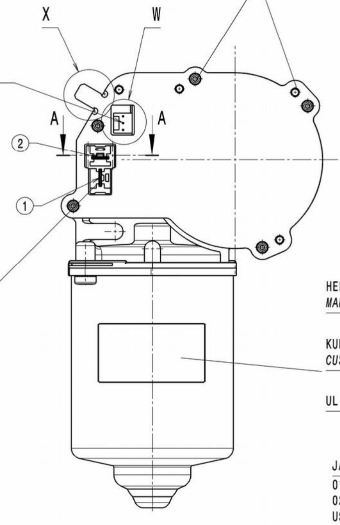
SAMPLING AND RELEASE ACCORDING TO HQ-P-7.3 AND NMA SUPPLIER MANUAL

SPECIAL CHARACTERISTIC	QUANTITY
SRC	0
SC	0
FC	0

REV. NO.	ZONE	DESCRIPTION		DATE	NAME
50000841		DOPPELTVERSTEMMT WAR EINFACHVERSTEMMT	DOUBLE STAKING WAS SINGLE STAKING	2014-02-19	PITICCOD

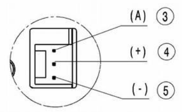
DECKELBEFESTIGUNG WAHLWEISE GENIETET ODER GESCHRAUBT
COVER FIXING RIVETS OR SCREWS OPTIONAL



FLACHSTECKER (DIN 46244) 6,3x0,8
GEGENSTECKER/TYCO ELECTRONICS-AMP
STECKERGEHAEUSE: SACHNUMMER 180907 (ZEICHNUNGSNUMMER C-180907)
FLACHSTECKHUELSE (DIN 46247): SACHNUMMER x-160526-x
(ZEICHNUNGSNUMMER C-160526)
FLACHSTECKHUELSE (DIN 46247): SACHNUMMER 925603-x
(ZEICHNUNGSNUMMER 925603)-(REDUZIERTE STECKKRAFT)
FUER LEITUNGSQUERSCHNITT 0,5-1,5mm²

FLAT PLUG (DIN 46244) 6,3x0,8
MATING CONNECTOR/TYCO ELECTRONICS-AMP
RECEPTACLE HOUSING: PART NO 180907 (DRAWING NO C-180907)
RECEPTACLE FOR TABS (DIN 46247): PART NO x-160526-x
(DRAWING NO C-160526)
RECEPTACLE FOR TABS (DIN 46247): PART NO 925603-x
(DRAWING NO 925603)-(REDUCED INSERTION FORCE);
FOR CONDUCTOR CROSS SECTION 0,5-1,5mm²

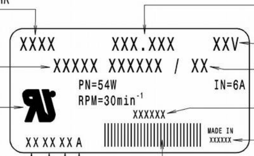
W
2:1



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

2:1

HERSTELLER-LOGO / *MANUFACTURER TRADEMARK*
KUNDEN-SACH-NR. / *CUSTOMER-PART-NO.*
UL-LOGO / *UL-LOGO*

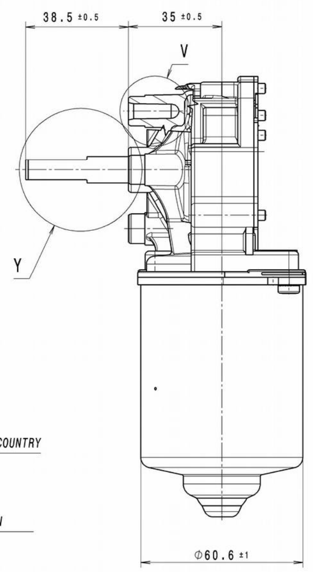


HERSTELLER-SACH-NR. / *MANUFACTURER-PART-NO.*
MOTORSPANNUNG/ *MOTOR VOLTAGE*
KUNDEN-INDEX / *CUSTOMER-INDEX*
EMV-HINWEIS / *EMC-NOTE*
HERSTELLUNGSLAND / *MANUFACTURING COUNTRY*
BARCODE 2/5 / *INTERLEAVED 2/5*
INTERNE SCHICHTKENNZEICHNUNG / *INTERNAL SHIFT WORK IDENTIFICATION*
A = FRUEHSCHICHT /*MORNING SHIFT*
B = SPAETSCHICHT /*EVENING SHIFT*
C = NACHTSCHICHT /*NIGHT SHIFT*

