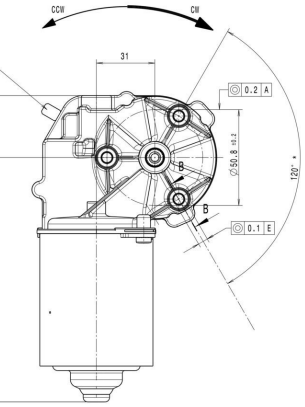
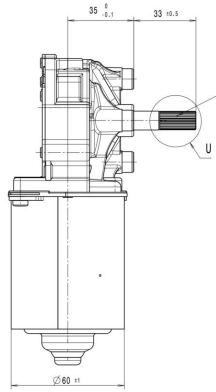
* SUMMENTEILUNGSFEHLER: ± 20'
* CUMULATIVE PITCH ERROR: ± 20'

VORZUGSDREHRICHTUNG
PRIORY DIRECTION OF ROTATION

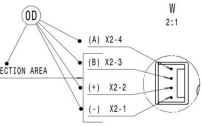


FLACHSTECKER 6.3x0.8
DICKE 0.9-0.1
NACH SWF 43.101 DIN 46244
MALE SPADE TERMINAL 6.3x0.8
THICKNESS 0.9-0.1
TO SWF 43.101 DIN 46244

GEGENSTECKER EMPFEHLUNG
RECOMMENDATION OF MATING PART
RSB 8240.158.F 1.5-6.3
FA.STOCKO



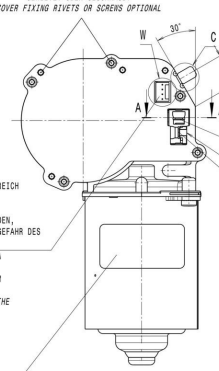
KERBVERZAHNUNG 8x10
AEHNLICH DIN 5481 (28 ZAEHNE)
SIEHE EINZELHEIT V
SERRATION 8x10
SIMILAR TO DIN 5481 (28 TEETH)
REFER TO DETAIL V



W
2:1

MAS-CON STECKER-NR.: MLAS 100
GEGENSTECKER PANDUIT-NR.: CE100 F22-03
FÜR LEITERQUERSCHNITT AWG: 22
MAS-CON PLUG-NO.: MLAS 100
PLUG CONNECTION PANDUIT-NO.: CE100 F22-03
FOR CONDUCTOR CROSS SECTION AWG: 22

DECKELBEFESTIGUNG WAHLWEISE
GENIETET ODER GESCHRAUBT
COVER FIXING RIVETS OR SCREWS OPTIONAL



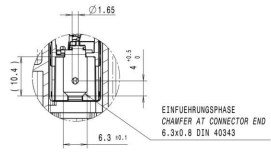
STECKER-FL 6.3x0.8 (DIN 46244)

GEGENSTECKER / TYCOELECTRONICS-AMP
STECKERGEHAEUSE: SACHNUMMER 926474
(ZEICHNUNGSNUMMER C-180907)
FLACHSTECKHUELSE (DIN46247) SACHNUMMER
X-160526-X (ZEICH. NR. C-160526)
FLACHSTECKHUELSE (DIN46247)-(REDUZIERTE STECKKREAFT);
SACHNUMMER 925603-X (ZEICH. NR.925603)
FUER LEITUNGSQUERSCHNITT 0.5-1.5mm²

PLUG-FL 6.3x0.8 (DIN 46244)

MATING CONNECTOR / TYOELECTRONICS-AMP
RECEPTACLE HOUSING: PART NO. 926474
(DRW.NO.C-180907)
RECEPTACLE FOR TABS (DI 46247):
PART NO.X-160526-X(DRW. NO.C-160526)
RECEPTACLE FOR TABS:(DIN 46247)-(REDUCED
INSERATION FORCE):PART NO.925603-X(DRW.NO.925603)
FOR CONDUCTOR CROSS SECTION 0.5-1.5mm²

A-A
2:1



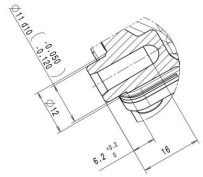
EINFUEHRUNGSPHASE
CHAMFER AT CONNECTOR END
6.3x0.8 DIN 40343

