.	Chkd.



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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. 2003-1112	Sign. HNg
Tolerancing principle	ISO 8015		Chkd.	Sign. HW
Dimensions in mm			Appvd.	Sign. HW
SIVERS	Title WAVEGUIDE SWITCH WR90/R100/WG16 Fail-safe		Designed	Sheet 1 (2)
			Scale 1:1,5	Issue B
			Doc. no. WS8087X/00	

Reference	Approved	Origin date	Issue date	Issue	Page	Document
HNg	HW	2002-08-06	2003-11-03	B	2 (2)	WS 8087X/00

RF DATA

Frequency range	8.2 – 12.4 GHz
VSWR	1.08
Insertion loss	0.1 dB
Isolation	90 dB
Peak power	250 kW at 0.1 MPa abs., +25°C
Average power	3 kW
Flange interface	MIL-DTL-3922/53D-016 Modified with M4, 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, Self cut off
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

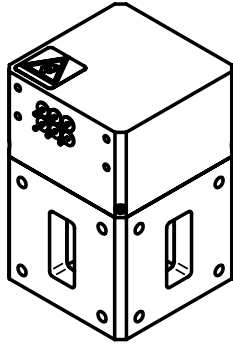
ENVIRONMENTAL DATA

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

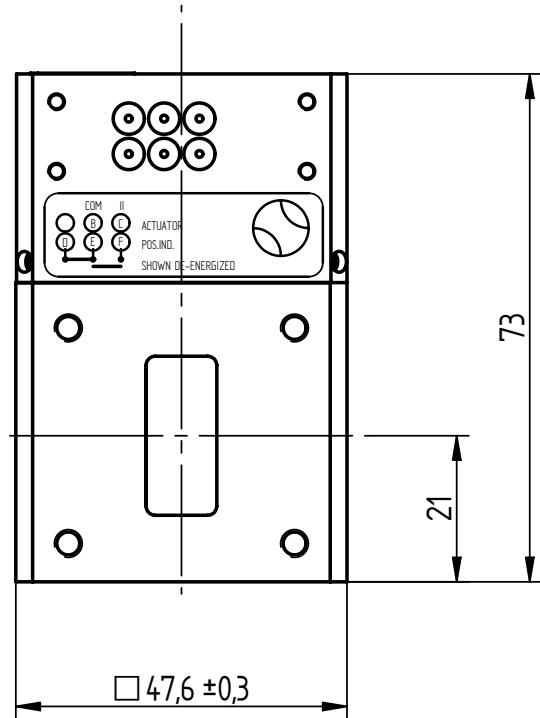
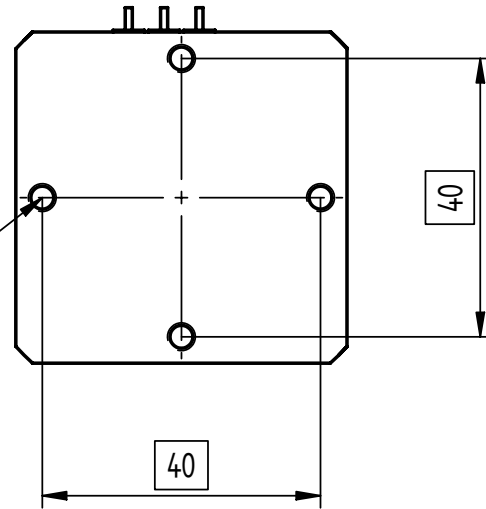
WS 8087X/00

CAD-dokument
Får ej revideras manuellt

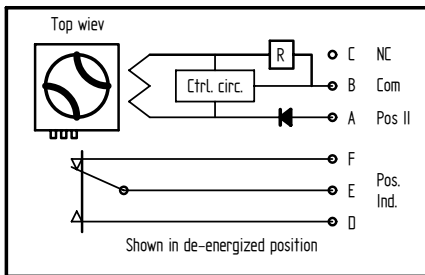
Issue	Modification	Date	Sign.	Chkd.
B	ECO	2004-04-26	HNg	HW



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.
	Title WAVEGUIDE SWITCH WR90/R100/WG16 Fail-safe	Designed	Sheet 1(2)	
		Scale 1:1	Issue C	
		Doc. no. WS8088X/00		

Reference	Approved	Origin date	Issue date	Issue	Page	Document
HNg	HW	1997-09-12	2004-04-26	C	2 (2)	WS 8088X/00

RF DATA

Frequency range	8.2 – 12.4 GHz
VSWR	1.08
Insertion loss	0.1 dB
Isolation	60 dB
Peak power	250 kW at 0.1 MPa abs., +25°C
Average power	3 kW
Flange interface	MIL-DTL-3922/53D-016 Modified with M4, thread depth min 5