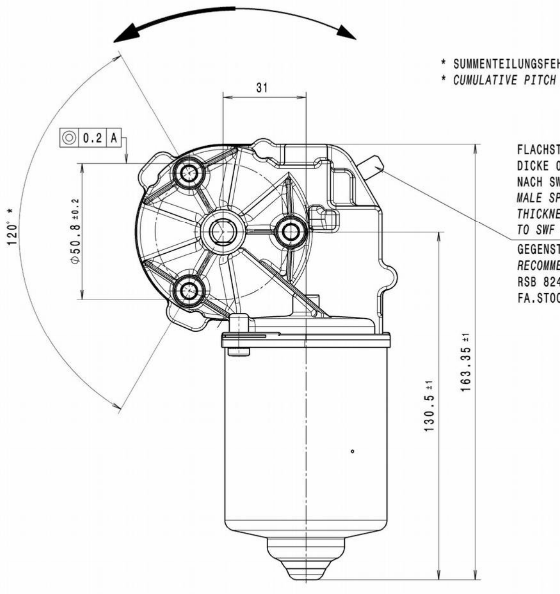
TAG / *DAY*
11
12
USW. / *ETC.*

JAHR / *YEAR*
01 = 2001
02 = 2002
USW. / *ETC.*

MONAT / *MONTH*
05 = MAI / *MAY*
12 = DEZ./ *DEC.*
USW. / *ETC.*



VORZUGSDREHRICHTUNG
PRIORY DIRECTION OF ROTATION

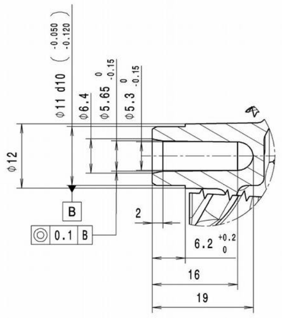


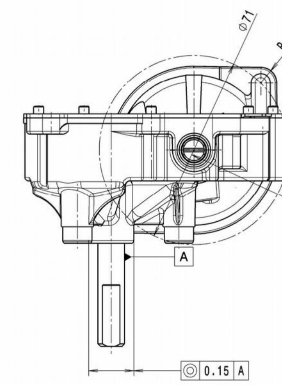
* SUMMENTEILUNGSFEHLER: ± 20'
* *CUMULATIVE PITCH ERROR: ± 20'*

FLACHSTECKER 6.3 x 0.8
DICKE 0.9-0.1
NACH SWF 43.101 DIN 46244
MALE SPADE TERMINAL 6.3 x 0.8
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

V (3x)
2:1

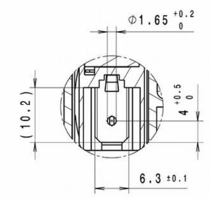
BEFESTIGUNGSLOECHER FUER SELBSTFORMENDE SCHRAUBEN M6, POWER LOK GEWINDE DIN ISO 965-2, MAX. ZULAESSIGES ANZUGSMOMENT DER BEFESTIGUNGSSCHRAUBE 13Nm
FASTENING HOLES FOR SELFFORMING SCREWS M6, POWER LOK THREAT DIN ISO 965-2, MAX. PERMISSIBLE TORQUE FOR FASTENING SCREW 13 Nm





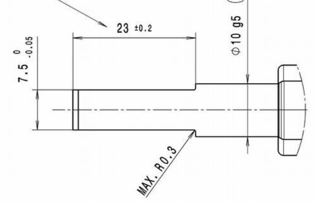
VERSTELLUNG DER ANLAUF-SCHRAUBE NICHT ZULAESSIG
ADJUSTMENT OF SET SCREW NOT PERMISSIBLE

A-A
2:1

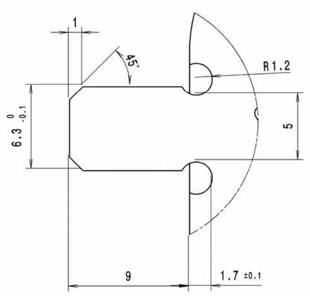


NUTZBARE LAENGE (ZWEIFLACH)
USEABLE LENGTH (PIROT WITH CHECKS)