B-B (3x)
2:1

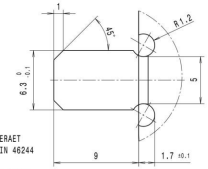
BEFESTIGUNGSLOECHER FUER SELBSTFORMENDE SCHRAUBEN M6,
POWER LOK GEWINDE DIN ISO 965-2, MAX. ZULAESSIGES
ANZUGSMOMENT DER BEFESTIGUNGSSCHRAUBE 13Nm
FASTENING HOLES FOR SELFFORMING SCREWS M6,
POWER LOK THREAD DIN ISO 965-2, MAX. PERMISSIBLE
TORQUE FOR FASTENING SCREW 13Nm

HANDHABUNGSHINWEIS IM BEREICH
DES HALL-IC STECKERS:
MOTOR DARF NICHT AUF
DECKELSEITE GELAGERT WERDEN,
AUF GRUND BESCHAEDIGUNGSGEFAHR DES
HALL-IC STECKER PINS.
NOTE FOR HANDLING IN AREA
OF HALL-IC-CONNECTOR:
STORAGE OF MOTOR ON COVER
SIDE IS NOT PERMISSIBLE,
DUE TO RISK OF DAMAGING THE
HALL-IC CONNECTOR PINS.

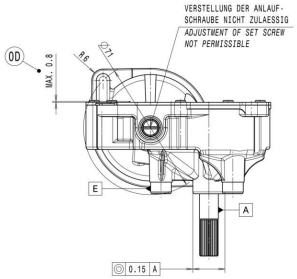
C
5:1
UM 150° NACH LINKS VERDREHT
AT 150 ° LEFT TURNED



Z
5:1

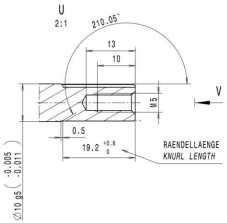


FLACHSTECKERENDE AM GERAET
AEHNLICH SWF 43.101 DIN 46244
MALE SPADE TERMINAL
SIMILAR SWF 43.101 DIN 46244



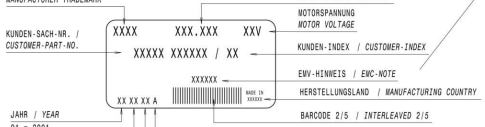
VERSTELLUNG DER ANLAUF-
SCHRAUBE NICHT ZULAESSIG
ADJUSTMENT OF SET SCREW
NOT PERMISSIBLE

KERBVERZAHNUNG (EINSTICH)
OBERFLÄCHENHÄRTE -NOCH ZU DEFINIEREN-
SERRATION DATA (CUT IN)
SURFACE HARDNESS -STILL TO DEFINE-