ACTUATOR DATA

Operating voltage	28±3 VDC
Operating current	1 A, 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 overpr. Max
Air leakage	10 cm ³ /min. (0.1 MPa overpr.) Max
Weight	0.35 kg Max
Life	250 000 actuations

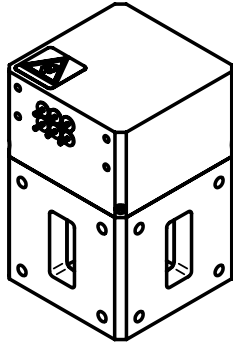
ENVIRONMENTAL DATA

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

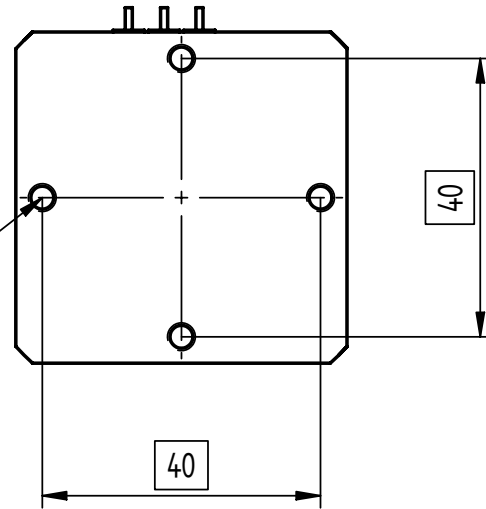
WS 8088X/00

CAD-dokument
Får ej revideras manuellt

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

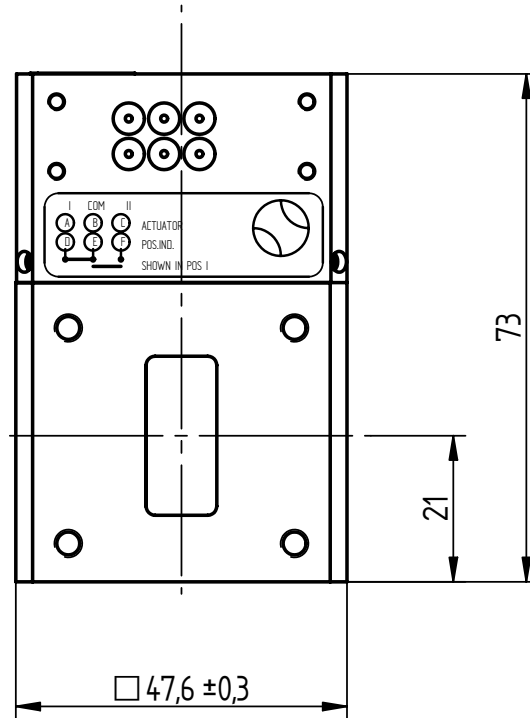
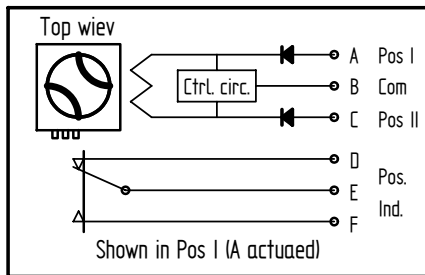


4x M4
Depth min 5
 $\begin{matrix} \oplus & \ominus \\ \oplus & \ominus \end{matrix} \quad \phi 0,2$



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

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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.
	Title WAVEGUIDE SWITCH WR90/R100/WG16 Latching	Designed	Sheet 1(2)	
		Scale 1:1	Issue D	
		Doc. no. WS8089X/00		

Reference	Approved	Origin date	Issue date	Issue	Page	Document
HNg	HW	1997-09-12	2004-04-26	D	2 (2)	WS 8089X/00

RF DATA

Frequency range	8.2 – 12.4 GHz
VSWR	1.08
Insertion loss	0.1 dB
Isolation	60 dB
Peak power	250 kW at 0.1 MPa abs., +25°C
Average power	3 kW
Flange interface	MIL-DTL-3922/53D-016 Modified with M4, 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
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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

WS 8089X/00

Reference	Approved	Origin date	Issue date	Issue	Page	Document
HNg	HW	2002-11-19	2003-11-05	B	2 (2)	WS 8189X/00

RF DATA

Frequency range	8.2 – 12.4 GHz
VSWR	1.08
Insertion loss	0.1 dB
Isolation	60 dB
Peak power	250 kW at 0.1 MPa abs., +25°C
Average power	3 kW
Flange interface	MIL-DTL-3922/53D-016 Modified with M4, thread depth min 5

ACTUATOR DATA

Operating voltage	28±3 V DC
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 8189X/00