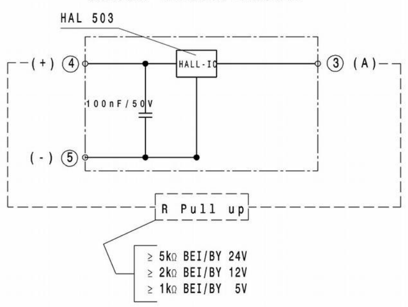
Y
2:1



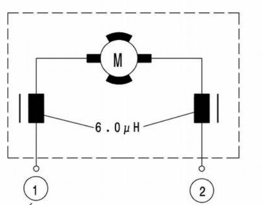
X
5:1



SCHALTBILD ENCODER
CIRCUIT DIAGRAM ENCODER



SCHALTBILD
CIRCUIT DIAGRAM



+ RECHTSLAUF	*CW ROTATION*
- LINKSLAUF	*CCW ROTATION*

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

SPANNUNGSBEREICH: Up = 4.5-24V
VOLTAGE RANGE
STROMAUFNAHME: ≤ 30 mA
CURRENT CONSUMPTION
TEMPERATURBEREICH: = -20°C - +60°C
TEMPERATURE RANGE
**AUSGANG: = 1 IMPULS PRO UMDREHUNG DER ANKERWELLE
***OUTPUT: = 1 PULSE PER REVOLUTION OF ARMATURE*

AUSGANGSSIGNAL
OUTPUT SIGNAL

AUSGANG: = OFFENER KOLLEKTOR
OUTPUT= OPEN COLLECTOR

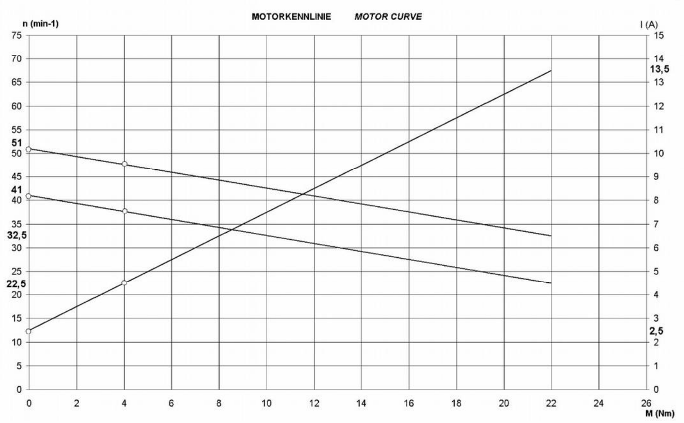
**SAETTIGUNGSSPANNUNG: UCESAT ≤ 0.4V = ULOW
***LOW LEVEL OUTPUT VOLTAGE: BEI |AT Ia= 26mA*

TASTVERHAELTNIS DER AUSGANGSSIGNALE: 50% ±10%
PULSE 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: 150 ms BEI 3.8V
ONTIME DELAY: 150 ms AT 3.8V

** ○ MESSPUNKTE KENNLINIE
○ *MEASURE POINTS GRAPH*



A) ALLGEMEINES

1. PRUEFSPANNUNG UP = 24V DC
2. LEERLAUFDREHZAHL n0 = 41-51min⁻¹
**3. LEERLAUFSTROM I0 MAX. ≤ 2.5A
4. STROMBEGRENZUNG SA = SIEHE MOTOR KENNLINIE
5. ENTSTOERBAUTEILE = SIEHE DIAGRAMM
6. ISOLATIONSPRUEFUNG = 850V DC FUER 1 SEC.
7. GETRIEBEHEMMUMG STATISCH ≤ NA
8. RADIALBELASTUNG DER ABTRIEBSWELLE F = 1N
9. AXIALBELASTUNG DER ABTRIEBSWELLE F = 1N
10. GERAEUSCHPEGEL = NACH INTERNER SPEZIFIKATION: CMS_405_130
11. UMGEBUNGSTEMPERATUR = -20°C BIS +60°C
12. SCHUTZART IP = 30
13. VIBRATION = NA

B) BETRIEBSDATEN

NENNMOMENT (NENNLAST) MN = 6Nm

C) LEBENSDAUERPRUEFUNG

GESTEUERTER DREHZAHLANSTIEG UEBER 2SEC
GESTEUERTER DREHZAHLABFALL UEBER 2SEC
1. ZYKLUS (DEFINITION)
EINSCHALTDAUER LL. 2sec. = RL 20 sec.- PAUSE 20 sec.
= LL 20 sec.- PAUSE 20 sec.
2. MIN. LEBENSDAUER = 25 000 ZYKLEN
3. PRUEFMOMENT = 6Nm
5. 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 IM SYSTEM SICHERZUSTELLEN. HIERFUER UEBERNIMMT NIDEC KEINE HAFTUNG.