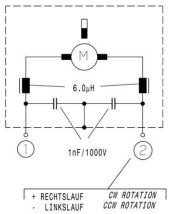


RAENDELLAENGE
KNURL LENGTH

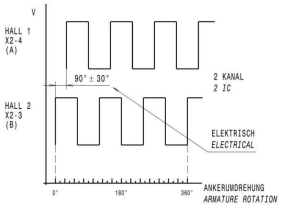
2:1



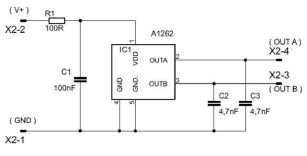
SCHALTBILD
CIRCUIT DIAGRAM



OD → AUSGANGSSIGNAL REIHENFOLGE BEI CCW
OUTPUT SIGNAL SEQUENCE AT CCW



OD → *CIRCUIT DIAGRAM*



DATEN HALL IC - 1 KANAL
DATA OF HALL IC - 1 SIGNAL CHANNEL

SPANNUNGSBEREICH: Up = 4.5V-24V
VOLTAGE RANGE

STROMAUFNAHME: ≤ 30 mA
CURRENT CONSUMPTION

AUSGANG: = 3 IMPULS PRO UNDREHUNG
DER ANKERWELLE
OUTPUT: = *3 PULSE PER REVOLUTION*
OF ARMATURE

AUSGANGSSIGNAL
OUTPUT SIGNAL

AUSGANG: = OFFENER KOLLEKTOR
OUTPUT = OPEN COLLECTOR

SAETTIGUNGSSPANNUNG: UCESAT ≤ 0.4V = ULOW
SATURATION VOLTAGE: UCESAT ≤ 0.4V = ULOW

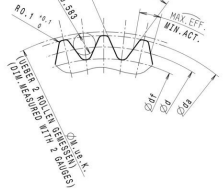
NIEDERVOLT-AUSGANGSSPANNUNG BEI Ia = 26mA
LOW LEVEL OUTPUT VOLTAGE AT Ia = 26mA

TASTVERHAELTNIS DER AUSGANGSSIGNALE : 50% ± 25%
PULS DUTY FACTOR OF OUT-PUT SIGNAL

RISE AND FALL TIME >=25mV/ µs BEI KUNDENAUSSENBESCHALTUNG
RISE AND FALL TIME >=25mV/ µs AT CUSTOMER OUTSIDE PROTECTIVE CIRCUIT

EINSCHALTVERZOEGERUNG: 150ms BEI 3.8V
ONTIME DELAY: 150 ms AT 3.8V

V
20:1



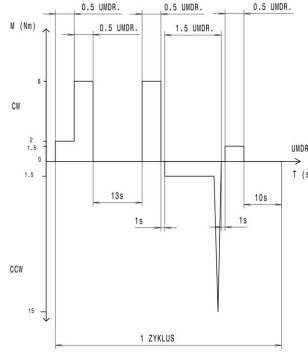
KERBVERZAHNUNGSDATEN
SERRATION DATA

ZAEHNEZAHL = 28
NO. OF TEETH
LUECKENWINKEL = (60°)
SPACE WIDTH ANGLE
TEILKREIS-Ø d = 9.0
REFERENCE CIRCLE Ø
GRUNDKREIS-Ø =(8.03)
FORM CIRCLE Ø
KOPFKREIS-Ø da = 9.6 -0.2
TIP CIRCLE Ø
FUSSKREIS-Ø df = 8.26 +0.11/-0.09
ROOT DIAMETER
FUSSRADIUS THEOR. 0.08 IST 0.12 - 0.19
ROOT RADIUS

MAX. EFF. = 0.495
(MAX. ACT.) = 0.480
MIN. ACT. = 0.439
KUGEL-Ø = 0.583
BALL Ø
(W.U.K. = MAX. 9.816 / MIN. 9.741)

VERZAHNUNG: LEHRENHALTIG NACH GUTLEHRRING FA. FRENCO 33906
UND SEKTORVERZAHNUNG AUSSCHUSSLEHRRING
FA. FRENCO 56169
TOOTH GEAR: TRUE TO GAUGE ACCORDING GO RING GAUGE COMPANY
FRENCO 33906 AND SECTION GEARING NO-GO RING GAUGE
COMPANY FRENCO 56169

LAST WECHSEL DIAGRAMM
LOAD CHANGE DIAGRAM



A) ALLGEMEINES

1.NENNSPANNUNG UP = 24V DC
**2.LEERLAUFDREHZAHL n0 = 13-16WIN $^{-1}$
**3.LEERLAUFSTROM I0 = ≤0.7 A GLEICHLAUFSCHWANKUNG
(LEERLAUFSTROM)<±10%
4.ENTSTOERBAUTEILE = SIEHE DIAGRAMM
5.THERMOSCHALTER = NA
6.ISOLATIONSPRUEFUNG = 500V DC FUER 1 SEC.
7.GETRIEBEHEMMUNG STATISCH = NA
8.RADIALBELASTUNG DER
ABTRIEBSWELLE F = 80N
9.AXIALBELASTUNG DER
ABTRIEBSWELLE F = NA
10.GERAEUSCHPEGEL = NA
11.UMGEBUNGSTEMPERATUR = -20°C BIS +60°C
12.SCHUTZART IP 30
13.VIBRATION = NA

B) BETRIEBSDATEN

NENNMOMENT MAX = 4 Nm RL/LL
EINBAULAGE = NA
BETRIEBSDREHZAHL = 11min-1

C) LEBENSDAUERPRUEFUNG***

1.ZYKLUS (DEFINITION) = SIEHE LAST WECHSEL DIAGRAMM
2.PRUEFSPANNUNG = 24V
3.PRUEFMOMENT = SIEHE LAST WECHSEL DIAGRAMM
4.PRUEFTEMPERATUR = RT
5.PRUEFLAGE = BELIEBIG
6.FREMDKUEHLUNG = ZUR VERKUERZUNG DER PAUSEN ZULAESSIG

7.LEBENSDAUER = 300 000 ZYKLEN
8.BLOCKLAUF = NA
9.LEISTUNG NACH LEBENSDAUERTEST = ABWEICHUNG BIS 10% ZULAESSIG

D) MITGELTENDE UNTERLAGEN

1.ALLG. SPEZIFIKATION INDUSTRIEMOTOREN NIDEC
NACH SWF 46.402 (AUSGABE VOM 09.04.1998)
DARUEBERHINAUS GEHENDE ANFORDERUNGEN
HAT DER KUNDE DURCH PRUEFUNGEN IN SYSTEM SICHERZUSTELLEN.
HIERFUER UEBERNIMMT NIDEC KEINE HAFTUNG.

*** DIE LEBENSDAUERPRÜFUNG IST VOM KUNDEN
DURCHZUFÜHREN UND FREIZUGEBEN.

LAST WECHSEL IM DAUERLAUF WIRD DEFINIERT UEBER RAMPE
THE LOAD CHANGE IN DURABILITY TEST WILL BE DEFINE WITH RAMP

**100% PRUEFUNG KONTROLL PLAN NA NICHT ANGEWENDET
**100% *CHECKING CONTROL PLAN* *NOT APPLICABLE*

A) GENERAL

1.NOMINAL VOLTAGE UP = 24V DC
***2.NO LOAD SPEED n0 = 13-16WIN $^{-1}$*
***3.NO LOAD CURRENT I0 = ≤0.7 A SPEED DROOP*
(NO LOAD CURRENT): ≤±10%
4.RFI SUPPRESSION = SEE DIAGRAM
5.THERMALSWITCH = NA
6.ISOLATION TEST = 500V DC FOR 1sec.
7.SELF LOCKING STATIC = NA
8.RADIAL LOAD ON
DRIVE SHAFT F = 80N
9.AXIAL LOAD ON
DRIVE SHAFT F = NA
10.NOISE LEVEL = NA
11.AMBIENT TEMPERATURE = -20°C TO +60°C
12.PROTECTION IP = 30
13.VIBRATION = NA

B) RUNNING DATA

OPERATING TORQUE (NOM. LOAD) = 4Nm CW/CCW
MOUNTING POSITION = NA
LOAD SPEED = 11min-1

*C) LIFE TEST ****

1.CYCLE DEFINITION = SEE LOAD CHANGE DIAGRAM
2.TEST VOLTAGE = 24V
3.TEST TORQUE = SEE LOAD CHANGE DIAGRAM
4.TEST TEMPERATURE = RT
5.TEST POSITION = OPTIONAL
6.EXTERNAL COOLING = FOR REDUCTION OF BREAKS PERMISSIBLE

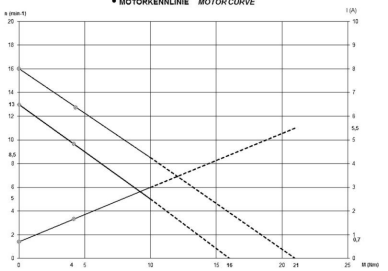
7.LIFE TIME = 300 000 CYCLES
8.BLOCK RUN = NA
9.PERFORMANCE AFTER LIFE TEST = DIFFERENCE TILL 10% PERMISSIBLE

D) OTHER VALID DOCUMENTS

1.GEN. SPECIFICATION INDUSTR.-MOTORS NIDEC
ACC. SWF 46.402 (EDITION AT 09.04.1998)
ADDITIONAL REQUIREMENTS, WHICH ARE NOT CONTENT OF THE
ABOVE SPECIFICATION, HAVE TO BE SECURED BY THE CUSTOMER.
FOR THIS ADDITIONAL REQUIREMENTS NIDEC CAN TAKE NO PRODUCT LIABILITY.