BEI BELASTUNG DES MOTORS UEBER 8 Nm IST AXIALSPIEL DES ANKERS ZULAESSIG

ERFUELLT ROHS B UL 1004

A) GENERAL

1. *TEST VOLTAGE UP = 24V DC*
2. *NO LOAD SPEED n0 = 41-51min⁻¹*
**3. *NO LOAD CURRENT I0 MAX. ≤ 2.5A*
4. *CURRENT LIMITATION SA = SEE MOTOR CURVE*
5. *RFI SUPPRESSION = SEE DIAGRAM*
6. *INSULATION TEST = 850V DC FOR 1 S*
7. *SELF LOCKING STATIC ≤ NA*
8. *RADIAL LOAD ON DRIVE SHAFT F = 1N*
9. *AXIAL LOAD ON DRIVE SHAFT F = 1N*
10. *NOISE LEVEL = AFTER INTERNAL SPECIFICATION: CMS_405_130*
11. *TEMPERATUR = -20°C TO +60°C*
12. *PROTECTION IP = 30*
13. *VIBRATION = NA*

B) RUNNING DATA

LOAD MN = 6Nm

C) LIFE TEST

OPERATED SPEED INCREASE OVER 2SEC
OPERATED SPEED DECREASE OVER 2SEC
1. *CYCLE (DEFINITION)*
ON / OFF TIME 2sec. = 20 s CW -BREAK 20 sec
= 20 s CCW -BREAK 20 sec
2. *MIN. LIFE TIME = 25 000 CYCLES*
3. *TEST LOAD = 6Nm*
5. *PERFORMANCE AFTER LIFE TEST = DEVIATIONS LIMIT 10%*

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.*

AXIALPLAY OF THE ARMATURE IS PERMISSIBLE WHEN THE MOTORLOAD > 8Nm

FULFILS ROHS B UL 1004

** 100% PRUEFUNG — KONTROLLPLAN
** *100% CHECKING — CONTROL PLAN*

NA] NICHT ANGEWENDET *NOT APPLICABLE*

GETRIEBEDATEN	*GEAR DATA*		
UEBERSETZUNG	*RATIO*	i	= 1:69
GANGZAHL	*NO. OF STARTS*	z1	= 1
ZAEHNEZAHL	*NO. OF TEETH*	z2	= 69
NORMALMODUL	*NORMAL MODULE*	mn	= 0.8
ZAHNRADMATERIAL	*GEAR WHEEL MATERIAL*		= DELRIN 100

MAX. GETRIEBEFESTIGKEIT STATISCH : 28Nm
MAX. GETRIEBEFESTIGKEIT DYNAMISCH: 17Nm
MAX. STATIC GEAR STRENGTH
MAX. DYNAMIC GEAR STRENGTH

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 DEGREE/ MINUTE (SHORTER ANGLE SIDE)	...10	>10...50	>50...100	>100	
TOLERANCES FOR NOMINAL SIZE RANGES ±	1°	30'	20'	10'	

SURFACE FINISH ACC. TO SWF 00.051 — NORM FOR SURFACE FINISH
SURFACE TEXTURE ACC. TO DIN EN ISO 1302 — EDGES ACC. TO ISO 13715
GEOMETRICAL PRODUCT SPECIFICATIONS (GPS) SIZE ISO 14405 (E) — GEOM. TOLERANCING ACC. TO DIN EN ISO 1101
STOCK MATERIAL
CUSTOMER REFERENCE NO.
MATERIAL SPECIFICATION ACC. TO SWF 10.XXX — NORM FOR MATERIAL SPECIFICATION

MATERIAL NO.	OLD SPAIN MATERIAL NO.	REFERENCE NO.
405-130-99-99		

ALL DIMENSIONS IN mm — SCALE 1:1
TITLE: **MOTOR DCK31** / *MOTOR DCK31*
ARTICLE NO.: 0266
Nidec — RELEASE-LEVEL: RELEASED

DT	DOCUMENT NO.	VERSION	SHEET	OF	FORMAT
A	10000002414	02	1	1	A0

	DATE	NAME
DRAWN	28.02.2014	HOFFMANNT
CHECKED	12.08.2015	BRUHNR
RELEASED	12.08.2015	SOMMERHALTERU

NIDEC MOTORS & ACTUATORS GERMANY / POLAND / SPAIN — SUB. FOR
COMPUTER DRAWING PLOTTED AT

ITEM	MATERIAL NUMBER	QUANT.	TITLE	DOCUMENT NO.

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