**** LIFE TEST AND RELEASE OF MOTOR IS*
CUSTOMER RESPONSIBILITY.

OD → **MOTORKENNLINIE** *MOTOR CURVE*



** ○ MESSPUNKTE MOTORKENNLINIE
○ *MEASURE POINTS GRAPH*

VERZAHNUNGSDATEN / *GEAR TOOTH DATA*

UEBERSETZUNG	*RATIO*	i	= 1:78
GANGZAHL	*NO. OF STARTS*	z1	= 1
ZAEHNEZAHL	*NO. OF TEETH*	z2	= 78
NORMALMODUL	*NORMAL MODULE*	mn	= 0.7
ZAHNRADMATERIAL	*GEAR WHEEL MATERIAL*		= MESSING / *BRASS*
ABTRIEBSWELLEN MATERIAL	*DRIVE SHAFT MATERIAL*		= C45 Pb C DIN EN 10277
			VERGÜTET/ *HEAT TREATED* HV 380-460

SURFACE TEXTURE ACC. TO DIN EN ISO 1302		EDGES ACC. TO ISO 13715	
GEOMETRICAL PRODUCT SPECIFICATIONS (GPS) SIZE ISO 14405 (E)		GEO. TOLERANCING ACC. TO DIN EN ISO 1101	
LIMIT DIMENSIONS FOR NOMINAL SIZE RANGES IN mm	...6	>6...30	>30...120	>120...400	>400...1000
TOLERANCES FOR NOMINAL SIZE RANGES IN mm	0.1	0.2	0.3	0.5	0.8
LIMIT DIM. FOR NOMINAL SIZE RANGES IN mm (SHORTER ANGLE SIDE)		...10	>10...50	>50...100	>100
TOLERANCES FOR NOMINAL SIZE RANGES	±	1°	30'	20'	10'

SAMPLING AND RELEASE ACCORDING TO HO-G-C2-04 AND NMA SUPPLIER MANUAL

SYSTEM CHANGE:
10000005336 REPLACED BY M0061152_A00

REV.	NO.	ZONE	SAMPLE	NEW	OLD
00				INTRODUCTION DWG. REL. 07.2022	
		221		DRAWING STANDARD CHANGED	
		617		VIEW A-A: L NO: 02-4 L1: 02-2 L2: 02-2 L3: 02-2 L4: 02-7 L5: 02-7 CONNECTION AREA* ADDED	L NO: 5 L1: 5 L2: 5 L3: 5
	L07			NNL: 0.8	NNL: 1
	N20			OUTPUT SIGNAL SEQUENCE AT CW ADDED	
		221		MOTOR CURVE ADDED "PRELIMINARY" DELETED	

OD	CONTROL DIMENSION (CD)	B	NO. DRAWING NO.	PART NAME	NOTE QTY. UNIT REMARKS
	SPECIAL PRODUCTS AND PROCESS CHARACTERISTICS			REQUIREMENT TERM / REQUIREMENT STANDARD	APPLICABLE STAND / NIDEC SPEC.
	Safety Regulation Characteristics (SR)	D		MATERIAL	
	Legal-Fixed Characteristics (LC)	D		TOLERANCE	
	Functional Characteristics (FC)	D		SURFACE TREATMENT	
	Process Characteristics (PC)	D		SURFACE FINISH	
				GEOM. TOLERANCING ACC. TO	

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DRAWING STATUS	RELEASED DATE	DESIGN DEPT		NMA	HDS-594-99-99
NIDEC PRODUCTION	2022-08-22	NMAG	CATIA V5		
E.C.O NO.	CHANGE/ERROR	APPROVED	PEMAENT	2023-10-09	MATERIAL NO.
APPROVED	TO BE DONE	CHECKED	PEMAENT	2023-10-09	ART-CLE NO.
	2022-08-19	DES-IGNED	PEMAENT	2009-10-31	0266
DESIGNED	NAZARZIK	DRAWN	PEMAENT	2023-10-09	TITLE: MOTOR DC57

PROJECTION METHOD
THIRD ANGLE PROJECTION
FIRST ANGLE PROJECTION

Nidec
-All for dreams

DRAWING NO.	MODEL NO.	REVISION NO.
	M0061152_A00	0 00

WIDTH	UNIT	SCALE	PAGE	SIZE
TBD	mm	1 : 1	1 OF 1	A0